

E-MOC Technology



EN

Hollow Glass Technology

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we • glass

The image features a white background with large, abstract blue shapes on the left side. These shapes include a light blue curved bar at the top and a dark blue curved bar at the bottom, both extending from the left edge. A dark blue vertical bar is also present on the left side, partially overlapping the other shapes.

we ●

glass

We **know** glass, we **love** glass

As a global leader in hollow glass and flat glass processing technology, we have been helping to shape one of the most beautiful and useful materials in the world for over 60 years. Its unique qualities, combined with the passion for technology and innovation, guide us in seeking for newer and more effective solutions to improve and expand its use.



E-MOC



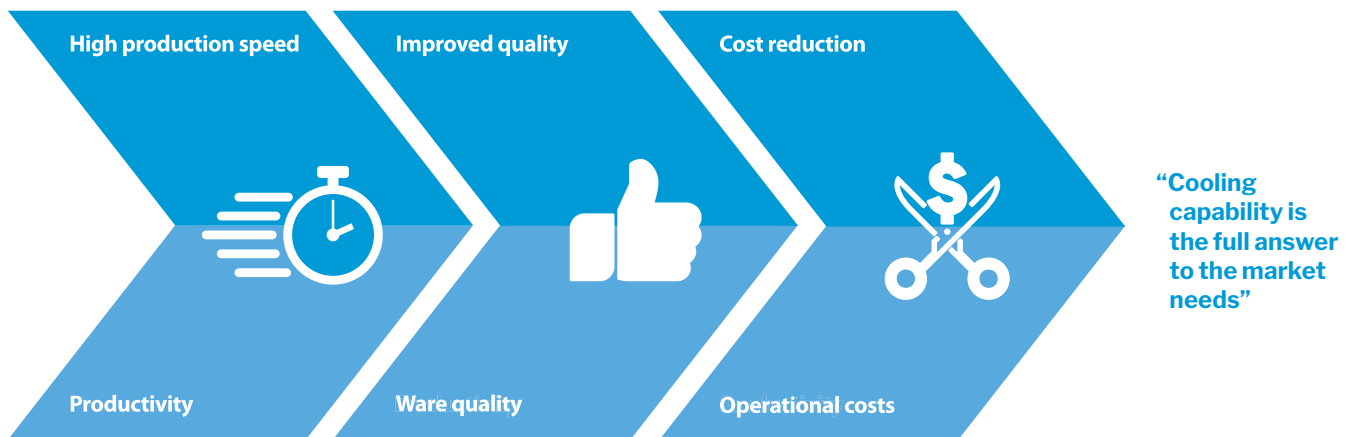
The E-MOC is an enhanced open and close mechanism born from glass plants experience. It's the key to simplify the forming process. A process oriented cooling system tailored on customer needs. The reading will introduce to E-MOC main features and production advantages.



“Forming means heat extraction control...”

IS machine for forming engineers is a **heat exchange device**
The **cooling capability** is forming performance and its control is forming **know-how**.

What Market needs:



What Cooling capability offers:



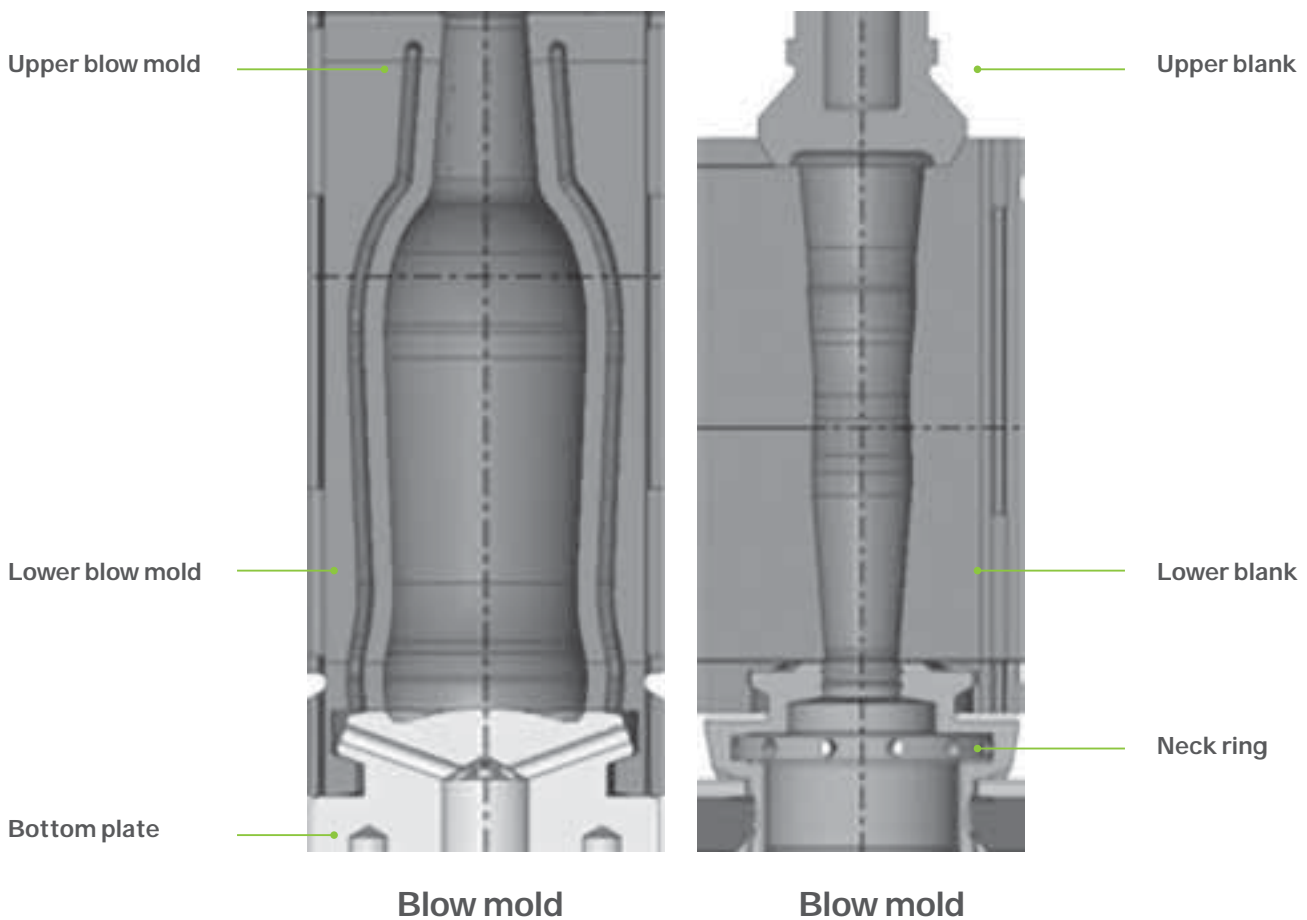
Conjugate heat transfer analysis: cooling

temperature, thermal transfer and glass behaviour are all inside the simulation.

“E-MOC is Bottero solution for cooling capability following market needs...”

E-MOC is the most advanced **heat exchange device**.
Airflow cooling rate can be divided in the following areas

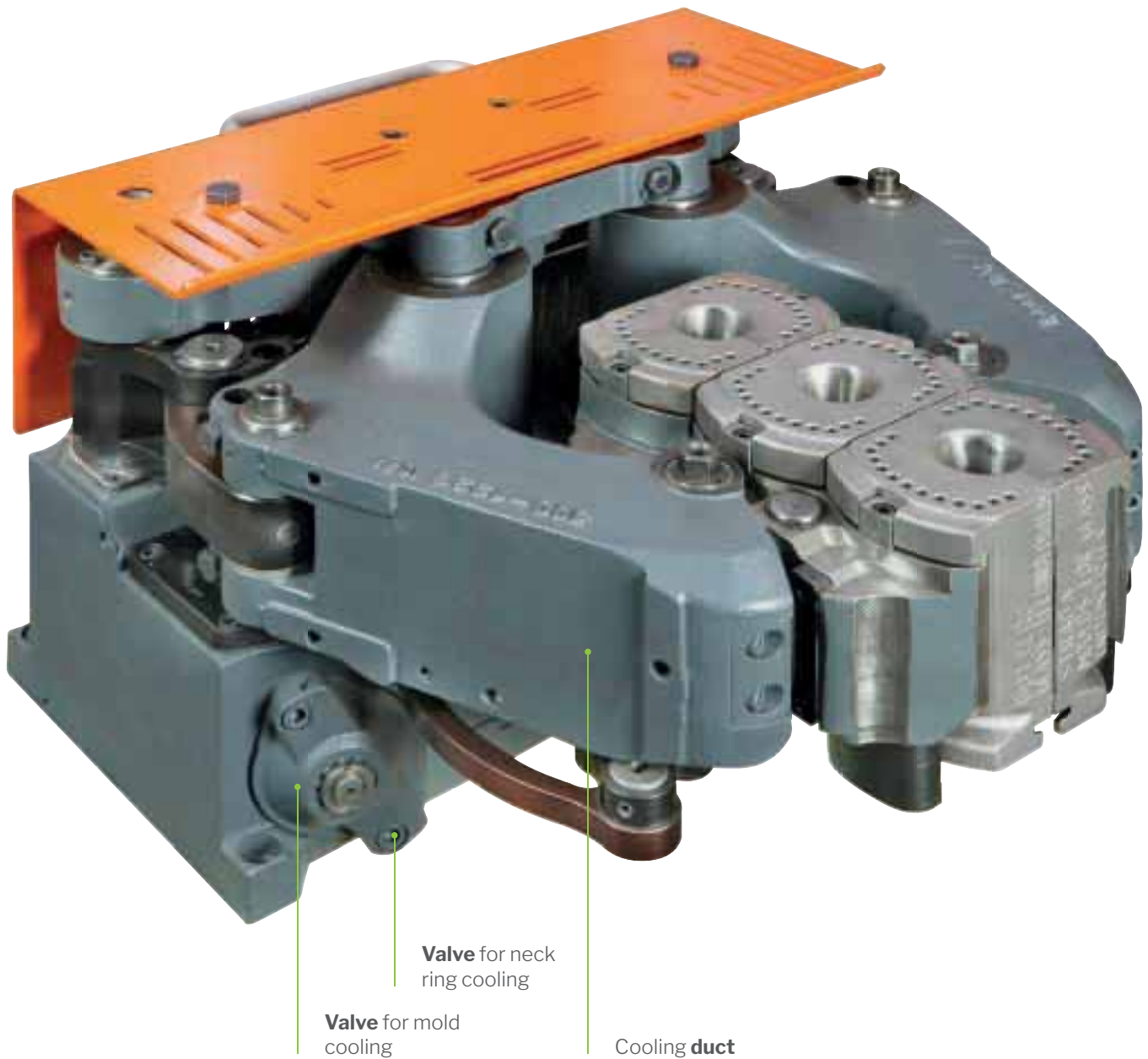
E-MOC cooling system



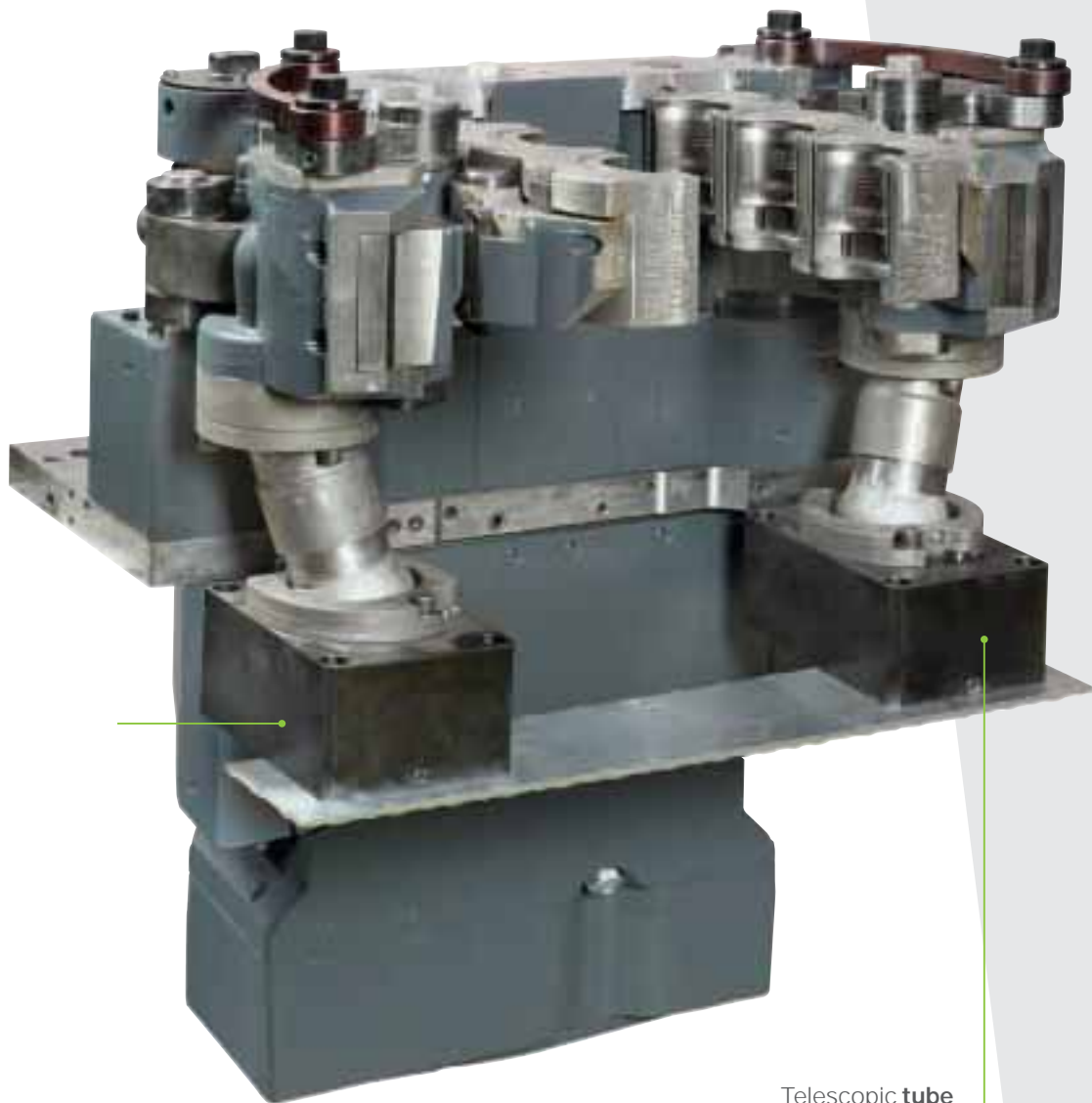
“What’s the cooling technology?”

carried, partialized and **controlled**.

Blank mechanism



Blow mechanism



Valve

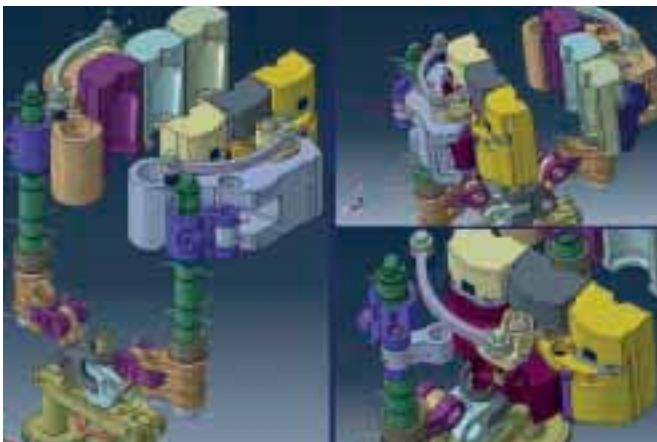
Telescopic tube

“What about E-MOC mechanism?”



Levers and parallel motion

- **Mold life time** increase
- **Easier** swabbing
- **More efficient** draft angle



Designed with structural simulations

- **Higher clamping force**
- **Smooth o/c** movement
- **More efficient** clamping

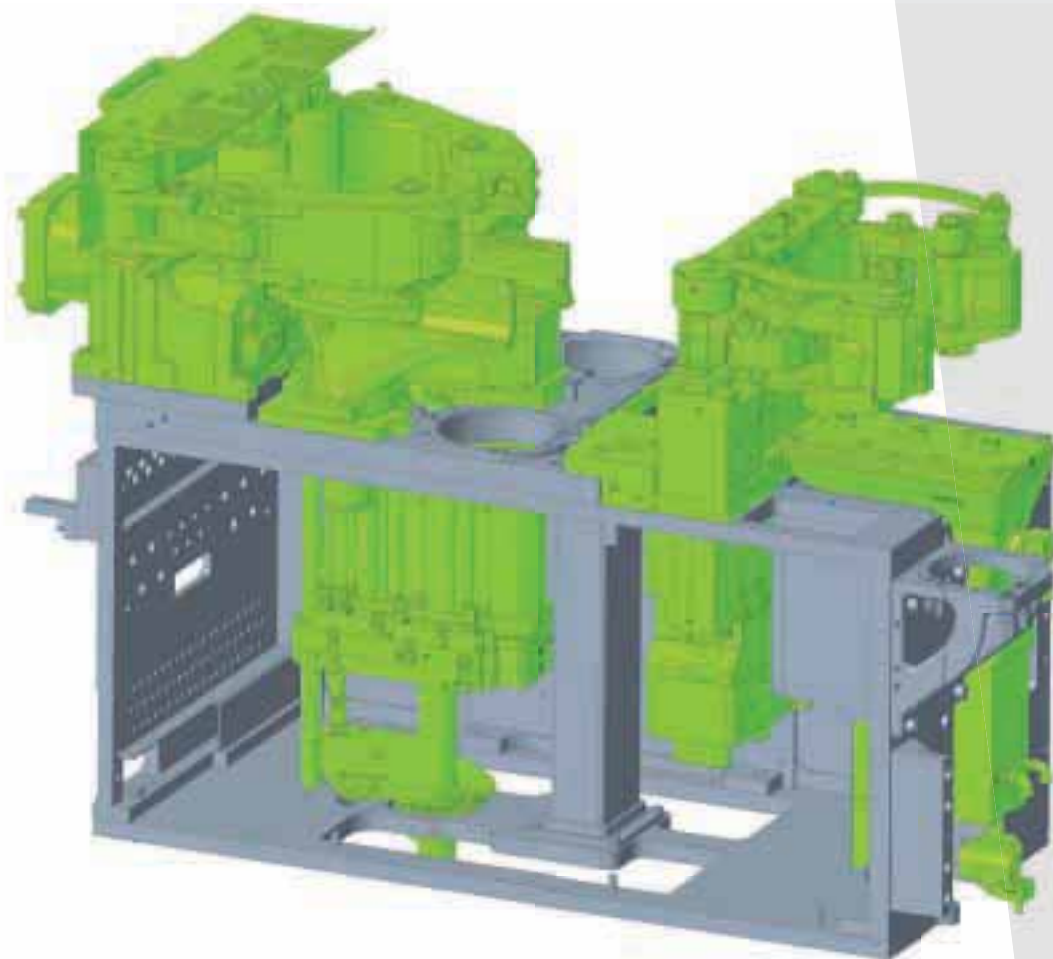
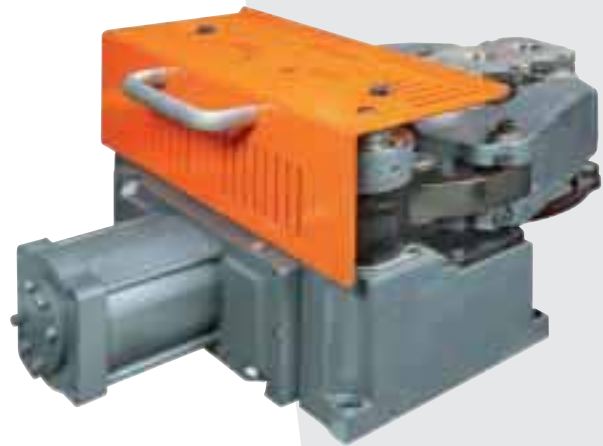


Job change with E-MOC is

- Faster
- Easier

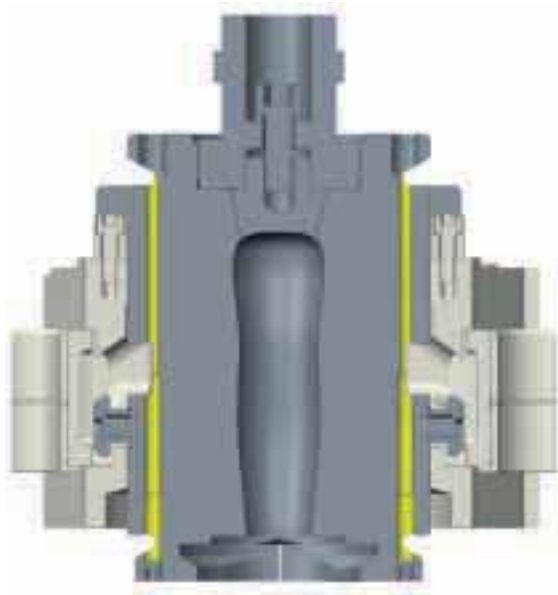
Levers and parallel motion

- **Mold life time** increase
- **Easier** swabbing
- draft angle



With all top mounted mechanisms section box is completely empty. Longer stroke plunger can be installed. Mechanism maintenance can be done in workshop, while machine is running.

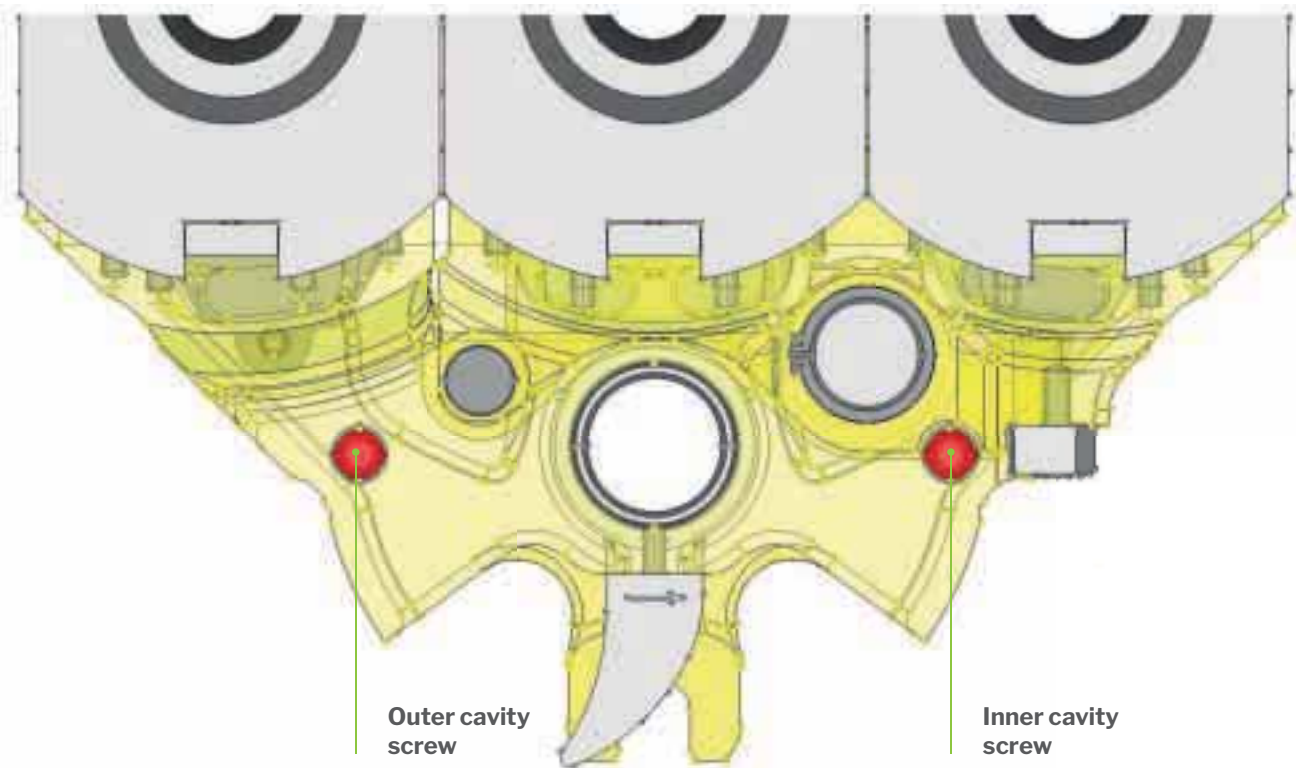
Cooling advantages: Blank cooling

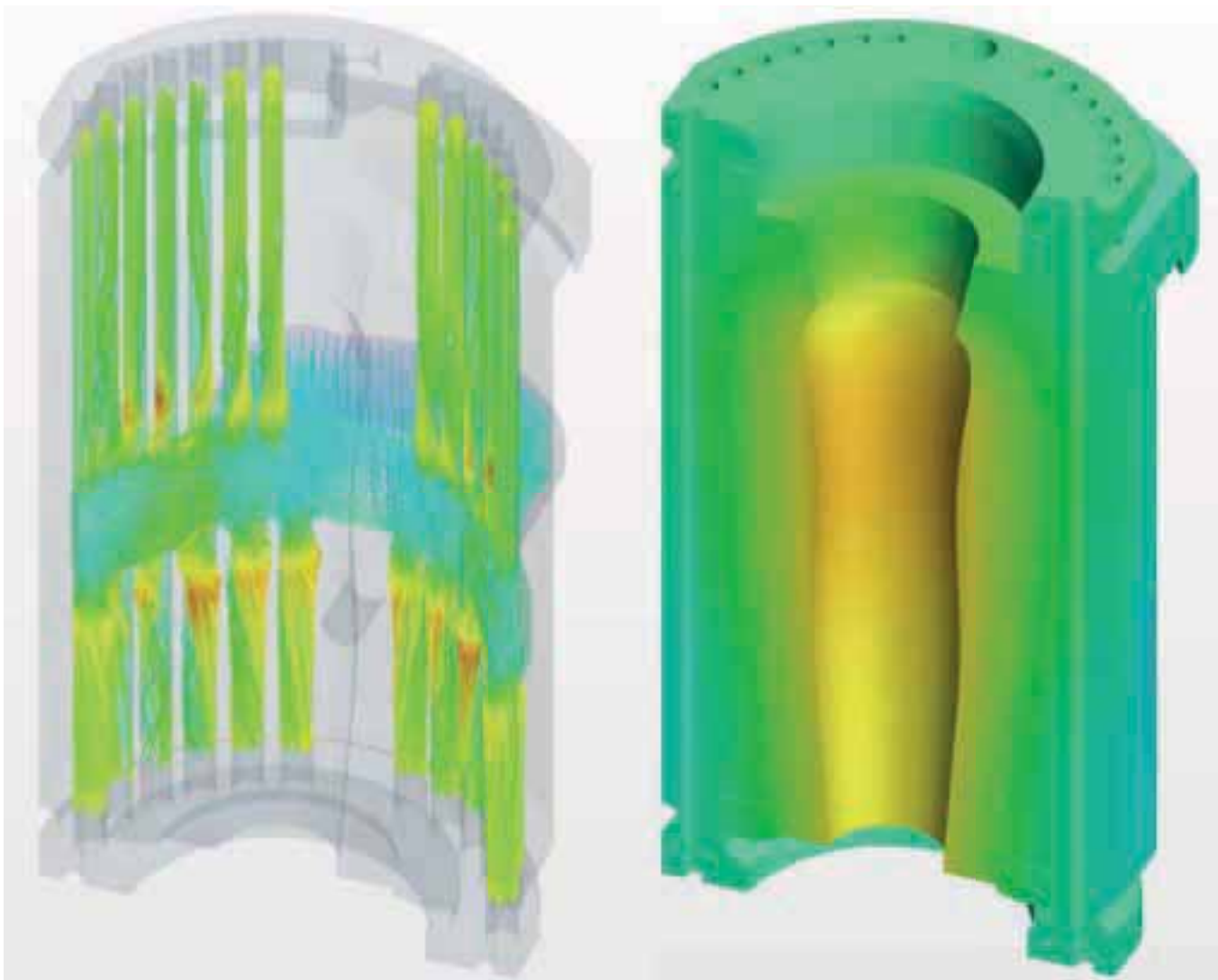


E-MOC axial cooling

- Cooling from mold center
- **Better** horizontal temperature homogeneity
- **Easy** adjustment with PLUGS
- **Full 360°** cooling time
- **Low** requirement
- **Independent** blank and neck ring cooling

E-MOC axial cooling

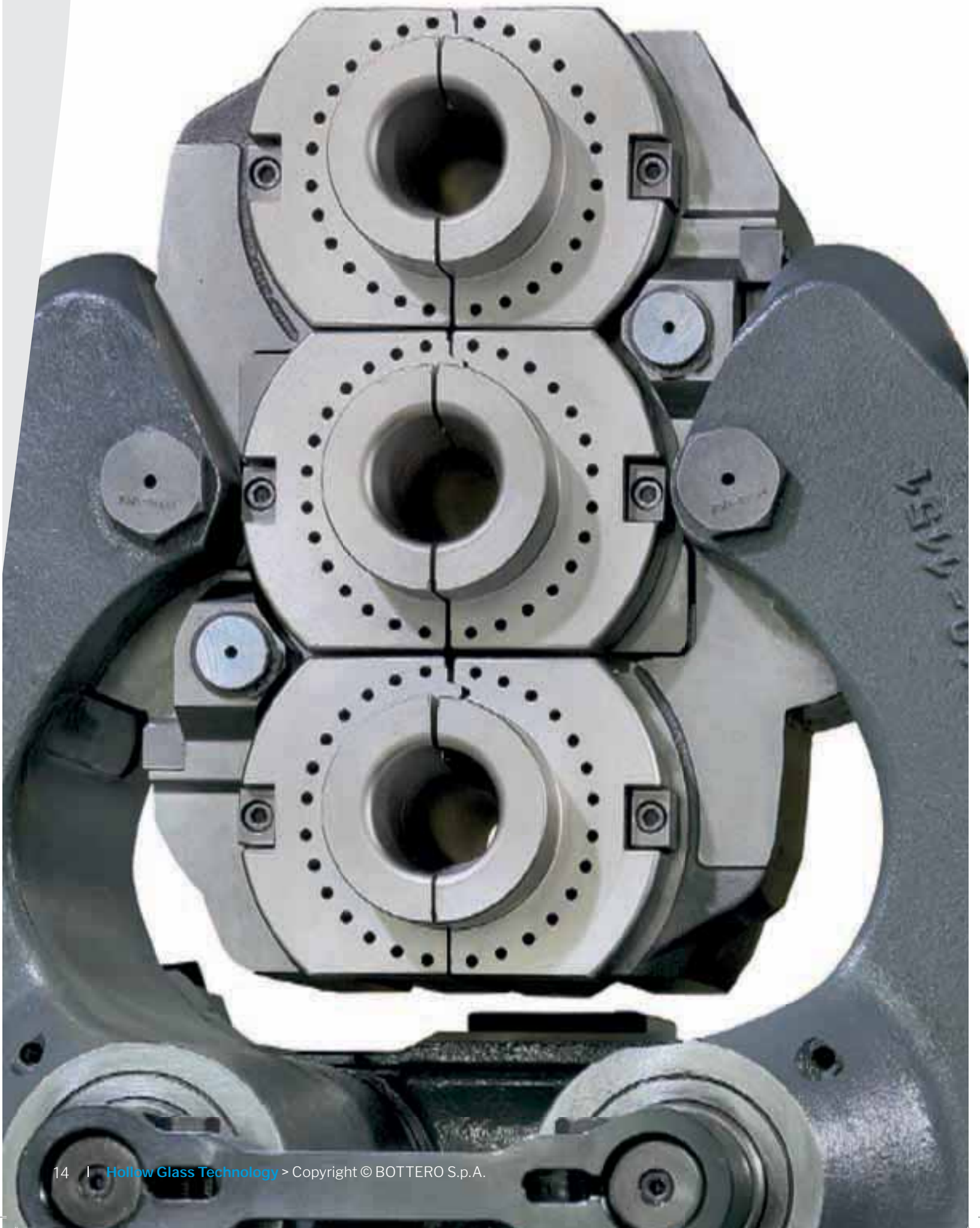




The cooling **adjustment**:

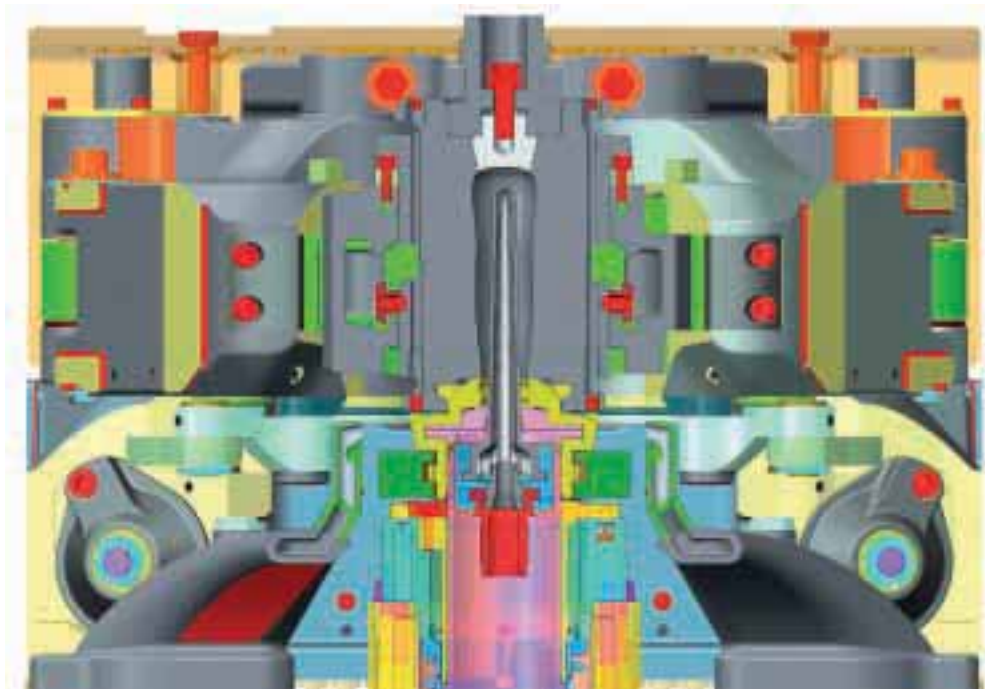
- Top & Bottom **number** of holes
- The **diameter** of holes
- The circumferential **distribution**

dynamics simulation for tailored parison cooling.

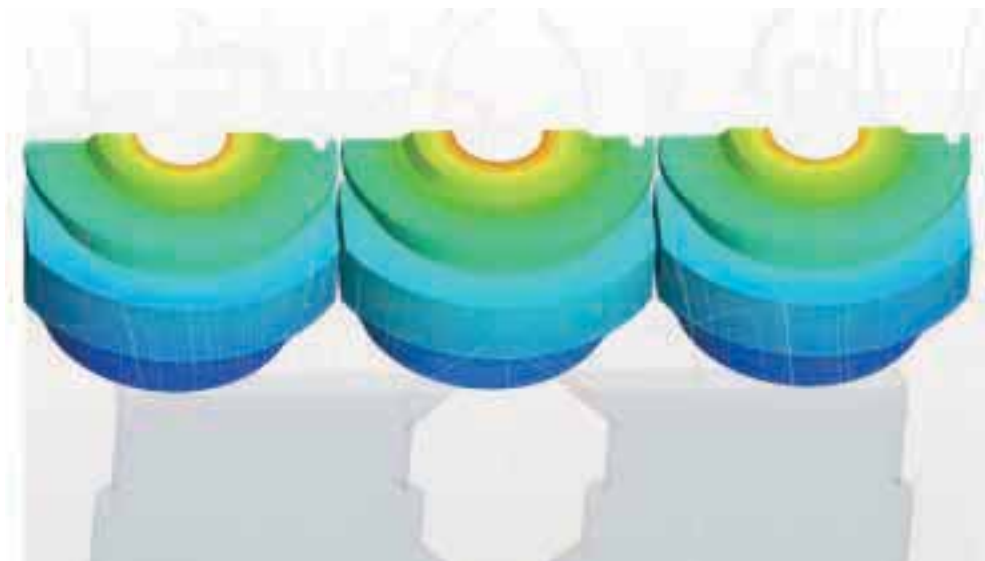


Cooling advantages: Neck ring cooling

ADJUSTABLE for all invert position



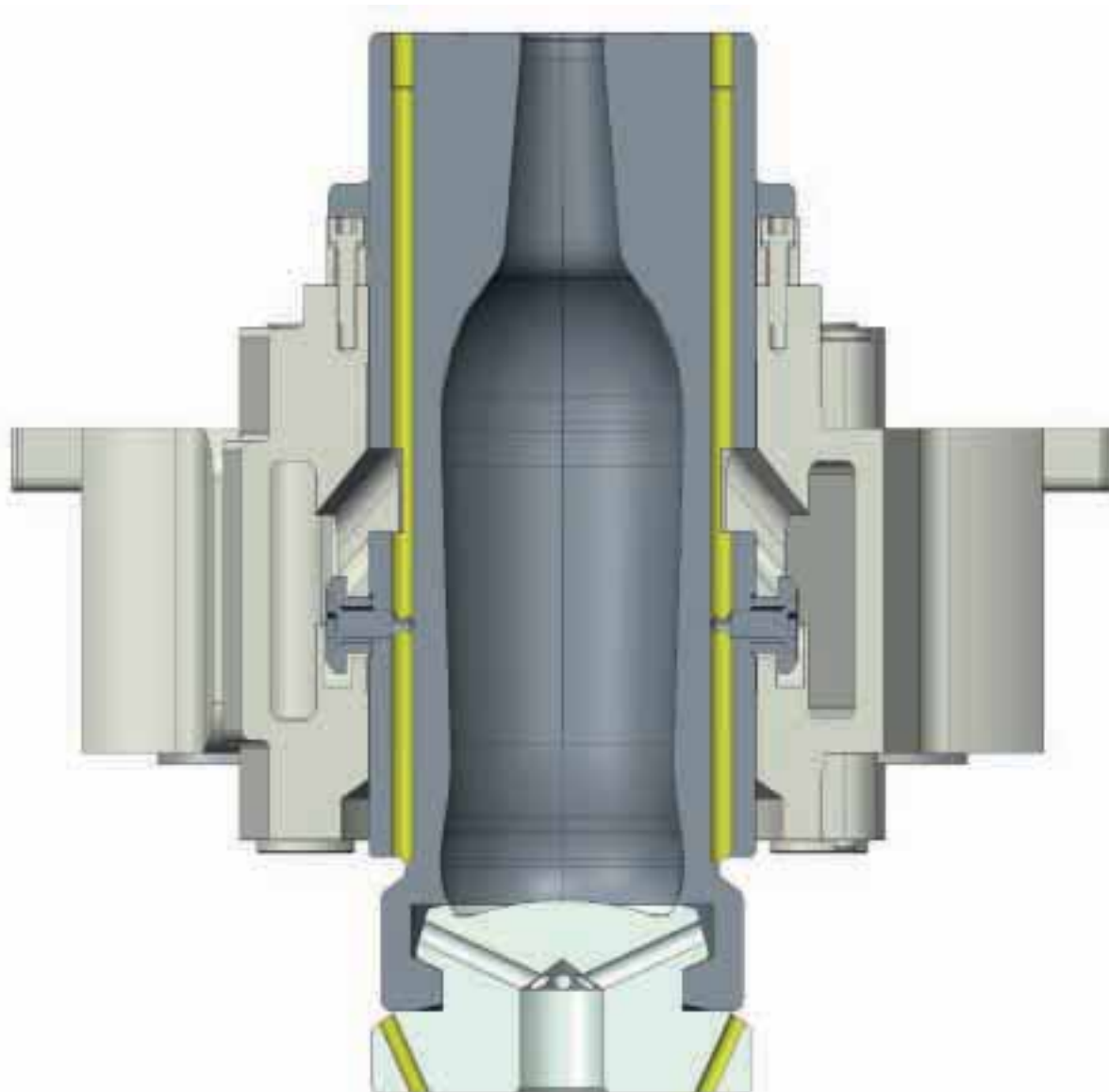
EFFICIENT for all cavities



Cooling advantages: Mold cooling

E-MOC mold axial cooling

- **Direct** cooling from mold center
- **Better** horizontal temperature homogeneity
- **Easy**
- **Full 360°** cooling time
- **Low** fan pressure requirement
- **Independent** mold and bottom plate cooling
- **No air leakage** inside mold cavity



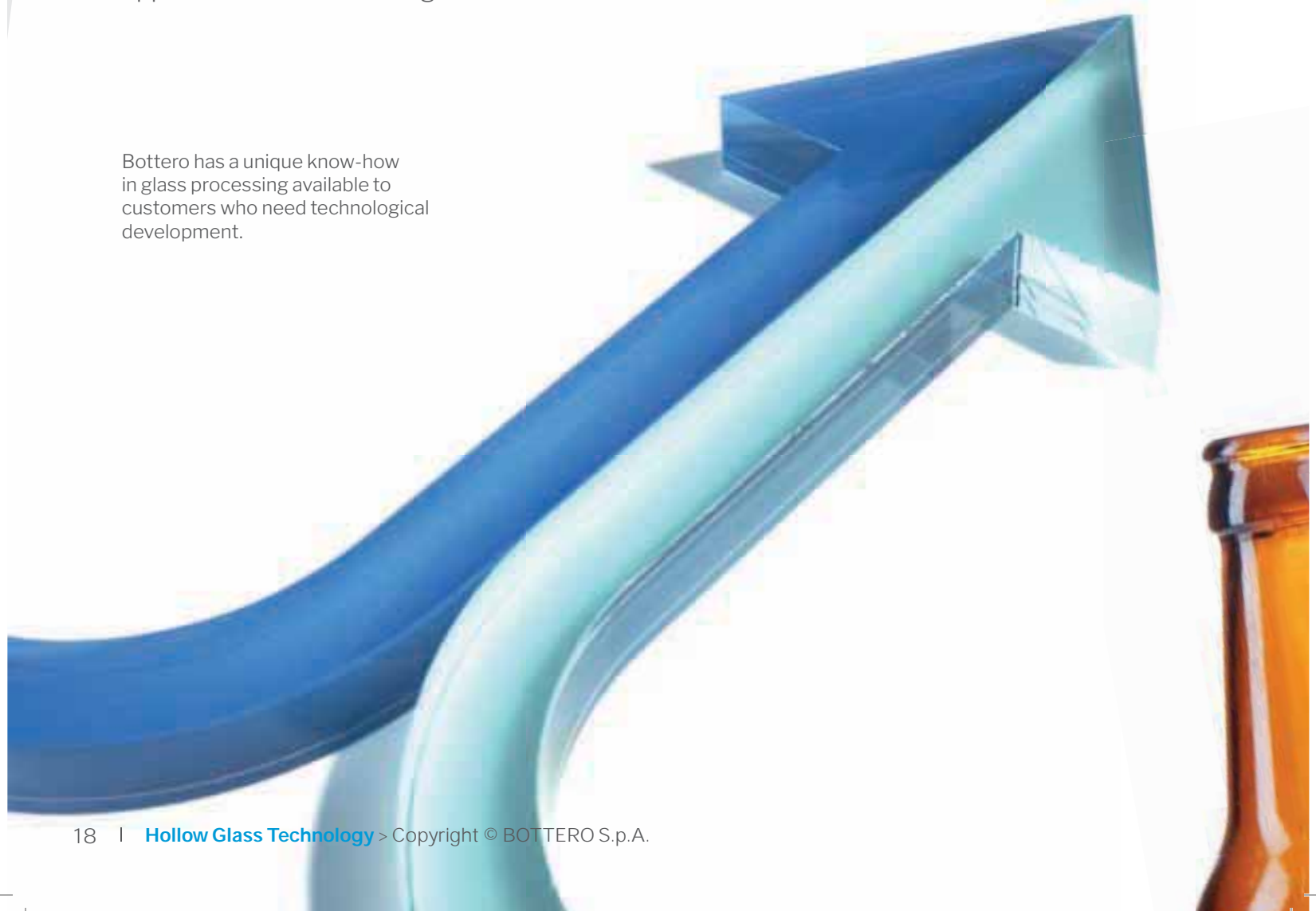


We support customers' development

Bottero, a global technological partner for customers growth

deserved the trust of many among the most important manufacturers of glass containers in the world. The **international** dimension of the company, the ability to be highly **innovative** and the **independent** market position put Bottero in the ideal condition to supply every customer with solutions for the optimization of production processes and indications on new opportunities for technological investments.

Bottero has a unique know-how in glass processing available to customers who need technological development.





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Kernersville - North Carolina - USA

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Shanghai - China

can boast a widespread presence and top-class technical and commercial assistance.





The images and data in this Catalog are only indicative and never override the contract engagement of Bottero S.p.A.
For photographic reasons the products are often shown complete with accessories that are not part of the standard equipment of the machine.

Discover the Bottero technology for **Hollow Glass**



Technology

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E-MOC Technology
Gob Forming
Servo Technology
Ware Handling
Pneumatic Mechanism

Automation

Architecture
Control System

Service

Forming Engineering
Customer Service

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