

### COMBISEPTIC

Format flexible cup filling  
and sealing machine



#### **Hygiene Standards**

hygienic, ultra-clean/aseptic for high-acid products

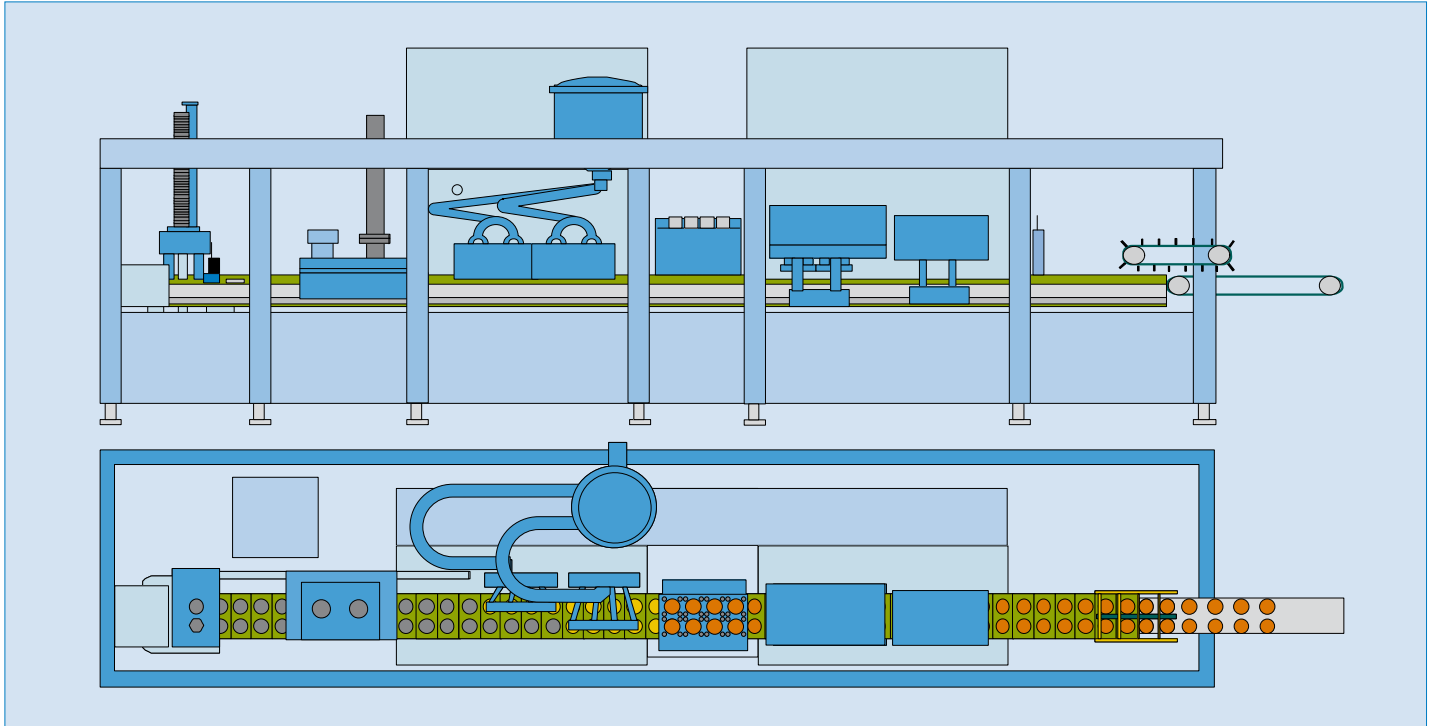
#### **Machine Types**

CS 41, CS 81

## COMPLETE LINE

We offer the project design of a complete packaging line on the COMBISEPTIC basis comprising:

- cup buffer and feeding systems
- separate tray packer
- tray erector
- palletizer



Machine overview COMBISEPTIC 81

### Machine Concept

- modular construction
- conveyor in an enclosed chamber
- controlled sterile air supply
- sealed protection doors
- large windows providing unrestricted observation and full accessibility to the clean area
- upwards sliding doors on the operator side
- no intervention into the clean area when servicing lid magazines
- continuous motion

### Format Flexibility

The following components have to be exchanged for size changes:

- cup cell plates
- cup magazine and de-stacking scrolls
- lid magazine
- sealing plates
- changeover time:  $\leq 30$  minutes

### Standard Equipment

All parts coming into contact with the product and cleaning agents are manufactured from materials acceptable for foodstuffs.

The standard equipment consists of:

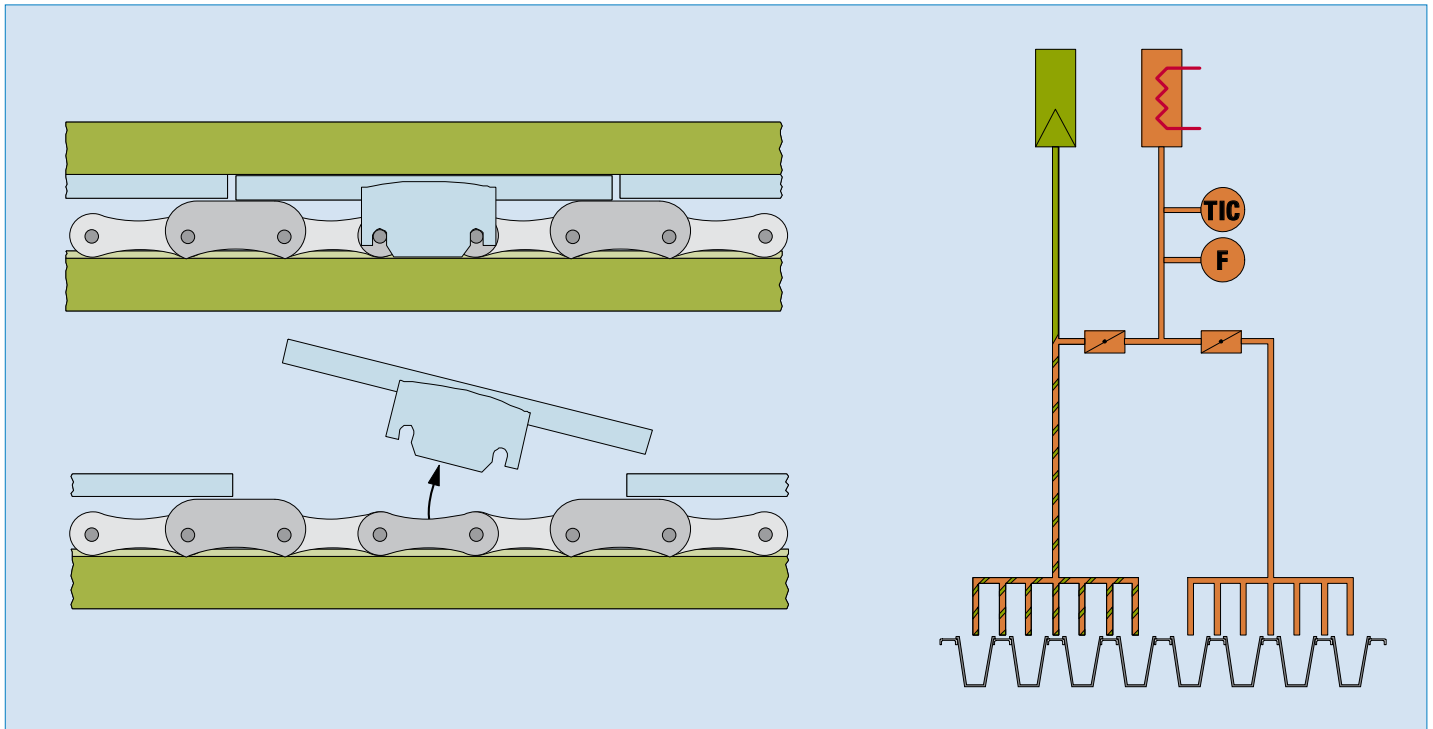
- cup de-stacker
- cup sensor “no cup” and “double cup”
- cup plate change-over station
- CIP-cleanable filler capable of steam sterilization using atmospheric saturated steam
- lid applier
- sealing station
- cup discharge
- separate switch cabinet
- machine moves from left to right when viewed from the operator side
- hygiene standard: hygienic

### Multiple Formats

For additional flexibility, two formats can be filled simultaneously (e.g. cup  $\varnothing$  75 mm and  $\varnothing$  95 mm)

### Optional Equipment

- additional dosing units for multi-layer filling and for spiralled or vertical-layer defined products and other special product presentations
- dosing units for cereals/dry products
- assorted filling, i.e. several product hoppers/ flavours
- 4-way magazine for assorted filling
- display in operator-machine dialogue (visualization system)
- operation data registration and evaluation system
- ink jet coding
- hygiene standard: ultra-clean or aseptic for high-acid products
- dust and particle extraction
- laminar airflow cabin
- cup leakage test device
- snap-on lid applier



#### Cup plate exchange

#### Cup Cell Plates

The OYSTAR Gasti patented mounting lugs ensure precise location of the cell plates onto the extended pins of the cup conveyor chain. Guide tracks prevent the cup cell plates from vertical displacement.

#### Cleaning

The COMBISEPTIC is equipped with program-controlled CIP cleaning and sterilization. Any malfunctions in the cleaning process are displayed at the M.M.I. OYSTAR Gasti offers the complete cleaning system and controls to be connected to either a dedicated CIP set or an existing central system. Flow rate 20–25 m<sup>3</sup>/hour at 3 bars overpressure. The highly efficient cleaning includes the complete product area from the valve interface to the dosing system/filler.

#### Cup Conveyor

- continuous motion
- mechanically driven from the main drive
- steplessly adjustable machine speed
- ramp-up start to the pre-set speed

#### Hygiene Standards

The COMBISEPTIC complies with the following hygiene standards:

- hygienic (standard)
- ultra-clean/aseptic for high-acid products (optional)

The sterile air overpressure chamber is separated from the drive elements. The controlled sterile air supply (laminar flow) and a sealed sterile overpressure chamber prevent re-infection during production.

#### Control

- ergonomically optimized machine design
- operation from one side with full all-round view
- short preparation times
- minimized personnel requirements

#### Cup Buffer and Feeding Systems

- manual feeding (stack height ca. 650 mm) into the vertical magazine
- automatic cup feeding from a horizontal magazine

#### Packaging material sterilization (H<sub>2</sub>O<sub>2</sub>)

#### Cup De-stacking Device

- rotating scrolls
- electronic cup sensing for “missing cups” and “double cups”

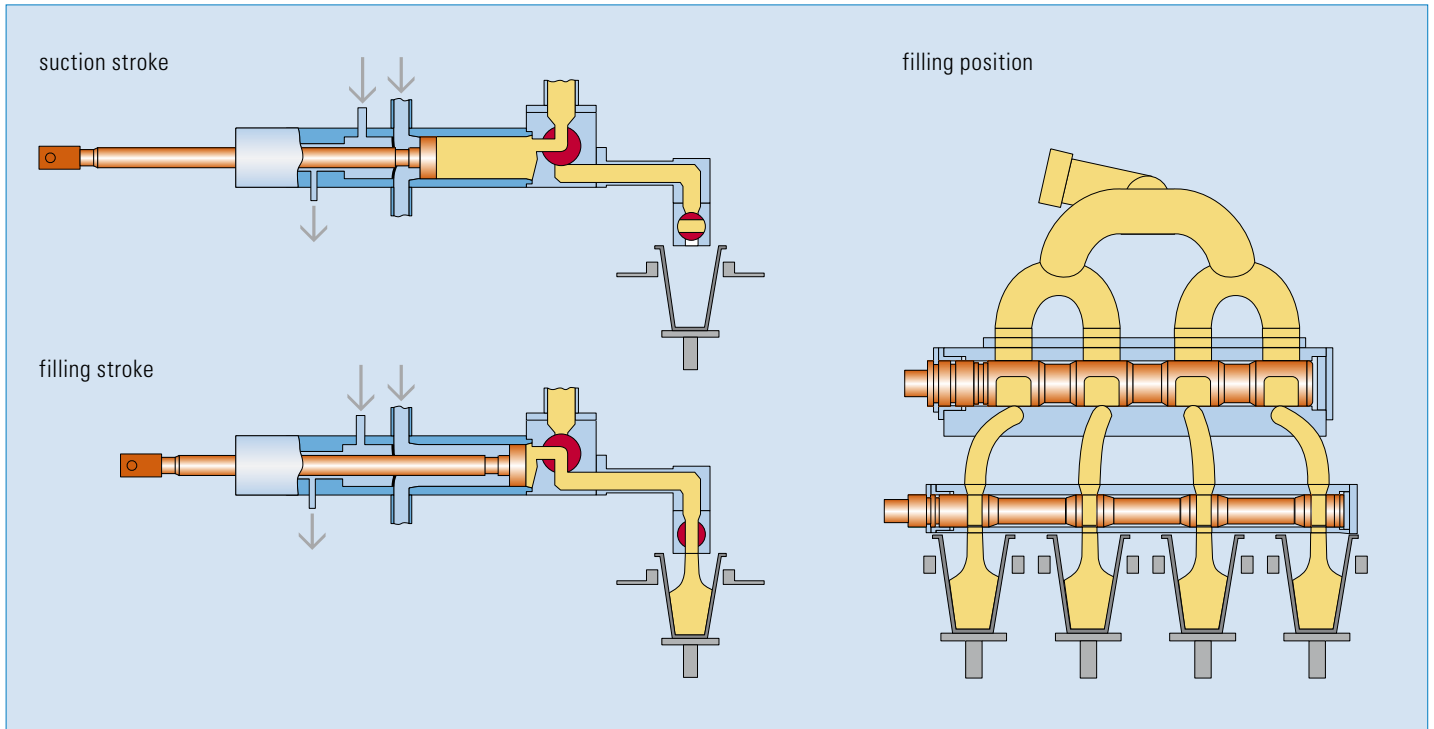
#### Packaging Material Sterilization

##### a) with H<sub>2</sub>O<sub>2</sub>

- dosing of H<sub>2</sub>O<sub>2</sub> synchronized with machine speed with fault alarm function
- H<sub>2</sub>O<sub>2</sub> is atomized into sterile air
- H<sub>2</sub>O<sub>2</sub> vapour is sprayed into the cups
- cup drying with heated sterile air
- multiple nozzles ensure complete drying
- extraction of H<sub>2</sub>O<sub>2</sub>-laden air

##### b) high pressure UV-C sterilization system

- high pressure UV-C emitter, ozone free, in a stainless steel housing with quartz filter
- safety reflector protection system, automatically controlled whenever the machine stops
- stainless steel switch cabinet housing all electrical components
- air-cooling system including pipework, fans and air flow controls
- safe and reliable sterilization using long life UV-C lamps plus an intensity recording device
- highly efficient irradiation compared with standard UV-C low-pressure emitters



## Filler

### Filler

- mechanically driven from the main drive
  - individual fillers – number depending on machine type
  - steplessly adjustable piston stroke
  - individually calibrated fill pump pistons
  - quick change filling nozzles
  - quick change string cutter for products with particulates
  - tube type nozzles for liquid products
  - cup lifting/lowering
- option:** servo drives for filler and for cup lifting/lowering

### Fill Products

The COMBISEPTIC is able to fill liquid to pasty food products with or without particulates

- fermented milk products
- soft drinks
- single and multi-layer desserts also for spiralled or vertical-layer defined products or similar special product presentations
- aerated products
- fruit preparations /sauces
- rice puddings
- de-hydrated soups (special dosing units)
- cereals /dry products (special dosing unit)

### Fill Volume (in cm<sup>3</sup>)

pre-filler: 10–60, 10–160  
main filler: 25–280, 50–550

### Closures

The following types of closures can be used:

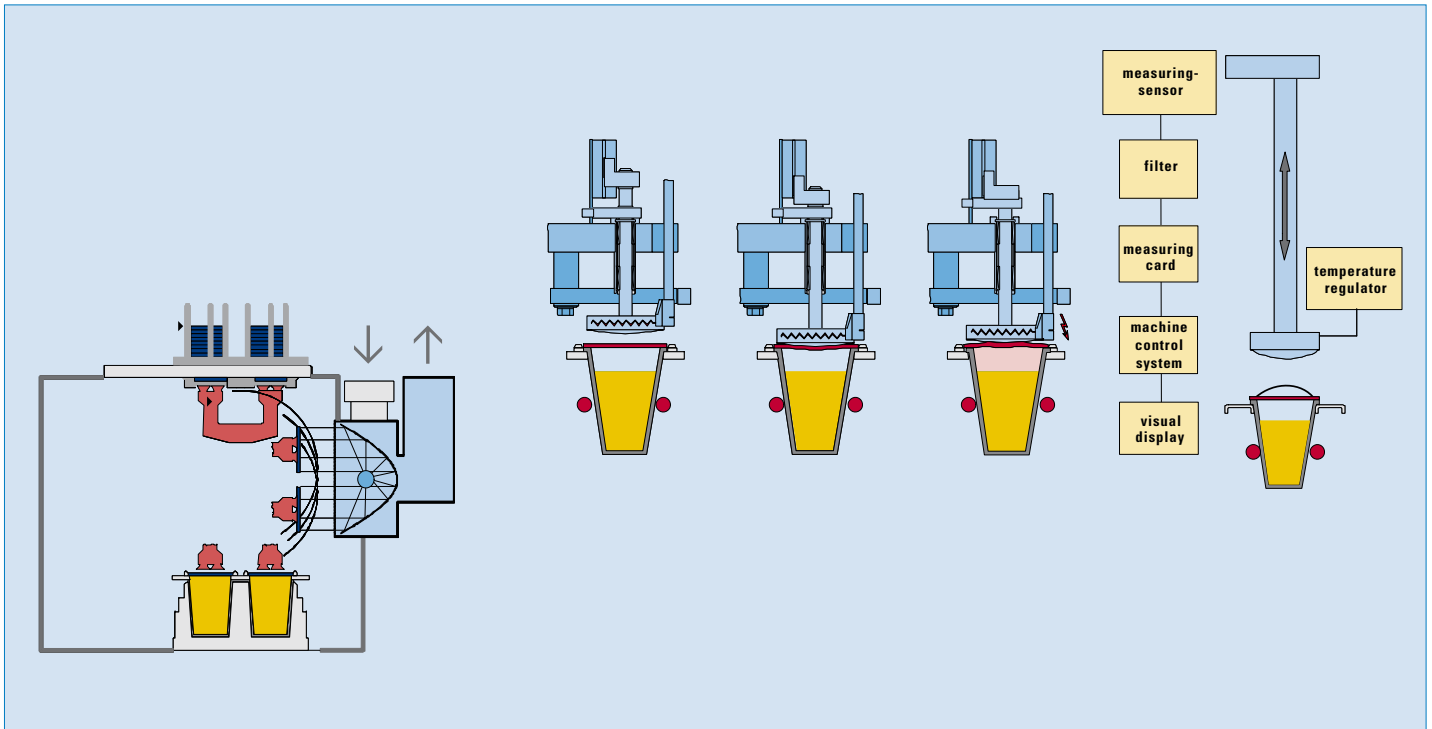
- diaphragm lids made of aluminium and/or plastic material, monofoil
- pre-formed, heat sealable lids made of aluminium, plastic material, monofoil
- re-closable lids made of plastic material (snap-in or snap-on lids)

### Technical data CS 41, 81

pre-filler	10–60 cm <sup>3</sup> , 10–160 cm <sup>3</sup>
main filler	25–280 cm <sup>3</sup> , 50–550 cm <sup>3</sup>

Machine type	Number of pumps	Output (cups/h)	max. cup ø*	max. cup height
CS 41	4	9,000	115 mm	130 mm
CS 81	8	18,000	95 mm	130 mm

\* bigger cup diameters upon request



**Lid applier with UV-C sterilization**

**Cup leakage control – combined system**

### Cup Leakage Test Device

The cup leakage device works using differential measurement of the lid deflection by creating overpressure in the head space

- thermal (by heating the headspace in the cup)
- alternative: mechanical (by squeezing the cups), or in combined version.

If there is no deflection of the lid, the cup is identified as being untight and separated

### Lid Applying Station

- standard lid applier for non-assorted filling
- 4-way lid applier for assorted filling (optional), mechanically driven and synchronized with the main drive
- UV-C lid sterilization system
- Lid feeding without machine stop

### Heat-Sealing

- drive: traversing, mechanically driven from the main drive, pneumatic vertical motions
- mechanical cup cell plate support
- flexing sealing heads, individually mounted
- individual temperature controls with alarm features
- pneumatic raising of the sealing heads when the machine stops

### Date Coding

Integrated ink jet coding system

### Cup Discharge

- cup lift-out utilizing a belt system (CS 41)
- cup lift-out utilizing a carrier system (CS 81) for combination with separate tray packer or discharge conveyor

### Operation

State-of-the-art visualization system with different authorization levels.

Displays for:

- production
- cleaning
- recipe management
- chronological listing of alarm and message texts
- operation data registration (optional)
- adaptation of the servo-cams in the filler area by means of visualization system (optional)

### OYSTAR Gasti Delivery Program

- Filling and sealing machines for pre-made cups
  - Continuous and intermittent operation
  - Flexible in size and equipment
  - Multi-layer filling
  - Hygiene standards: standard – hygienic – ultra-clean – aseptic
- End-of-line packaging equipment
- Mixing and feeding pumps
- Second-hand machines

**OYSTAR Holding GmbH**  
Lorenzstrasse 6  
76297 Stutensee, Germany

P +49 7244 747 0  
F +49 7244 747 299  
info@oystar-group.com  
www.oystar-group.com

**Gasti Verpackungsmaschinen GmbH**  
Raiffeisenstrasse 8  
74523 Schwäbisch Hall, Germany

P +49 791 402 0  
F +49 791 402 100  
info-dairypackaging@oystar-group.com  
www.oystar-group.com

## OYSTAR Group Worldwide

