



Acmi



**Omnia
Technologies**
Enabling Evolution

BLO2FILL

Compactness, efficiency, and
total guarantee of product quality

The solution that combines a blow moulder
and filler on a single platform, to simplify line
management and reduce the risk of contamination
of the product.

BLO2FILL

Blowing and Filling Machine

THE ACMI SOLUTION THAT COMBINES A BLOW MOULDER AND FILLER ON A SINGLE PLATFORM, TO SIMPLIFY LINE MANAGEMENT AND REDUCE THE RISK OF CONTAMINATION OF THE PRODUCT

The Acmi SmartBlo has been designed to be easily installed in configuration with the Acmi EquaFill, operating in electronic synchronisation without any manual synchronisation activity. The two machines are managed by a single HMI. The great compactness and ease of use makes this solution extremely interesting and advantageous for those who want to limit, as much as possible, the number of operators on the bottling line and reduce the risk of contaminating the bottles. In fact, they remain in an isolated environment from their blowing to the capping, thus preventing the risk of contamination.

DOUBLE CAVITY, DOUBLE SPEED

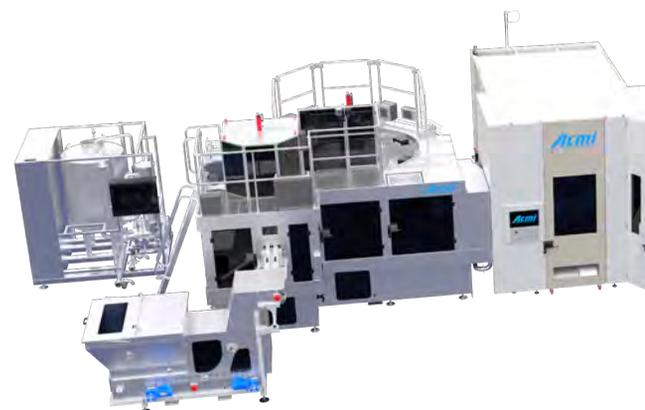
- For output rates of up to 100,000 bottles/hour
- Compact overall machine size

EFFICIENCY AND SUSTAINABILITY

- 100% r-PET and lightweight preform-compatible
- Energy & air consumption monitoring directly via HMI
- Optimized recipes with lower consumption can be set up and recalled

EASY MAINTENANCE

- Low running and maintenance costs
- Easy access to machine



100,000 bottles/hour

Max. speed

5,000 bottles/hour

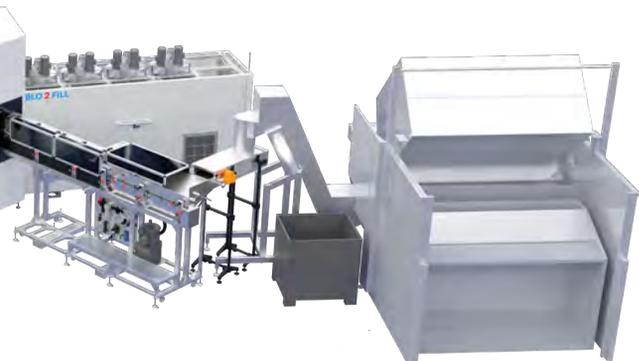
Per mold (on double cavity version)

STILL PRODUCTS (COLD FILLING):

- Still water
- Juices, teas, energy drinks (with preservatives)
- Still beverages in general (with preservatives)
- Suitable for pulps & fibers
- Edible Oil
- Sauces & Syrups

CARBONATED PRODUCTS

- CSD
- Sparkling water
- Beer



SMARTBLO

Sizes



Standard/ Double cavity

- Maximum speed - 100,000 bph (2b) - 52,800 bph (1b)
- Maximum size - 3.3 l



Large single cavity

- Maximum speed - 16,800 bph (4 l) - 24,000 (up to 3 l)
- Format - US gallon



Extra Large (XL Configuration)

- Maximum speed - 8,400 bph
- Maximum size - 12 l

Smarter, automated, ergonomic



- **Automatic monitoring** of blowing parameters for each blown bottle, defective bottle reject
- **Innovative low pressure design of the mold bases** maximizes reliability and speed of changeovers, reducing TCO
- Grippers with **smart position adjustment** for gentle, precision handling of preforms and blown bottles
- Outstanding **ergonomics**, excellent **accessibility** to all machine parts



Oven

The highest **process quality**, the lowest **running and maintenance costs** (no belts or cogs). All operations are lubricant-free. The result: **zero risk of preform contamination** during the stretch-blow process.

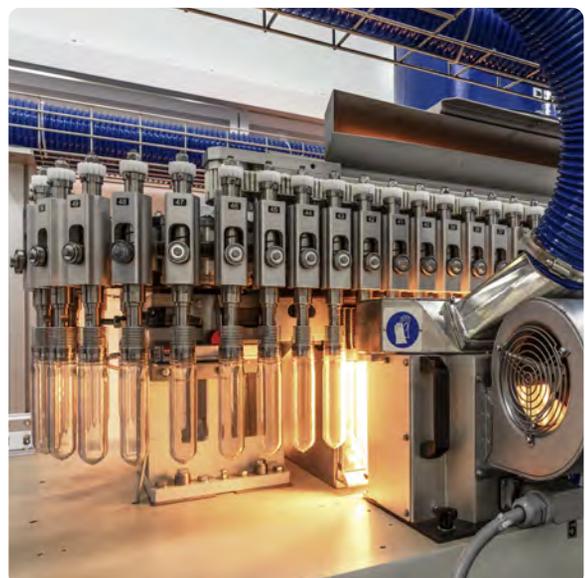
Reduced, **predictive maintenance**: structural chain parts never need replacing, wear on chain components is continuously monitored by advanced sensors.

LOWER RUNNING COSTS

- **20% reduction in oven length** compared to previous versions
- **Modular lamps, easy access** for inspection and replacement
- **U-shaped infrared lamps**: high energy density, more compact oven, smaller footprint, less scrap
- **Aluminum polished lamp reflectors (patented)**, specially shaped for optimized heating efficiency; easy to clean compared to ceramic panels
- **Automatic adjustment of heating parameters** as a function of inlet and outlet preform temperature and ambient temperature; same blowing recipe independently of season, night or day
- Automatic checking of **oven chain position, no replacement needed** during entire machine lifetime, **bearing mandrels** do not need replacing before **12,000 working hours** (the chain has the same lifetime as the machine, so does not need replacing)

HIGHER-QUALITY PREFORM HEATING PROCESS

- Cooling system **separated** from bottle neck
- **Consistent** finish, thanks to lamps that heat the PET under the neck ring
- **No condensation in the oven** during the preform neck cooling process, enhanced **heat exchange** due to high efficiency cooling shield 'wings'



SUSTAINABILITY

- Designed to accommodate **lightweight preforms**
- Heating time adjustable **according** to preform thickness
- **Electricity consumption 25% lower** than conventional solutions



OPTIONALS

- Optional mechanical control system for **correct insertion of preform** (automatic rejection in case of incorrect insertion)
- Integration with vision system



Blower

Featuring high **mechanical efficiency**, maximum **product safety** and outstanding **quality and hygiene**, the blower can also perform **dual-cavity molding**, thus doubling productivity and/or optimizing machine use according to the customer's real needs.

Maximum versatility: fast format changeovers make this an **optimized-productivity format-specific solution**.

Reduced maintenance requirements are combined with enhanced sustainability (**lightweighting, r-PET compatibility**).

STANDARD/DOUBLE CAVITY

- **Productivity doubled (100,000 bottles per hour)**
- **Smaller footprint**, output remaining equal
- **Accelerated format changeovers** (machine can easily be retooled with single or double cavity molds)

HIGH EFFICIENCY

- Up to **26% surface gain** compared to alternative solutions (stand-alone blowers)
- **Strong frame**, no flexing during installation or production
- Stretching rod system with servo motor: reduces preform weight and increases blowable stretching ratio
- **Mold opening system** integrated with the base mold: less vibration, faster format changeovers
- Blowing carousel and transfer starwheels with servo motor, high precision, easy set-up
- Hard-wearing, innovatively designed grippers, with mechanical safety system and quick gripper changeover; high accuracy, no neck deformation

LOWER RUNNING COSTS

- **Air recovery system** (up to 20%): higher efficiency and less air consumption. Air can be retrieved directly from blower to filler and cap system, no low-pressure compressor needed
- **Low pressure** mold base design, up to 15 bar for 1.5 l water bottles
- Energy recovery from main motor during braking
- Easy accessibility for smooth format changeover and unhindered maintenance



PROCESS QUALITY

- Direct settings via HMI, continuous monitoring of **parameters** for each blown bottle, **automatic rejection** of faulty bottles.

OPTIONAL

- **Recovery valve block** inside blowing carousel: purging of air introduced into the mold takes place in two stages, allowing recovery of part of the compressed air during the process; this provides **total air flow savings of up to 20%**.
- Integration with Preform and **Bottle Vision System** for 100% quality control of output



EQUAFILL

Configurations



Configurations for carbonated products:

- One flowmeter for each filling valve
- The same machine can also process still products with ultralight bottles
- Mixer and carbonator integrated in the filler
- On some configurations the automatic dummy bottle is as standard



Configurations for still products:

- Filling-by-time (ACMI patent) system available to allow use of one magnetic flowmeter for all valves, thus reducing machine complexity and maintenance. High-precision filling with one flowmeter (ACMI patent) is, thanks to the calibration system, automatic, and customers can activate it whenever they wish
- One flowmeter for each filling valve and double-speed valve option available to reduce filler size



Optionals:

- Automatic dummy bottles
- Integrated CIP system
- Sterile air flow cabin
- Integrated COP system

Key values



Optimized process:

- Easy to use
- Reduced line footprint/complexity
- Cost/logistics optimization
- Hygienic design/process (no-contact filling valves for still products)
- Hygienic, reliable, low-maintenance filling valve
- Fully washable
- Easy, fast changeovers
- All settings via HMI
- The external product tank is **pre-assembled on a SS frame** and comes complete with pump, valves, fittings and controls
- Integrated capping system



The best flexibility on the market:

- **Cans and bottles of various formats and materials can be filled and closed on one machine**
- The ideal solution for **small-medium size beer and CSD line**
- Quick can/bottle changeover: **almost 10 seconds per gripper** (holding pad switchover), **valve** (alignment bell)

Continuous Cap Supply

SAFETY & ERGONOMICS

Easy access for maintenance

Efficiency & Reliability

- 100% cap inspection by camera
- Jam Self-clearance System
- Less equipment to be maintained
- Caps always handled on application side

Gentle, controlled handling

- Gravity sorting
- Star-wheel pockets for inspection
- Blown air conveyors

High hygiene levels

- Enhanced de-dusting
- Hygienically designed hopper

OPTIONALS

- UV Lamps
- Pressurized cap hopper
- Increased hopper volume, size up to 2 m³
- Cap temperature monitoring system



Fully Electronic Capper

COMPLETE CAP APPLICATION CONTROL

- Controlled parameters of motors (rotary and linear)
- Feedback on each capped bottle
- Gentle, high speed cap application

Efficiency and performance

- Reduced maintenance
- High speed, excellent monitoring and safety

Total flexibility

- Easy-to-set HMI

High hygiene levels

- Machine, product and package safety
- Splash control function
- Grease-free turret

OPTIONALS

- Caps managed (by vacuum) directly by the heads
- Cap application temperature control parameter setting
- Thread start identification (even in the event of lower cap quality and/or poor positioning)



