

CMU Maturation tanks

When innovation meets tradition



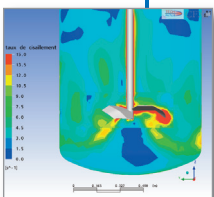
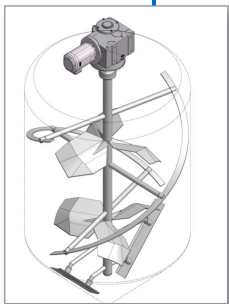
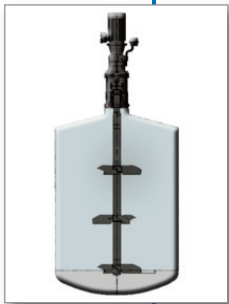
PIERRE GUERIN
TECHNOLOGIES

TOGETHER BRING LIFE TO YOUR PROJECTS

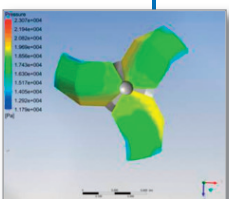
ISO 9001
BUREAU VERITAS
Certification



CMU, maturation tank on legs or on skirt



Measurement of shearing rates
in the different tank zone



Digital simulation
CFD: pressure on upper
surface of blades

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

- controlled maturation of milks, creams, ice cream mix, yogurts, fresh cheese.

Design

- capacities: 2 500 up to 100 000 litres
- Clean-In-Place stainless steel cylindrical tank, without retention zone
- insulation by non-hydrophilic Mineral Wool with water-proof stainless steel jacket, fitted to avoid watering and permitting material expansion without damage
- bottom shape from 15 to 45° to provide complete drainability
- atmospheric tank in the basic design, this tank can be equipped with an Ultra-Clean vent to keep the product under sterile filtered air during all the period of loading, unloading and maturation.

Performance & Innovative agitation system

For this application, 3 agitation systems are applicable:

- a three bladed HTPG4 impeller, bottom of tank or lower part of side-wall mounted, for milk maturation applications
- a central top mounted three bladed impeller for ice-cream mix, cream, yogurts, cheese milk maturation

Depending of viscosity of products, agitators can be equipped with proximity blades in the bottom and tank wall.

- an central top-mounted agitator type Eole 4 dedicated to high percentage of dry matter and high viscosity products or fragile product maturation.

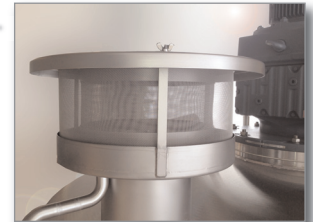
This agitator is made with several stages of HTPG4 impeller with baffles fitted at the lower part of the shaft and with opposing helicoids along the liner. This system ensures an axial pumping of the product from the top to the bottom throughout in the vessel, with lower rotating speed to guarantee the quality of matured product.

Main features

- 15° conical cover and bottom
- frame support:
 - on adjustable stainless steel legs (*from 3 up to 10 depending of capacity*)
 - on request, on skirt
- material: all parts (*including supporting, legs, cladding included*) made of stainless steel EN 1.4307 (AISI 304L) ; on request, made of stainless steel EN 1.4404 (AISI 316L) for all parts in contact with the product.
- finish:
 - internal: welds are rolled, ground and polished Ra <0.8 μ and cold-rolled mill

Accessories

- 1 centred top mounted three bladed HTPG4 type impeller with one turbine fitted on the lowest part of the shaft (*without bottom guide*) - frequency inverter to record - or a wall-side three bladed HTPG4 type impeller
- 1 inlet anti-vortex baffle
- 1 man-hole on the cover \varnothing 400 minimum, without retention area
- 1 atmospheric vent with anti-mosquito screen sized for clean-in-place
- 1 plain end outlet with welded anti-vortex
- 1 large diameter plain end outlet with welded anti-vortex
- 1 set of nozzles for instruments (*temperature probe, low and high level switches, continuous level probe*)
- 1 set of cleaning devices including 2 static spray balls on the cover (*not submerged*) and one set of flush-fit cleaning devices on the wall side (*one for each three bladed impeller*). **Pierre Guerin** flush-fit cleaning systems are switched by pilot valve (*with the possibility to have proximity detectors*) and run independently from the pressure of CIP piping.



Atmospheric Vent



HTPG4 Agitator



Circular Safety Rail

Options

- stainless steel agitator drive motor cover
- cleaning-in-place sample valve, or membrane sampling probe
- circular safety rail, intermediate rail and kick plate, EN 1.4307 (AISI 304L)
- walkway support bracket(s)
- ultra-clean vent to maintain the product under pressure with filtered air
- jacket on the bottom and the wall-side to apply thermal maturation programs with a lower difference of temperature between the product and hot/cold water
- insulation of cover.



Sample Valve

Dimensions - Weight - Sizes

Nominal Volume (l)	Useful Volume (l)	Internal Diameter (mm)	External Diameter (mm)	Wall Height (mm)	Total Height (mm)	Total Weight (kg)
2 500	2 790	1 390	1 530	1 750	4 800	900
5 000	5 235	1 590	1 730	2 500	5 800	1 200
10 000	12 255	2 186	2 326	3 000	6 270	1 500
15 000	16 005	2 186	2 326	4 000	7 270	1 900
20 000	21 860	2 863	3 003	3 000	6 470	2 650
25 000	26 695	2 863	3 003	4 000	7 470	3 350
30 000	35 140	3 181	3 321	4 000	7 585	3 750
40 000	43 680	3 578	3 719	4 000	7 700	4 600
50 000	53 735	3 578	3 719	5 000	8 700	5 100
75 000	77 280	3 976	4 117	6 000	9 850	5 900
100 000	102 120	3 976	4 117	8 000	10 850	6 800



Flush-Fit Cleaning System



Ultra-clean Vent

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