



GEA CHEESE MAKING EQUIPMENT

GEA is your partner in design, engineering and manufacturing of complete production systems for soft/fresh (mozzarella), semi-hard (scamorza) and hard pasta filata cheeses (pizza-cheese, kashar, provolone, kasseri).



Provolone cheese is a hard pasta filata Italian cheese with a distinctive flavor and smooth, pale-yellow to pale-white color. It is traditionally made from cow's milk and is produced in various regions of Italy, including Lombardy, Veneto, and Southern Italy. Provolone cheese is known for its versatility, as it comes in two main varieties: Provolone Dolce (sweet) and Provolone Piccante (sharp).

PORTFOLIO OVERVIEW

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Cheese making vats

Complete automation for the transformation of milk into curd. Consistent product quality thanks to the preset recipes.



Hydraulic setting vats

Milk capacity 3,000 and 5,000 litres/batch. GEA overturnable cradle-type curd making vats
P-series

- Designed for all types of pasta-filata cheeses
- Nominal capacity: 3.000 or 5.000 litres per batch
- Maximum process flexibility
- Homogeneous cutting and perfect mixing of the curd
- Low fine losses
- Low fat losses
- Discontinuous processing
- Curd unloading into trolleys



Cylindrical coagulators for curd processing

Milk capacity from 4,000 to 15,000 litres/batch.
GEA horizontal axis cylindrical cheese making vat CF-series

- Designed for pasta-filata cheeses
- Nominal capacity: from 4.000, to 15.000 litres per batch
- Accurate rennet distribution
- Homogeneous cutting and perfect mixing of the curd
- Low fine losses
- Low fat losses
- Fully automated lines (curd transfer by means of positive pump, mechanized acidification process downstream)
- Process with intermediate CIP
- Curd unloading into trolleys

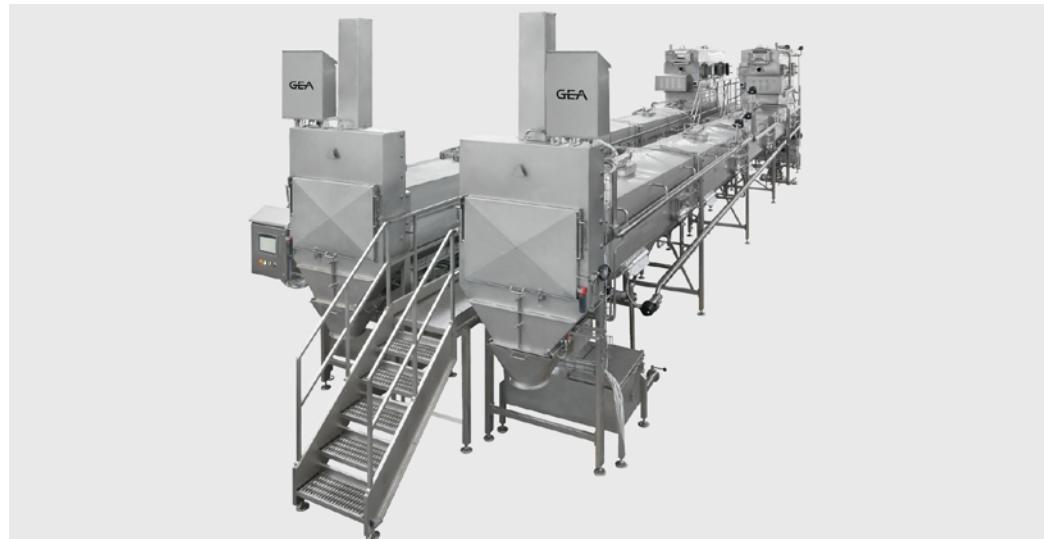
Curd drainage, maturation & feeding

Cutting, maturation and drainage of curd.
All fully automatic.



**Batch drainage and maturation
DMC systems with auger**

- Batch operation
- Designed for fresh mozzarella, but can perfectly handle also pizza-cheese curd
- Can handle acidification under the whey and without whey
- Delicate curd handling
- Separation and collection of sweet and acid whey



**Continuous curd
drainage and maturation
tunnel systems**

- Continuous operation
- Designed for pizza-cheese (dry acidification)
- Sweet whey is immediately separated from curd
- Delicate curd handling
- Separation and collection of sweet and acid whey

**Feeding units**

Feeder units from GEA comprise an accumulation vat into which the curd is transferred, either by hand or automatically, and which contains an auger to transfer the curd to a pneumatically controlled curd cutter unit.

Stretching machines - steam

Steam stretching can offer a number of advantages over traditional hot water stretching, for producing a wide range of curd cheeses.



**Steam stretching
machines - continuous type**

- Kneading by means of dipping arms
- Flexibility(fresh & commercial curd, and production of fresh mozzarella and pizza-cheese as well)
- Increased yield (more kg of cheese per kg of cheese milk)
- Energy efficiency (direct steam heating)
- No buffering (very consistent product features)
- No thermal stress on the curd
- Considerably longer fibers (dipping arms kneading)
- Vulcan anti-sticking treatment is possible



**Steam stretching
machines - batch type**

- Kneading by means of dipping arms
- Equipped with curd dicer with adjustable knives rotary cutting disk
- Processing of fresh curd, commercial curd, mixes of curd and food ingredients
- Production of any type of pasta filata cheese
- Suitable for small scale production (small dairies, laboratory, pre-production tests, re-work processing etc.)
- Vulcan anti-sticking treatment is possible:



Kashar or kashkaval cheese is a type of hard pasta filata cheese that is popular in various parts of the Balkans, Eastern Europe, and the Middle East and especially in Türkiye. It's known for its distinct flavor and versatility in both culinary applications and as a standalone cheese.

Stretching machines - water

Hot water stretching machines with augers, dipping arms and rotary paddles, together with curd cutting equipment for highly versatile batch or continuous processing of curd cheeses.



Stretching machines
with rotary paddle

- Designed for pizza cheese and low moisture pasta filata cheeses
- Kneading by means of rotary paddle system
- Continuous (no buffer needed hence consistent quality of the product)
- Gentle handling of the curd (no thermal stress) thanks to low temperature of the heating media
- Long fibres (thanks to the stirring action of the kneading tools)



Stretching machines
with dipping arms

- Designed for pizza cheese and low moisture pasta filata cheeses
- Kneading by means of rotary paddle system
- Continuous (no buffer needed hence consistent quality of the product)
- Gentle handling of the curd (no thermal stress) thanks to low temperature of the heating media
- Long fibres (thanks to the stirring action of the kneading tools)



- Kneading by means of dipping arms
- Equipped with curd dicer with adjustable knives rotary cutting disk
- Processing of fresh curd
- Production of any type of pasta filata cheese line having moisture between 55% and 65% (depending on the applied process technology, including infeed curd characteristics)
- Suitable for small scale production (small dairies, laboratory, pre-production tests etc.)
- This product is accessible in both steam and hot water variants.

Hot water stretching & molding unit with dipping arms

Molding machines

Drum molding equipment, curd draining, molding and pre hardening units, and all-in-one combination systems.



Molding and pre-hardening units

- Horizontal axis carousel molding and pre-hardening machines Prater-series
- High capacity pizza-cheese blocks lines
- Fully automated lines (automated packaging)
- Highest capacity molders in relation to the footprint
- Longer pre-cooling time compared to traditional, vertical axis carrousel molders: better block shape
- Combined with guided cooling vats allow product traceability thanks to real FIFO product advancement in the system
- Vulcan anti-sticking treatment



Molding and pre-hardening units

- Vertical axis carousel molding and pre-hardening machines HG series
- Flexibility by changing the carousel, it is possible to change size and shape of the blocks
- Fully automated lines (automated packaging)
- Low manpower required: the carousel wheel is washed in CIP inside the machine, no need to remove it or demount it
- Vulcan anti-sticking treatment
- Longer pre-cooling time compared to traditional, vertical axis carrousel molders: better block shape



- Extremely versatile molding unit capable of producing pearls, cherries, balls, logs, silani, blocks, braids, medallions, sfoglia and special shaped products
- 2, 4 or 6 augers molding head with product infeed hopper
- Vulcan treatment on machine body as option
- Cheese molding by means of interchangeable aluminum drums
- Additional tool available to mold the cheese into different shapes

Drum molding
machines



Scamorza cheese is a semi-hard Italian cheese with a distinctive appearance and a mild, slightly tangy flavor. This cheese is traditionally made from cow's milk, although variations made from other types of milk, such as buffalo milk, can also be found. Scamorza cheese undergoes a unique processing method that gives it its characteristic shape and texture.

Hardening and brining vats

Brining and hardening are the final, critical processes in the production of high quality pasta filata cheeses.



Hardening vats

- Cheese cooling by means of cold water
- Modular design with size variable according to cooling requirements
- Product advancement by means of “swinging bottom system”
- Available with product rails when paired with a Prater carousel molder
- Product extraction by means of belt conveyor or elevator



Brining vats

- Cheese cooling by means of cold brine
- Modular design with variable sizes according to cooling requirements
- Up to 3 decks version available to minimize foot-print
- Product advancement by means of brine jets
- Available with product rails when paired with a Prater carousel molder
- Product extraction by means of belt conveyor or elevator

Salt dosage system & hot water heaters

Salt dosing is a key stage in producing many types of curd cheeses.



Hot water heaters

- Portfolio of water heaters to meet any production requirement and capacity for pasta filata cheese processing
- The thermoregulated system features a silencer injector in the steam inlet pipe, and solenoid valve



Salt dosage systems

- Comprehensive portfolio of technologies for the dosing of precise quantities of liquid and dry salt solutions, and accurate temperature regulation
- Developed to meet the highest hygienic requirements, and promise robust and reliable operation

Vulcan Treatment

The confidence of having a product that is always intact. No residues released and zero maintenance requirements.

Anti-sticking surface physical treatment

No coating: the chemical properties of the stainless steel.

No product contamination

Approved for surfaces coming into contact with the product.

No Re-Applying

Effective replacement of the Teflon coating without its drawbacks (product contamination and need to be periodically restored).

- Developed and patented by GEA.
- Can withstand the normal CIP cycles.
- Proven technology, widely applied in the dairy industry since it's been first introduced in 2011.
- The perfect anti-sticking companion for continuous steam cooker stretchers as well as for moving parts of molders (augers and carrousel wheels). ***

*** depending on the applied process technology:to be evaluated by on case by case basis

Vulcan surface





GEA SERVICE - FOR YOUR CONTINUED SUCCESS.

Working with GEA Service means partnering with a dedicated team of service experts.

Our focus is to build, maintain, and improve customer performance throughout the entire life cycle of the plant and its equipment.

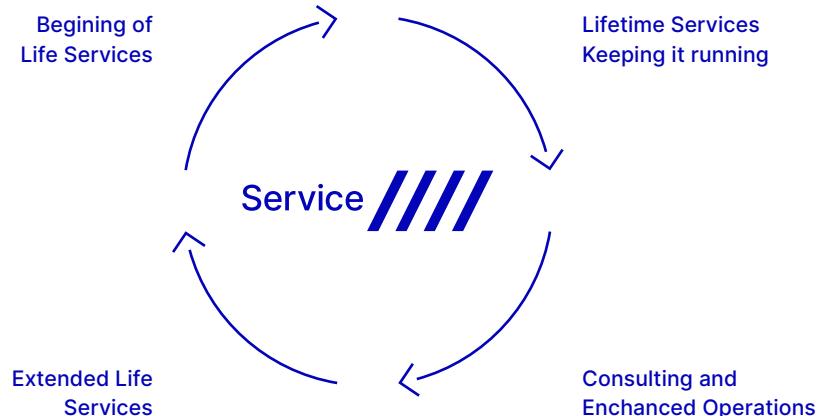
Begining of Life Services
Getting you started with seamless support for instant productivity and performance.

Lifetime Services
Keeping it running with the cost-efficient

way of ensuring safety and reliability.

Extended Life Services
Constantly improving by sharing our knowledge to safeguard your investment

Consulting & Enhanced Operations
Together with you by enduring commitment to you and your business.



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