

Because the more advanced the  
technology, the less space it  
takes up

[ 2,32 x 2,16 m ]

[ 2 x 2 liters ]

**URBI-2**

Compact Pet Container Blowmoulding Machines



**urolo**

# URBI 2



## RELEVANT CHARACTERISTICS

- **ELECTRIC MACHINE**

The use of servomotors in the main drives: stretcher, press, preform and container transfer, contributes to excellent precision and repetitiveness of movements.

- **HIGH PRODUCTIVITY**

Up to 1,600 cont./h. per cavity.

- **COMPACT**

Very little space taken up in the plant.

- **MOREOVER**

- Excellent investment/feature relationship.
- Minimum energy consumption.
- Quick and easy change of format.

The 2-mould URBI 2 pet preform stretching-blowing model enables containers up to 2 liters to be manufactured with a double cavity mould. This technologically very advanced model is highly rated for its high productivity, how easy it is to use and the reduced amount of space it takes up in the plant.



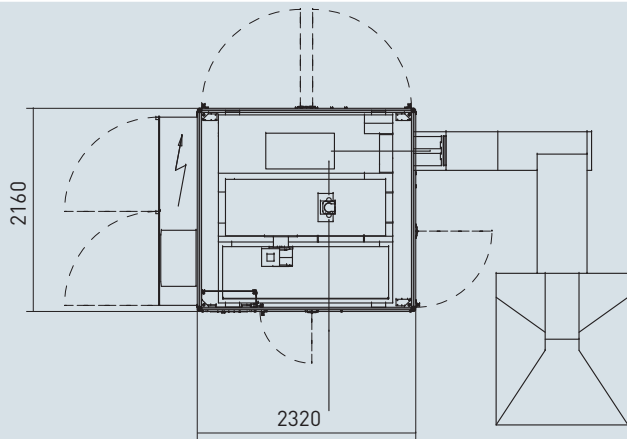
Preform Heating Oven, with minimum distance between preforms, and with wide homogenisation area.



Preform stretch system, by means of servomotor.



## GENERAL SPECIFICATIONS



### GENERAL SPECIFICATIONS

Number of moulds	2	
Maximum bottle volume	2 liters	
Maximum bottle size	Diameter Ø	120 mm
	Height	350 mm
Output[*]:	3,200 bot/hr	

[\*] According to the type of bottle.

## DESCRIPTION OF THE PROCESS

### PREFORM INSERTER

The preforms, stored beforehand in a hopper, are lifted by a transporter to the positioner. By means of gravity, these preforms slide down to a robot arm that puts them into the support mandrels, and a pusher ensures they are in a stable position, preventing them from moving about on the support.

### PREFORM CONVEYOR SYSTEM

The preforms are conveyed on two parallel belts held by supports mounted on pallets. There is very little distance between them, thereby making the best use possible of the heat.

### OVEN

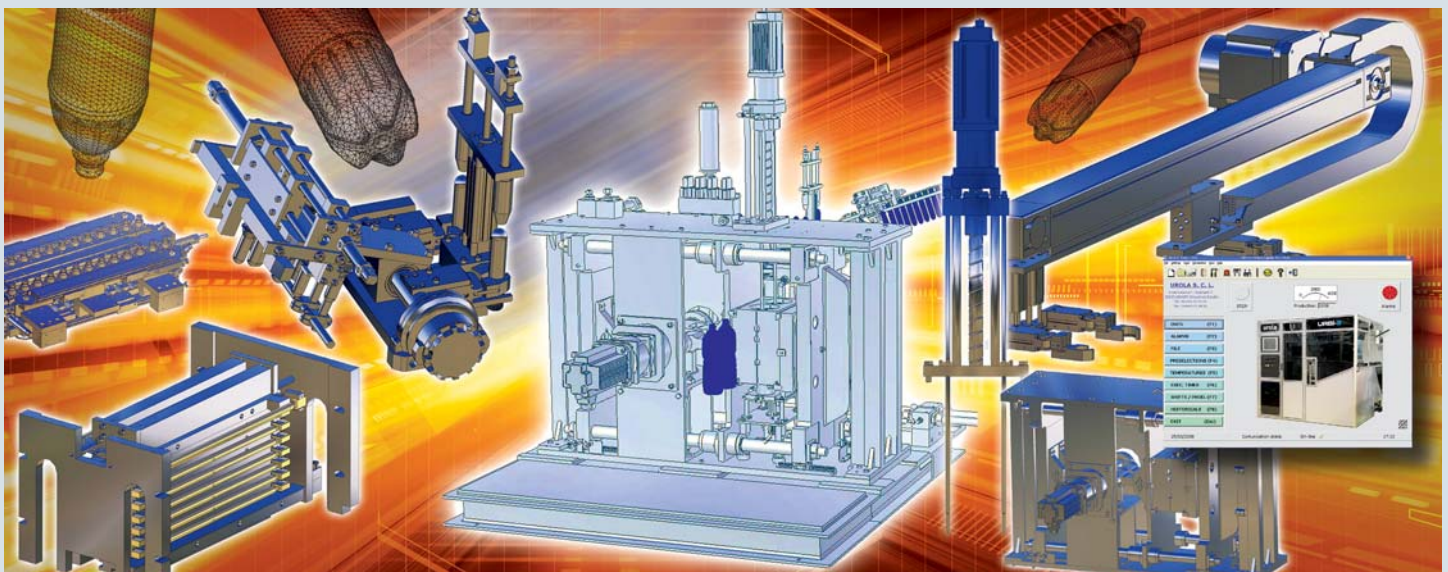
Consists of two double heating modules, which in turn have 8 infrared lamps at different levels. This oven has been designed to achieve maximum penetration of the waves emitted by the lamps in the wall of the preform, using surfaces with a high reflection capacity. This results in great efficiency and energy

### STRETCHING AND BLOWMOULDING SYSTEM

This is carried out in two phases. In the first phase, the stretching rods come down to the bottom of the preform and then each rod stretches the preform to the final height of the container. The blowmoulding is carried out at high pressure, with the possibility of carrying out preliminary blowmoulding at a lower pressure. These successive movements make biorientation possible and enable the material to be well distributed. Adjustment of the stretching parameters is instantaneous and the system is driven by a servomotor, which helps make format changeover quick and easy, and means the movements are fully repetitive (electric machine).

### TRANSFER AND REMOVAL OF CONTAINERS

The preforms are recovered by means of a gripper system that transfers them and positions them in the mould cavities. The system itself takes charge of removing the containers from the mould.



savings, as the number of heating modules is significantly reduced, which means the oven can be a lot shorter in length. To improve the heating system, the machine has a homogenisation system that applies a flow of air inside the oven together with suction, to generate a suitable current of air.

### PRESS

The press houses the blowmoulding mould equipped with the two cavities where shells for each bottle (quick changeover) are clamped. Both open and close with a single drive controlled by a servomotor. There is a compensation system to counteract the blowmoulding pressure by means of the high-pressure air. The container bottoms are activated by means of a cam linked to the press, reducing the cycle time and making the system more robust.

### MACHINE CONTROL

Machine control is carried out by means of a PLC (Programmable Logic Controller) that, in turn, serves as a master to the rest of the slave units in the field bus installed to decentralise the inputs and outputs. Moreover, there is a man-machine interface installed in an industrial PC that can carry out the following functions:

- Preform heating control.
- Process parameter control.
- Data storage in records for subsequent use.
- Alarm display.
- Production,... database.

# A Complete Service from Beginning to End

## Special Applications/Adaptations

- Preferential heating for oval containers.
- Preform neck position control.
- Hot-fill containers.
- PP Containers (Polypropylene).
- Multilayer Containers.

## Bottle Design Advice

Our service begins by providing the client with advice regarding the bottle's design, while taking the following factors into account:

- Product to be bottled.
- Aesthetic aspect.
- Functionality.
- Technical characteristics.
- Determining limitations in the filling line.



## Mold Design and Manufacture

The mold plays a key role in the project's success. Because of this, we at UROLA integrate the entire process, from the mold idea and its design to its manufacture.

## Post-Sales Service

- Training for the client's personnel at Urola's and the client's facilities.
- Equipment installation and setup at the client's facilities.
- After-sales advice and service, with the possibility of remote online connection via modem or via Internet.



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