PACKAGING TECHNOLOGY FOR THE FOOD INDUSTRY
TAILOR-MADE TECHNOLOGY FOR INDIVIDUAL PRODUCTS

The demand for fresh tasting products with an extended shelf-life and retailers’ requirements of low cost logistic concepts can only be jointly satisfied by utilising modern machine technology capable of meeting all of the hygienic, economic and high efficiency obligations.

The diverse GASTI machine range offers the appropriate machine for each product. All GASTI machines meet the latest EU standards and the hygiene concept follows the EN 1672-2, 3A and FDA regulations. Our speciality is cup filling and sealing machines for pre-made cups made from all types of approved materials. All GASTI machines are known for their extremely high filling accuracy, often using dosing devices without seals and also for products with particulates. In addition to yoghurt, quark, cream and desserts, they can fill other liquid-to-pasty products with or without particulates. Depending on the market and product requirements, four different standards are available: „standard“, „hygienic“, „ultra-clean“ and „aseptic“. The GASTI dosing units offer exceptional product flexibility, from liquid to pasty, single-layer or multi-layer, hot or cold filled products.

GASTI has a solution for each application.
Packaging machines with intelligent solutions

Since 1900, GASTI has been renowned for the high quality and reliability of its machines. Over the years an extensive range of tailor-made solutions has been developed specifically designed for the packaging of liquid, semi-liquid and pasty products. Since 1970 GASTI has supplied cup filling and closing machines for the dairy and food industries. The company’s reputation in the international marketplace is based on its many years of experience in specialized fields, which demand the highest product quality with flexible solutions. Whenever food products are to be filled into cups of various materials and shapes, GASTI machines provide a cost-effective and efficient solution.

GASTI is a member of the IMA Dairy & Food Group and is a specialist supplier of cup filling and sealing machines. Membership of the IMA Dairy & Food Group enables international exchange of technology, expertise and know-how. The international sales network renders expertise engineering and rapid service available to our customers, worldwide.

GASTI machines, with output rates of between 4,500 and 28,800 cups/hour and hygiene levels of “standard”, “hygienic”, “ultra-clean” and “aseptic” are specifically designed to suit the needs of the dairy, desserts, juice, beverage, jam, sauce and instant soup industries. Their state-of-the-art developments, such as the flexible COMBISEPTIC series and the aseptic DOGASEPTIC systems, have proven to be a tremendous success. Highest packaging and product flexibility, most advanced servo-technology etc. are the latest highlights.
**DOGATHERM**

for fresh products

The smaller the markets are the more versatile the technology has to be. For diversification and the ability to respond to short term trends, flexible equipment is a necessity.

The GASTI DOGATHERM series are the corresponding cup filling and sealing machines for fresh products which are distributed within the cold chain, with or without extended shelf lives.

**GASTI DOGATHERM 21,**

the machines for low output requirements

For smaller outputs, the DOGATHERM 21 is the ideal machine. It is able to fill a variety of dairy products, sauces, juices, jam, spreads, dips and processed cheese.

The standard equipment includes one main filler for single layer products. Additional fillers can be fitted for multi-layer or twin cavity filling (optional).

The DOGATHERM 21 fills pre-formed, stackable and de-nestable cups, made of plastic, cardboard or aluminium material. They are closed by a heat sealed aluminium or plastic membrane. A re-usable plastic snap-on lid can also be applied.
GASTI DOGATHERM – the machine for higher outputs

Whenever fresh products have to be filled at higher outputs, the DOGATHERM – more than 500 machines have already been sold – is the optimum solution. Liquid to pasty products can be filled in single and multiple layers, with or without particulates, e.g. yoghurt (plain or fruited), chilled desserts, crème fraîche, processed and fresh cheese, sauces, jams, honey and soups.

The GASTI DOGATHERM’s output is optimized by virtue that, being of continuous motion, the cups are transported through the machine at a constant speed. The continuous motion is particularly suited to liquid and foaming products, with minimum head space and without reducing the output. Tubs or cups made of polypropylene, polystyrene, cardboard or composite materials can be used. They are closed by heat sealed diaphragm lids. Snap-on lids can also be applied.

As an option, the standard models are available in the „hygiene“ version, with laminar air flow cabinet for sterile air application in the product zone and with high intensity UV-C radiation for sterilizing the inner cup and lid surfaces. The UV-C equipment can be retro-fitted with the provision of a rotary type lid applier.

With a special machine execution, it is also possible to fill de-hydrated soups, muesli, confectionary etc.

Technical data

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<tr>
<th>Machine type</th>
<th>Number of pumps</th>
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COMBISEPTIC
Flexibility to perfection

The more competitive the markets are, the more versatile the technology has to be. For diversification and the ability to respond to short-term trends, flexible equipment is mandatory. The modular GASTI COMBISEPTIC offers flexibility to perfection and at a high output. The ergonomically optimized machine design, combined with the patented GASTI cell plate system, enables short change-over times for changes to completely different formats. Liquid products can be filled at constant speed throughout the machine, with no acceleration and deceleration forces, at the highest output of up to 18,000 c/h. Convenient operation from one side of the machine plus the OYSTAR Gasti visualization system minimizes personnel requirements.
For products with an extended shelf-life:
The COMBISEPTIC is able to fill liquid to pasty products such as plain or fruited yogurt, quark, crème fraîche, mousse, custard, dips, processed cheese etc., with and without particulates, in single and multi-layers. The fillers are available with conventional drives or servo-drives. With the hygiene level of "ultra-clean/acidic-aseptic" all of the shelf-life requirements demanded by the markets are reliably fulfilled. For packaging sterilization there is a choice of UV-C or H₂O₂, de-germination systems. Guaranteed germ reduction for both systems is $10^4$. Combining sterile air admission at the filling zone, the CIP/SIP cleanable filler and de-germination of the packaging enables products to be packed with extended shelf-lives.

Always retro-fittable /extendable
Due to its modular construction, post delivery retro-fits are quickly and easily carried out e.g. additional fillers, fillers for cereals and dry products, assorted filling, snap-on lid applying station, cup leakage test device, labels or spoon/straw applicators.

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CONTITHERM
for products with extended shelf-life

More frequently consumers ask for fresh products with a longer shelf-life. Retailers have to sell the products long before the “best before date” – otherwise they would be obliged to sell them as “special offers” at reduced prices. Manufacturers need longer shelf-lives in order to distribute their products throughout the national market.

Shelf-life according to demand:
“hygienic” or “ultra-clean”

The name of the CONTITHERM is derived from it’s continuous motion working principle. With this continuous motion principle, the CONTITHERM can fill products with an extended shelf-life, i.e. low-count products which have to be distributed within the cold chain. In the ultra-clean version cups and lids can be sterilized with either UV-C or H₂O₂. Guaranteed germ reduction for both systems is 10⁴. The complete filling area from the cup drying station to the heat-sealing station is continuously under sterile air over-pressure, thus preventing re-contamination from ambient air. The CONTITHERM can be delivered in “hygienic” or “ultra-clean” versions. The same packaging material as for the DOGATHERM can be used: i.e. stackable and de-nestable cups made of polypropylene or polystyrene materials and closed by heat-sealed, pre-cut aluminium foil lids. Recyclable packaging (mono-packaging) materials can also be used.
Product diversity and easy operation

The advantages of the continuous motion principle of the CONTITHERM become particularly clear when filling liquid products. Products such as yoghurt (with or without fruit pieces), milk shakes, quark, soft cheese, desserts, mousse, jam etc. can be filled problem-free, at high outputs. Assorted filling and packing are also possible. The pre-selected weight of all different products to be filled at any given time is accurately achieved. Each dosing pump in each lane can be adjusted individually. The fillers are available with conventional drives or servo-drives.

The modern, state-of-the-art construction makes all areas of the machine easily accessible. Thanks to the high degree of automation the machine takes over a multitude of functions from machine operator. All machine versions are easily operated and maintained.

The user-friendly on-screen visualization system ensures safe and simple control of all machine functions. Easy cleaning of the external surfaces of the machine is possible due to the unbroken, smooth profiles.

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**DOGASEPTIC**

for long shelf-life products

Products filled under aseptic conditions have, even outside the cold chain, a considerably longer shelf-life than fresh products. They are equally good tasting and do not deteriorate. Without the need for refrigeration, distribution costs are vastly reduced.

The GASTI DOGASEPTIC was designed for multi-layer and assorted filling of liquid to pasty products, with or without particulates. All types of yoghurt and desserts such as custard, pudding and mousse, with and without cream toppings, are filled under ultra-clean or aseptic conditions.

The packaging material is sterilized in an enclosed chamber which remains sterile throughout the whole filling process and is subject to a sterile air over-pressure. The inner cup walls and the inner surface of the lids are exposed to a 35% H₂O₂ vapour which condenses into an extremely fine and uniform condensate film, without droplets. Up to five drying stations evaporate the residual sterilizing agent by means of hot sterile air. The sterile product is filled under sterile conditions by fillers which were specially developed for aseptic filling into sterile cups. All sterilization functions are individually controlled by a multi-stage monitoring system, i.e. the exact dosing of hydrogen peroxide and a harmonized air pressure and exhaust system within the machine, which also controls the exhaust of peroxide-laden air. The aseptic fillers have no moving seals and are CIP-cleanable and SIP-sterilizable. The pistons are lubricated by the product itself. A sterile air over-pressure avoids infected ambient air from entering into the machine. All machine types are extremely operator and maintenance friendly.

The visualization system enables the machine operator to completely and safely monitor all machine functions.

**GASTI aseptic machines – with germ reduction rates of 10⁷ for bacillus subtilis**

The DOGASEPTIC is available in "ultra-clean" and "aseptic" standards:
- "ultra-clean": exempt* from vegetative micro-organisms including test germ aspergillus niger (pH < 4.5 and aw < 0.95)
- "aseptic": exempt* from any micro-organisms including bacteria spores; test germ bacillus subtilis (pH > 4.5 and aw > 0.95)

Both hygiene standards are thoroughly secured via:
- an enclosed sterile system which protects the machine against re-contamination by infected ambient air
- effective packaging material sterilization by hydrogen peroxide (H₂O₂) treatment.

* "exempt" means that the total microbiological failure rate remains within the guaranteed limits.
Options for every requirement
• cup feeding equipment, also by elevators from a mezzanine floor
• pre-filling and/or post-filling stations
• products in two or three layers
• assorted filling
• special dosing units for spiralled or vertical-layer defined products and other special product presentations
• servo drives for filler, cup lifting/lowering
• filling nozzles and string-cutters according to the consistency of the product to be filled
• steam sterilization of the dosing equipment and product hopper
• cup leakage control with removal of unsealed cups
• ink-jet coding device
• snap-on lid applying station
• format flexible design for different cup diameters

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* format flexible version on request