



Packaging machines
for your food products

OPTIMA
EXCELLENCE IN PACKAGING

Member of



Only experts master future technologies

Challenges? That's what we like.

Innovative packaging machines demand a high level of specialization. Optima meets this requirement with innovative concepts for the development and manufacture of branch-oriented systems in its four areas of Consumer, Nonwovens, Pharma and

Life Science. Continuous growth has characterized this family business since it was established in 1922. With more than 1,700 employees worldwide, Optima has deliberately chosen to maintain flexibility and customer focus as central principles.



Food



Single Serve



Cosmetics



Chemicals

Day after day, unimaginable quantities of food, cosmetics and chemical products are dosed, filled and packed. Many of them with machines from Optima Consumer and this for several reasons: machine flexibility, high output rates, product protection and process assurance are

prime advantages. From starter models to complete lines, including some with handling and assembly functions.

Optima Consumer offers everything that makes dosing, filling and packaging easier, safer and even more economical. Optima

Consumer machines are also continuously optimized with respect to the total cost of ownership. Thus they require only a minimum of service, wear and tear and replacement parts while offering long-term high performance and precise and consistent weighing results.

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For classic food products and innovations

From large packs to portion packs

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Packaging technologies for foods

Optima Consumer is your partner for packaging foods of varying consistencies: from thin liquids to pastes and for powders, granulates and chunky foods. Optima packaging technologies are based on decades of experience and are convincing again and again with innovations that set the standards in the branch. They are

regarded as extremely reliable, precise and with high output rates. Whether semi-automatic single machines, fully automatic monoblock machines or complete turnkey lines, Optima has the solutions especially tailored to meet your needs.



Product characteristics

- ▶ Liquid
- ▶ Pasty
- ▶ Powdery
- ▶ Granulated
- ▶ In pieces

Containers

- ▶ Glass
- ▶ Plastic
- ▶ Composite paper
- ▶ Foil
- ▶ Metal

Closures

- ▶ Screw closures
- ▶ Press-on closures
- ▶ Pump closures
- ▶ Crimp closures
- ▶ Seals

Machine Types

- ▶ Pilot systems, sample production
- ▶ Semi and fully automatic machines
- ▶ Packaging systems for portion packs
- ▶ Monoblock machines (filling and closing on one machine)
- ▶ Complete turnkey lines

The best solution for every requirement

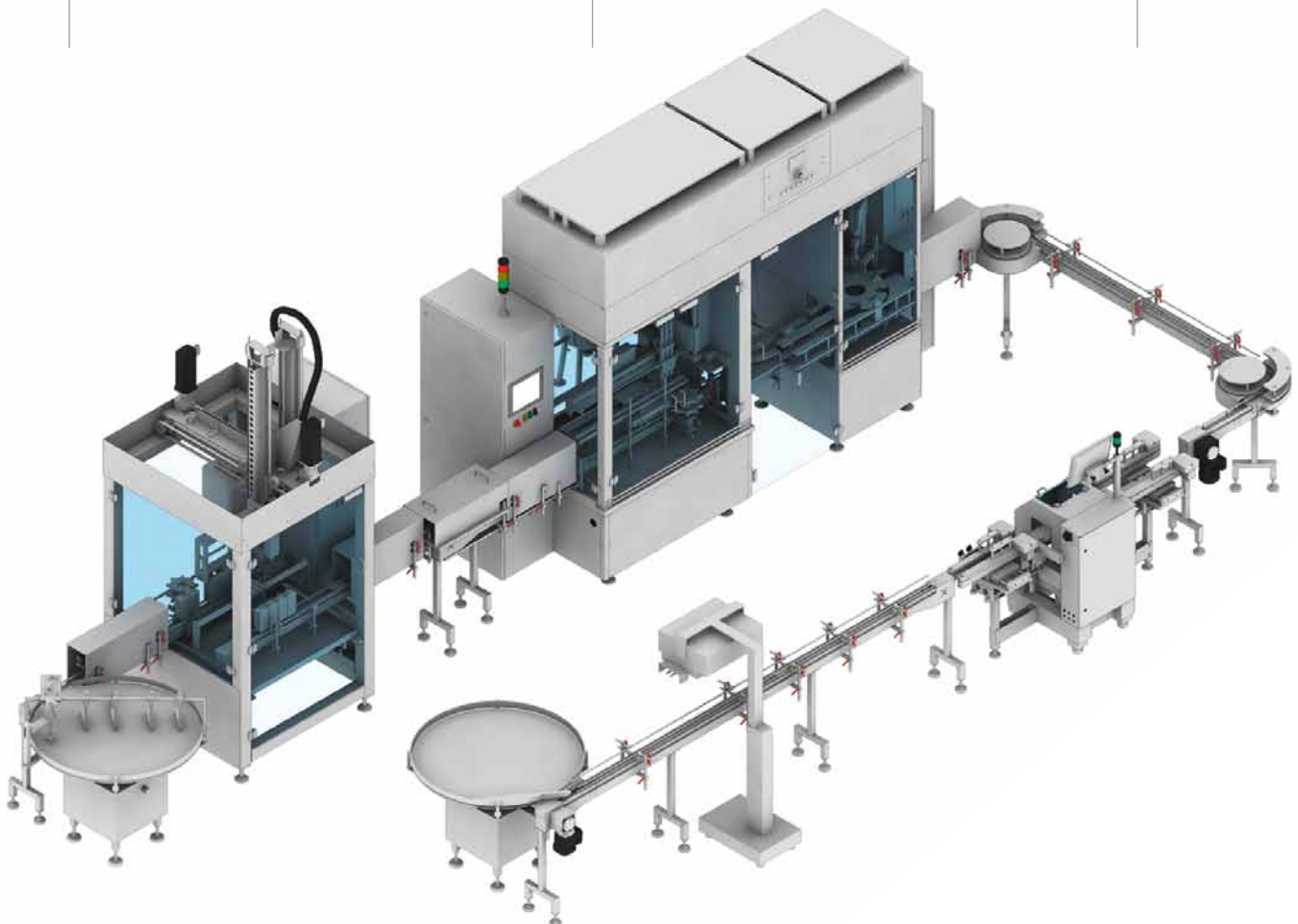
The processes

- ▶ Container feeding
- ▶ Depalletizing
- ▶ Cleaning / Sterilizing
- ▶ Filling / Dosing
- ▶ Closing
- ▶ Weighing
- ▶ Labeling
- ▶ Handling
- ▶ End of Line

mg – kg

ml – l

▶▶ up to ▶▶▶▶





Instant products

up to **400** containers/min.



Figure shows an example:
OPTIMA MMK-FS

This is what matters

- ▶ Calibratable weight controls
- ▶ Container sealing
- ▶ Easy access
- ▶ Explosion-protected machine execution
- ▶ Compact construction
- ▶ Dosing with highest accuracy



The processes for instant products

Cleaning of containers

- ▶ Air rinsing, evacuation, turning and sterilizing

Dosing

- ▶ Volumetric system
- ▶ Gravimetric system
- ▶ Vacuum system

Filling

- ▶ Careful filling of product with cup dosing system or auger dosing machines
- ▶ Dust-free filling process
- ▶ Vibrating stations increase product density and output
- ▶ Revolving funnels
- ▶ In-line gassing
- ▶ Volume adjustment via weighing system
- ▶ Dosing with highest accuracy

Closing

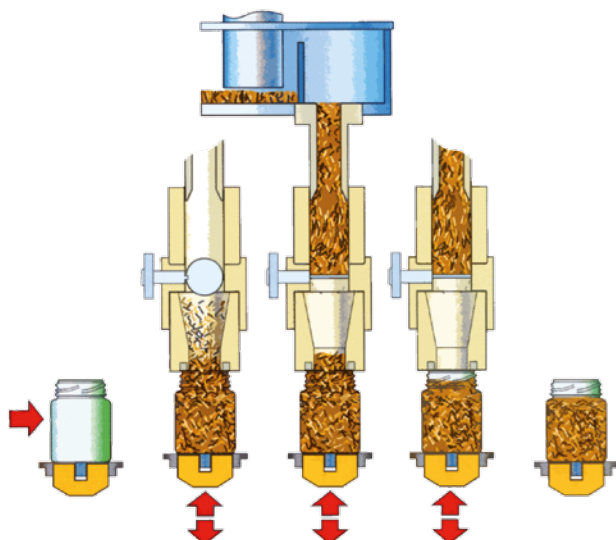
- ▶ Screwing, press-on, position orientation, crimping
- ▶ Sealing: Inductive, ultrasonic, thermal
- ▶ Adjustable speed and torque
- ▶ Closure inspection with rejection

Handling

- ▶ Automatic change of product
- ▶ Simple and quick format changes
- ▶ Central controls of the technical units
- ▶ Interface to a higher-level data system (MES/SCADA)
- ▶ Touch panel

Further processes

- ▶ Arrangement of container groups
- ▶ Placing into trays and cartons
- ▶ Filling process under protective gas
- ▶ Calibratable weighing technology
 - 100 % tare/gross weighing system
 - 100 % gross weighing system





up to **240** containers/min.



Figure shows an example:
OPTIMA MFL

This is what matters

- ▶ Hygienic design concept
- ▶ Highest portioning accuracy through customized dosing and weighing technology
- ▶ Tool-less and quick format changes
- ▶ Calibratable tare/gross weighing system
- ▶ Efficient product compression over several stations



The processes

for dry powdered soups, sauces & spices

Cleaning of containers

- ▶ Air rinsing, evacuation, turning and sterilizing

Dosing

- ▶ Volumetric system
- ▶ Gravimetric system
- ▶ Vacuum system
- ▶ Product-specific

Filling

- ▶ Careful filling of product with cup dosing system or auger dosing machines
- ▶ High filling accuracy
- ▶ Programmed topping up
- ▶ Dust-free filling process
- ▶ Vibrating stations increase product density and output
- ▶ Processing of mixed products
- ▶ Revolving funnels
- ▶ In-line gassing

Closing

- ▶ Screw capping, press-on, position orientation, crimping
- ▶ Sealing: Inductive, ultrasonic, thermal
- ▶ Adjustable speed and torque
- ▶ Closure inspection with rejection
- ▶ Closures processing from the stack or as bulk goods

Weighing

- ▶ 100 % tare/gross weighing system (calibratable)
- ▶ Shut-off weigher

Handling

- ▶ Easy to clean
- ▶ Simple and quick format changes
- ▶ Central controls of the technical
- ▶ Data interface to production control panel
- ▶ Touch panel





up to **200** containers/min.



Figure shows an example:
OPTIMA SHF

This is what matters

- ▶ Toolless and quick format changes
- ▶ CIP / SIP fully automatic cleaning
- ▶ Chunky ingredients in liquid
- ▶ Inductive without pressure vessel
- ▶ Multi-component filling



The processes

for liquids and paste

▶ **Sauces & spreads (sweet and savory)**

▶ **Soups & spices**

Cleaning of containers

▶ Sterilizing and air rinsing

Dosing

- ▶ Coriolis mass flow meters (MDM)
- ▶ Magnetic-inductive flow meters (IDF)
- ▶ Piston pump
- ▶ Gravimetric system
- ▶ Volumetric system

Filling

- ▶ Low-germ under laminar flow
- ▶ Hot filling, double-jacket execution
- ▶ With chunky parts
- ▶ High filling accuracy
- ▶ Multi-component filling

Closing

- ▶ Screw capping, pressing-on, position orientation
- ▶ Sealing: Inductive, ultrasonic, thermal
- ▶ Adjustable speed and torque
- ▶ Closure inspection with rejection

Further processes

- ▶ CIP / SIP
- ▶ Filling module completely changeable
 - Quick change of product
 - Avoidance of cross contamination
- ▶ Low-germ processes under laminar flow
- ▶ Explosion-protected machine execution possible
- ▶ Data exchange with customer's master system





Concentrates

up to **350** containers/min.



Figure shows an example:
OPTIMA OF-OV

This is what matters

- ▶ Turn-key lines
- ▶ Processing of non-freestanding containers
- ▶ CIP / SIP fully automatic cleaning
- ▶ Low-germ filling
- ▶ Short format changeover times due to carrier systems
- ▶ Minimized energy consumption



The processes for liquid concentrates

Cleaning of containers

- ▶ Sterilizing and air rinsing

Dosing

- ▶ Coriolis mass flow meters (MDM)
- ▶ Magnetic-inductive flow meters (IDF)
- ▶ Gravimetric system
- ▶ Volumetric system

Filling

- ▶ Low-germ under laminar flow
- ▶ Hot filling, double wall model

Closing

- ▶ Screw capping, press-on, position orientation
- ▶ Sealing: Inductive, ultrasonic, thermal
- ▶ Adjustable speed and torque
- ▶ Inspection stations with rejection
- ▶ Easy format change

Further processes

- ▶ CIP / SIP
- ▶ Container feeding and/or sorting
- ▶ Filling module completely changeable
 - Quick change of product
 - Avoidance of cross contamination
- ▶ Low-germ processes under laminar flow
- ▶ Explosion-protected machine execution possible
- ▶ Data exchange with customer's master system
- ▶ 100 % weighing controll
- ▶ Container coding
- ▶ Placing into trays
- ▶ End of Line solutions





Single Serve – capsules and pods

up to **1.500** packs/min.



Figure shows an example:
OPTIMA CFL

This is what matters

- ▶ Modular system
- ▶ Integrated controls / components
- ▶ Only one operator panel for all functional modules
- ▶ Functional modules can be moved on a patented track system
- ▶ Multi-lane and intermittently working model
- ▶ Servo-driven dosing technology
- ▶ Individual lanes can be switched off
- ▶ Integrated weighing technology



Single Serve – capsules and pods



Portion packs – quickly produced and with high pressure

Since their introduction, portion packs for coffee, tea and other food items are ever more in demand. Optima offers filling and packaging machines specially designed for the rational and flexible manufacture of small packaging sizes.

The special features of the various coffee types and their typical

packaging can be taken into account individually by the modular construction.

The quality of the product has first priority. With the integrated combination of dosing and weighing technology, high output rates with the highest level of filling precision can be achieved.

Capsules

Processes:

- ▶ Container magazine and sorting
- ▶ De-stacker and Pick-and-Place modules
- ▶ Auger dosing device
- ▶ Piezo-electric filling chute
- ▶ Drum doser
- ▶ Multihead weigher
- ▶ Product optimization, gas flushing
- ▶ Welding and sealing technology for metal, plastic or nonwovens
- ▶ Closure application under vacuum or with overpressure
- ▶ Closing systems, e.g. screw caps, press-on caps, seal caps and drag-off caps
- ▶ Assembly module
- ▶ Printing and coding systems
- ▶ Inspection systems
- ▶ Fully automatic sample presentation
- ▶ Cartoning machines, case packers or product transfer

Pods

Processes:

- ▶ Bottom paper uncoiling
- ▶ Pre-forming the pad
- ▶ Dosing and filling
- ▶ Turning the product several times
- ▶ Compressing
- ▶ Cover paper uncoiling
- ▶ Pod sealing
- ▶ Punching finished pad
- ▶ Peeling off and reducing rest paper
- ▶ Weight control and regulation
- ▶ Counting and stacking device
- ▶ Placing the pads in cassettes
- ▶ Cassette transport to the packing machine



Secondary packaging for capsules and pads

Module: Bag forming, filling, and sealing machine

- ▶ For packaging a number of stacked pads into bags of different execution.

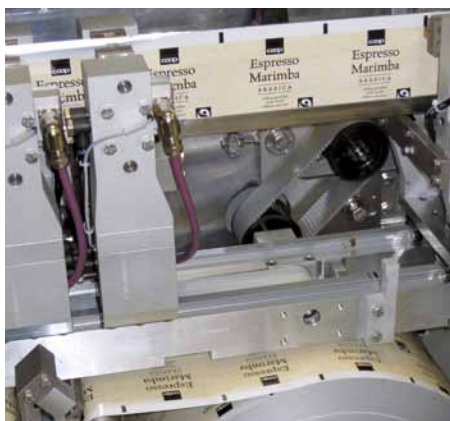


Processes

- ▶ Gassing of filled magazines
- ▶ Corner sealing
- ▶ Forming of the tubular bag (VFFS)
- ▶ Inserting the product stack into the bag
- ▶ Gassing the product stack and the bag
- ▶ Flat bag bottoms
- ▶ Sealing the bag
- ▶ Printing
- ▶ Re-closing
- ▶ Final check weigher

Module: Four-side seal pouch device

- ▶ Capsules and pads are individually packaged with the single pouch module. In this way they are aroma protected and can be stored for a longer period without any loss of quality.



Processes

- ▶ Packaging in tubular bag
- ▶ Integrated in the smallest space
- ▶ Foil feeding from the reel
- ▶ Processing as half tube
- ▶ Nitrogen gassing for product protection with lowest residual oxygen content
- ▶ Coding with production date and best-before date

Cartoners and case packers

- ▶ In order to present the portion packs as attractively as possible at the Point of Sale, we offer ideally suited folding boxes with an insertion or glued closure. Optima cartoners can be integrated directly in the process after the production, filling and closing machine.



Processes

- ▶ Semi-automatic with manual work stations to fully automatic
- ▶ Working modus intermittent or continuous
- ▶ Insertion station for packs
- ▶ Coding
- ▶ Barcode check
- ▶ Processing in-liners, inserts or booklets

The SoftCan® Maker

Machine solution for foil cans

Foil is made into a can

The machine solution for foil cans opens a whole new and flexible packaging world which unites quality with convenience. Based on the patented Cyclero® concept by Huhtamaki, Optima presents its SoftCan® Maker for this innovative type of packaging from the reel. The machine can be flexibly combined with various dosing systems. Cyclero® is suitable for chunky products or also powders and

granulates and can also be packaged with use of protective gas.

Successful projects for the packaging of coffee pads confirm the benefits of low material consumption and warehousing costs with the same security of processing and high output rates.

Processes

- ▶ Sides and bottom manufacture from the reel
- ▶ Processing of a pressure control valve
- ▶ Filling the can with chunky or powder products
- ▶ Filling process under protective gas
- ▶ Closure: One-time closure by means of a peel-off foil or reclosure by means of a snap lid
- ▶ Calibratable gross weight control
- ▶ Placing the can into a carrier or tray / carton



Figure shows an example, other can forms are possible.

This is what matters

- ▶ Simple opening and reclosing with the "easy peel off" method
- ▶ Easy to dispose of, flat and thus extremely environment-friendly
- ▶ Height of the foil can is easily changed in only a few minutes
- ▶ Foil material transparent or with viewing window
- ▶ Significantly lower costs compared with hard cans and glasses with respect to material, manufacture, warehousing and transport
- ▶ Production of 15,000 cans from one reel, thus minimizing packaging material storage



Functional Closures

Closures with additional function(s)

1 – 100 ml

50 – 240 containers/min.

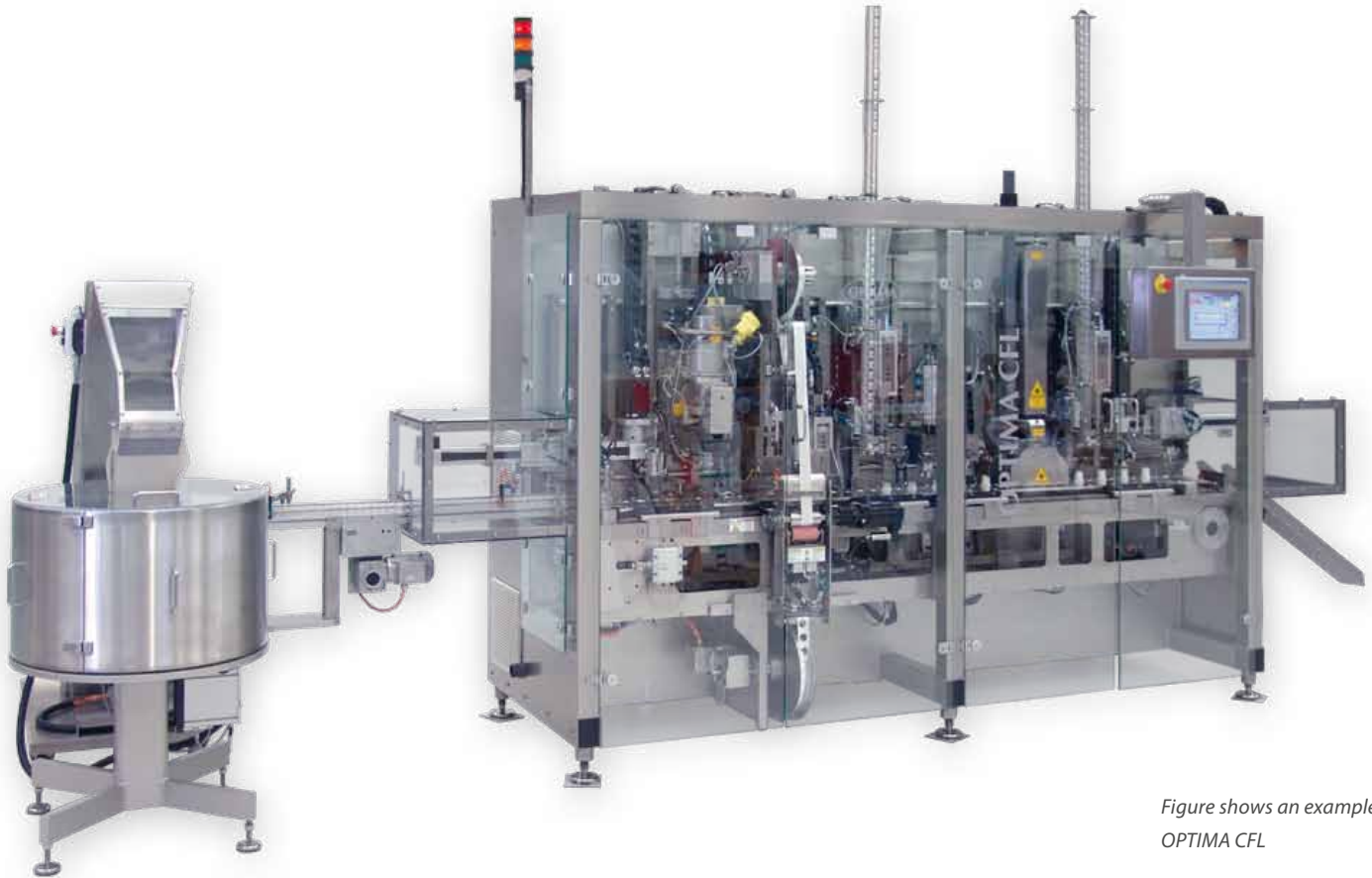


Figure shows an example:
OPTIMA CFL

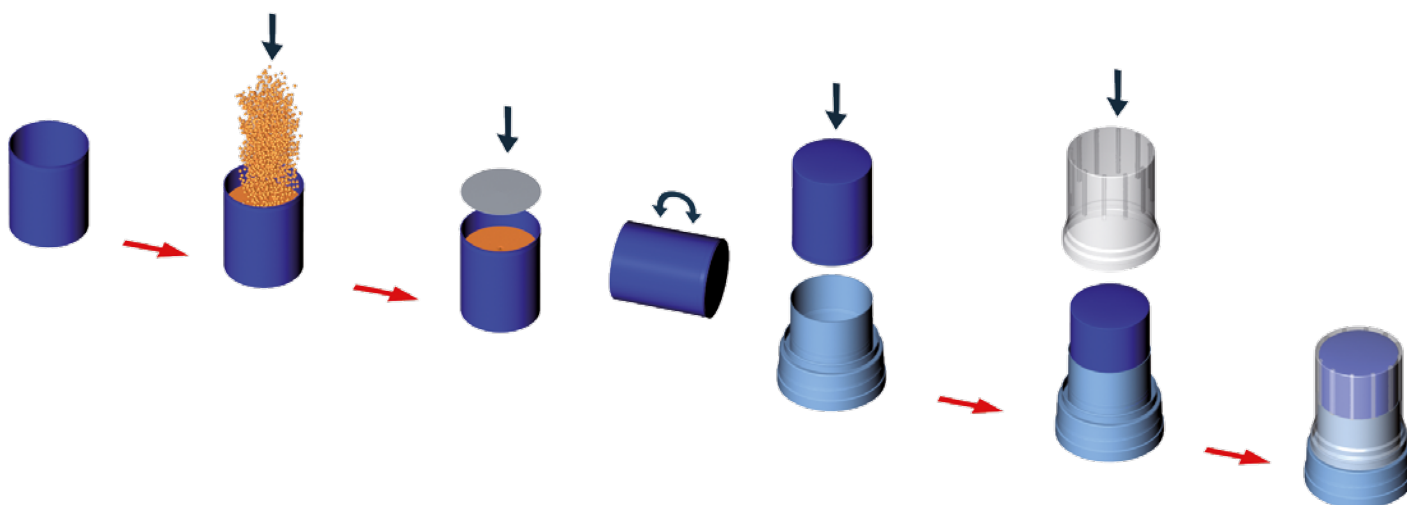
This is what matters

- ▶ Modular machine construction enables flexible adjustment to the extensive variety of product requirements
- ▶ Ongoing automatic process
- ▶ Each process step is fully monitored
- ▶ Simple to operate
- ▶ Excellent access
- ▶ Pilot lines, sample production
- ▶ Leakage test to check if the closure provides optimum protection for the product
- ▶ Semi and fully automatic machines



Functional Closures

Closures with additional function(s)



The processes for closures with additional function(s)

Cleaning of containers

- ▶ Sterilizing and blowing-out

Dosing

- ▶ Coriolis mass flow meters (MDM)
- ▶ Magnetic-inductive flow meters (IDF)
- ▶ Volumetric systems
- ▶ Product-specific systems

Filling

- ▶ Low-germ
- ▶ Dust-free
- ▶ Liquids
- ▶ Powders
- ▶ Granulates

Closing / Assembling

- ▶ Materials processing from the stack or as bulk goods
- ▶ Screwing, pressing-on, position orientation
- ▶ Lid sealing from the stack or roll
- ▶ Adjustable speed and torque
- ▶ Sealing: inductive, ultrasonic, thermal

Further processes

- ▶ Sorting systems
- ▶ Container coding
- ▶ Seal integrity check
- ▶ Control stations with reject

With modularly designed filling and assembly machines Optima Consumer provides solutions for closures with additional functionalities. Several machine functions can be integrated: Dosing systems for contents, sorting and assembly of various components and in addition control functions for the leak tightness of the closure. Particularly important for the closure's reliability is the accuracy of the manufacturing process.

This is how it works:

With activation of the Functional Closure - also called Ingredient Release or Dispensing Closure - **liquid or dry contents** automatically gets released into the container.

Functional Closures are applicable for **Ready-to-Drink beverages with vitamins, aromas or active ingredients** to achieve a longer shelf-life – or simply as a new drink experience.

Further applications are possible for cosmetics, chemical products or OTC.



Service Lifecycle

Service = Security

With the acquisition of an Optima machine all the benefits of a long-term partnership are united. For example, regular maintenance by the experts of our globally available **service network** minimizes the risk of machine downtime. Optima emergency service is available to customers around the clock in person, via **tele-service** and online.

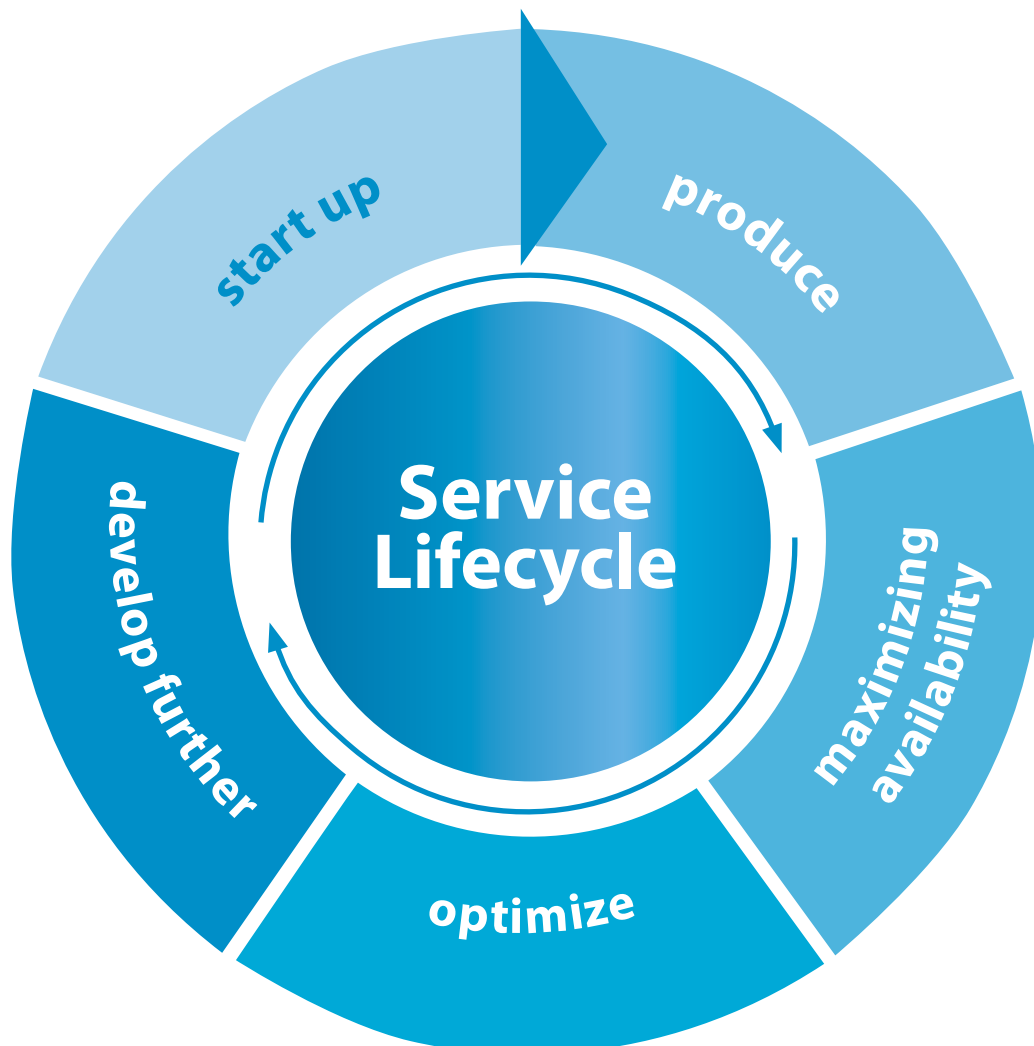
Perfect service needs an **extensive spare parts warehouse**. Our proven logistics system guarantees that the replacement parts reach you in the shortest possible time. **Original replacement parts** are of course in Optima quality.

We also offer you an extensive selection of **format parts** that enable you to respond flexibly to market changes. In particular, components and modules such as manipulators, robots

and line automation, sorting modules and conveying systems are available.

Service begins when the machines are taken into operation. Individual **training concepts** lead to confident handling of the user friendly technology. A further aspect is that it is not always necessary to invest in new machine systems. **Innovative machine upgrades** and individual **conversion packages** from Optima bring your machines up to the latest state of technology.

Consulting, development and integration of various systems to ensure faultless filling and packaging processes e.g. **SCADA systems, line monitoring, track & trace solutions** or **optical inspection systems** all belong to our daily business.



Your contact partner

We are at your service

Our Service Team is at your disposal!

Our hours of business:

Monday – Friday
7:00 am – 5:00 pm (CET)

We can also be contacted on our Service-Hotline 24 hours a day:
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An overview of OPTIMA consumer



Packaging machines for your chemical products

- ▶ Pesticides and fertilizers - dry & liquid
- ▶ Washing and cleaning agents - dry & liquid
- ▶ Refined products



OPTIMA - Excellence in Packaging

- ▶ Milestones
- ▶ Globally active, close to the customer
- ▶ Service global
- ▶ Nonwovens
- ▶ Consumer
- ▶ Pharma
- ▶ Life science



Packaging machines for your cosmetic products

- ▶ Body care
- ▶ Hair care
- ▶ Decorative cosmetics
- ▶ Perfume



Service worldwide – A Comprehensive Service Program

- ▶ Start up
- ▶ Produce
- ▶ Maximizing availability
- ▶ Optimize
- ▶ Develop further



Semi-automatic machines

- ▶ Auger dosing feeders
- ▶ Filling and weighing machines
- ▶ Liquid filling
- ▶ Closers

We will be pleased to send you further information.

Addresses worldwide

The security of a strong partner

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