

BUCHER
emhart glass

Forming Machine **NIS^{II}**

Excellence Redefined



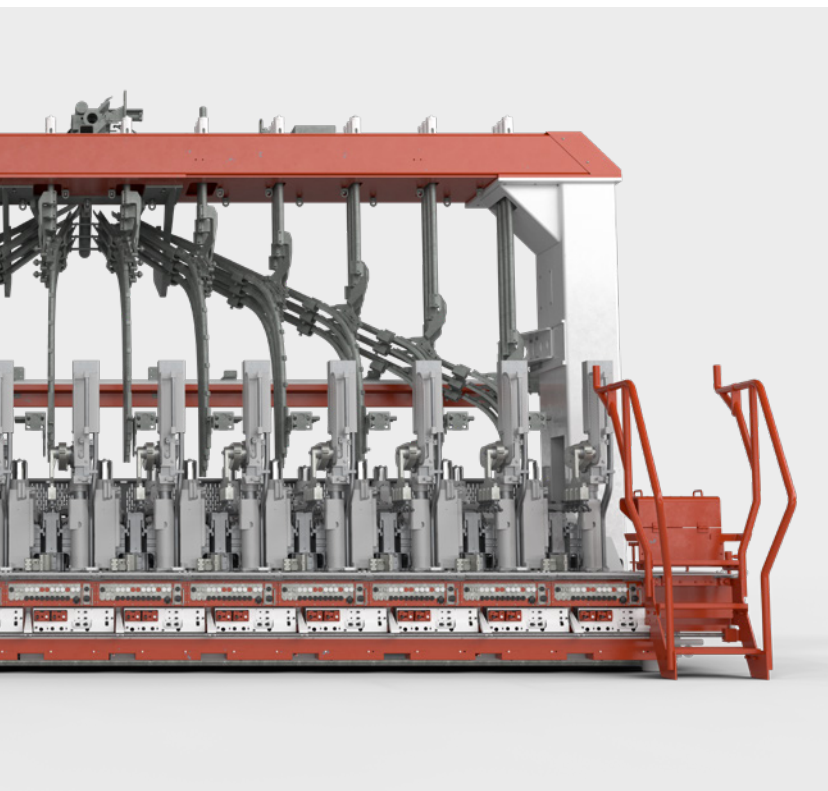
The NIS II sets a new benchmark for productivity and throughput in glass container forming

The full servo electric driven NIS II machine is the ultimate forming solution from Bucher Emhart Glass. The servo mechanism technology ensures that the NIS II machine outperforms traditional IS machines through better and precise motion control, perfect repeatability and faster and more precise setup time.

The center distances of 5" TG and 95mm QG together with the conversion features DG<->TG<->QG make the NIS II the most flexible high throughput machine available today.

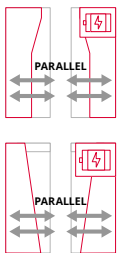
The highlights:

- The Servo Electric Plunger delivers precise motion control and repeatability, enabling a new level of process capability
- Servo-electric mechanisms provide precise, repeatable motion
- Allows for 5" Triple Gob production run at the same speed as Double Gob
- Allows for 95mm Quad Gob production run at a similar speed as Triple Gob
- Substantial noise reduction for a quieter work environment



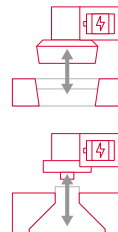
Next-level precision and control, powered by innovations including the new Servo Electric Plunger and individual blank mold half cooling. The platform is available for all End to End closed loops process products and ready for future autonomy solutions. Designed for both productivity and flexibility, the NIS II combines modular construction with easy accessibility to support high-volume production and fast, efficient job changes.

Benefits of the NIS_{II}



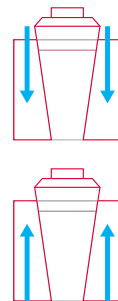
1&2 Full servo-electric parallel blow and blank mold open-close mechanism

- Precise motion control, perfect repeatability
- Extended mold life time
- Enhanced thermal behavior



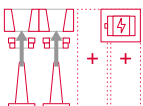
3&4 Full Servo Electric Baffle and Blowhead mechanism

- Precise, repeatable motion
- Simplified pre-forming process flow with the use of V-Baffle
- Perfectly coordinated timing between the mechanisms



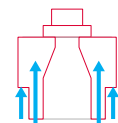
5 Advanced blank mold cooling

- Individual Blank Mold Half Cooling
- Available as VertiFlow, InVertiFlow
- High cooling capacity



7 Servo Electric Plunger mechanism

- Integrated and direct position feedback
- Precise motion control and perfect repeatability
- Modular design, one plunger fits all



6 VertiFlow-Assist blow side

- Improved thermal distribution
- High cooling capacity
- Ready for future cooling options

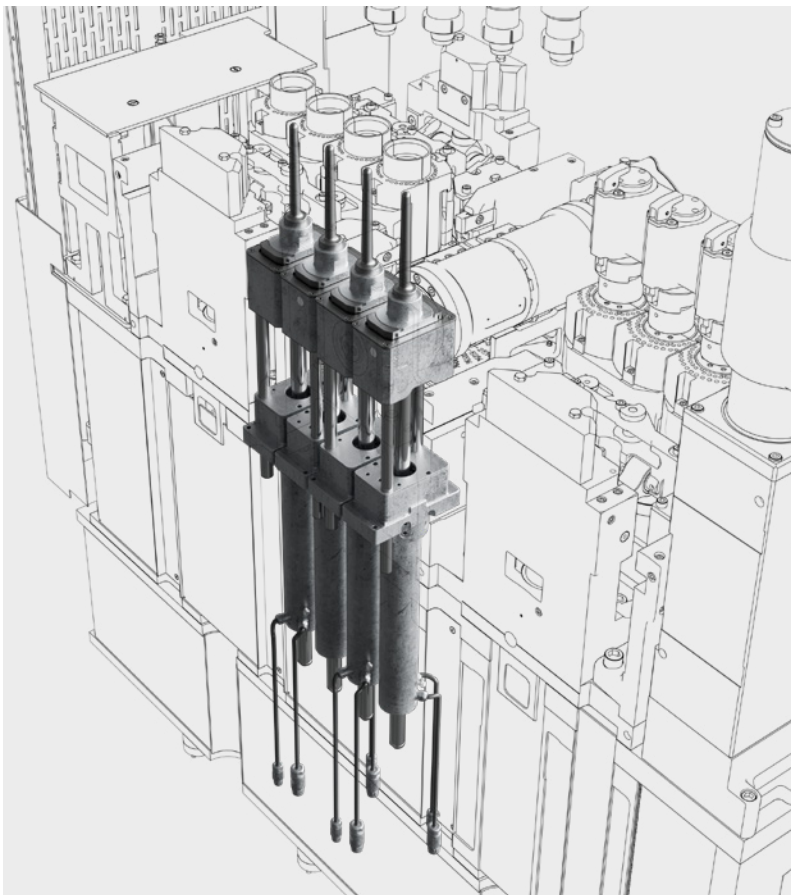
Servo Electric Plunger

The new Servo Electric Plunger takes forming precision and process control to the next level.

Precise, repeatable motion enables optimized motion sequences, shorter cavity cycles and longer glass contact times.

Its modular design supports all mold cavity configurations, while the integrated measurement system enables closed-loop control. A long-stroke linear motor covers the complete mold design range **without mechanical adjustment**, with every movement programmed through FlexIS forming and process control.

For even greater flexibility, the technology **eliminates conventional Narrow Neck Press & Blow and Wide Mouth positioners and cartridges**. A simple **interchangeable adapter** is all that is needed to switch between processes.



The highlights:

- Fully programmable, no mechanical adjustments required for the job setup
- Precise motion control and perfect repeatability
- Modular design
- High plunger cooling capacity (360° cooling)
- Fully integrated and direct position feedback

Individual Blank Mold Half Cooling

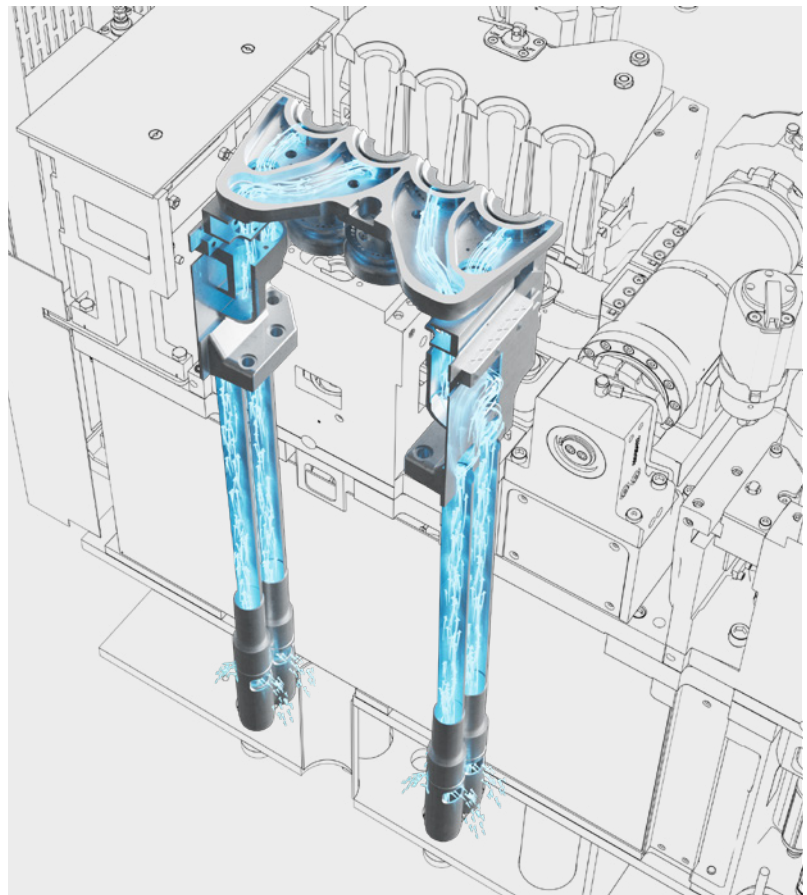
The completely **redesigned** and cleverly engineered Section Frame and Actuator systems integrate a wide range of advanced and improved cooling systems.

Individual control of **each blank mold half** maintains cavity temperatures at setpoint, improving consistency, quality and process efficiency. An **individual cooling valve** for each half-cavity, closed-loop temperature control and an optimized air path provides precise control and **increased cooling capacity**. In addition to the significantly improved VertiFlow-Assist, the modular blow mold cooling design is compatible and prepared for many future cooling systems.

The redesigned neck ring cooling system combines **increased cooling capacity** with a modular nozzle design for Blow & Blow and Press & Blow applications, improving cavity-to-cavity **consistency and reliability**.

The highlights:

- One cooling valve per half-cavity
- Higher cooling capacity by optimized cooling air path
- Increased Neckring cooling capacity by enlarged cooling valve and optimized air path in section frame
- Closed-loop control keeps each cavity precisely at its temperature set point
- Significant higher VertiFlow-Assist cooling capacity



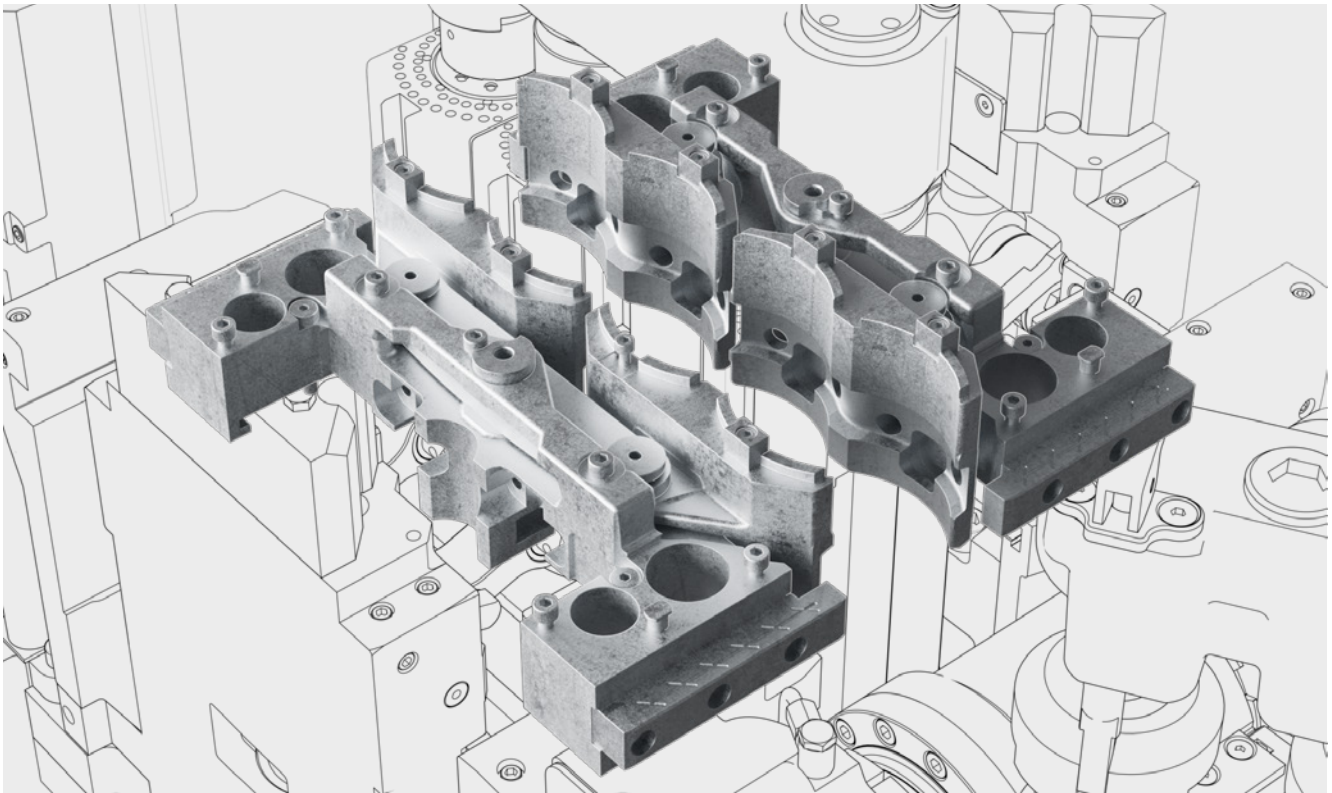
Mold Holder and Cooling Accessories

User-friendly mold holders and cooling devices **speed up setup and simplify job changes**. Thanks to these improvements, the **weight** of the individual components has been **significantly reduced**, and they can be easily installed and removed.

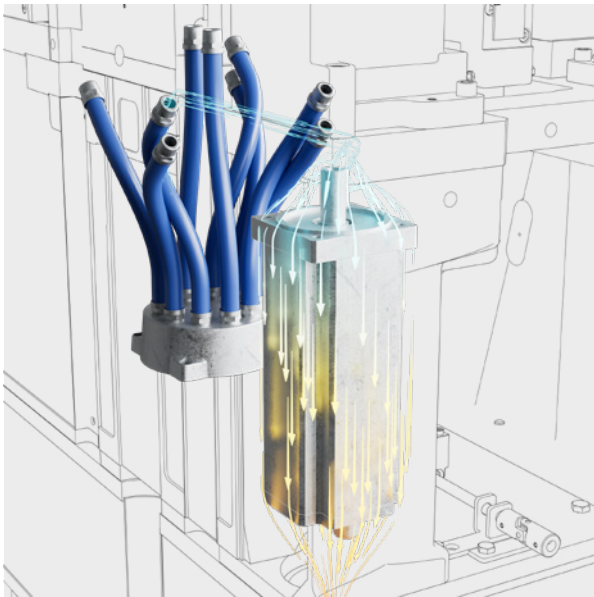
The carrier itself only needs to be replaced during a cavity conversion, e.g., from TG to QG and vice versa. The expanded Mold Design 3.5 provide a wider range of applications and **more centered clamping** for larger molds, resulting in greater stability and performance.

The highlights:

- Ease of use of Mold Holder and Cooling Equipment
- Extended Mold Design Range 3.5 for more centric clamping
- Significantly lower weight of the handled accessories
- Flow-Optimized Cooling Accessories
- AIS standard mold design transitions (VertiFlow) compatible



Efficient Servo Motor cooling



The highlights:

- Greater servo motor operation reliability thanks to efficient cooling
- Adjustable cooling air flow
- Energy savings due to lower cooling air consumption

Reinforced Mechanism and Accessories

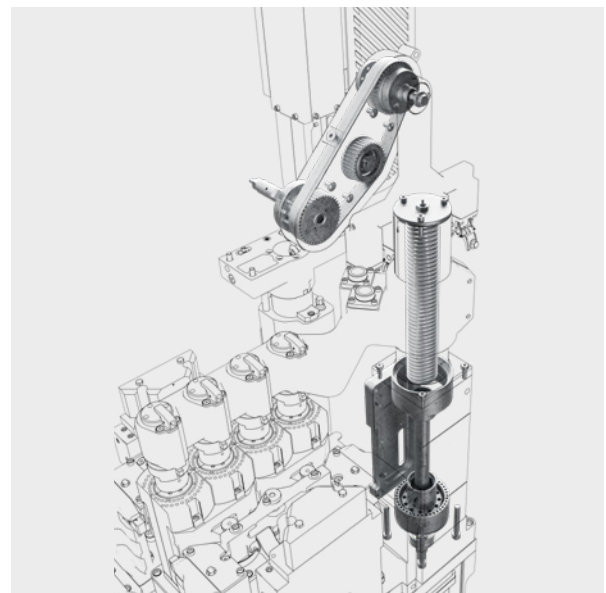
The highlights:

Servo Electric Baffle and Blowhead

- Job independent and sealed oil bath
- Improved bearing and sealing arrangement

Take Out Arm

- Introduction of steel bushings on pulley and shafts
- Extended lifetime for shaft seals



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machine dimensions

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Utilities Specification

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Article Range Overview
MD Overview (summary)

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Bucher Emhart Glass is a company with a rich heritage and a tradition of excellence that we are proud to continue today. Our founders laid the foundations for automation in glass manufacturing, setting us on a course of market-leading innovations that has lasted for over a century. We created the industry-standard IS machine and have repeatedly delivered game-changing innovations in gob forming, container forming, automation, control and inspection.

Growing strategically through new branches, alliances and acquisitions, we have developed into a true global enterprise with the power to serve customers around the world with speed, responsiveness and understanding. Our global footprint provides the very best in established expertise, economical manufacturing, and hands-on client support.

Our work is underpinned by a profound and unshakeable belief in glass as a packaging material. And we back up that belief with investment in R&D. Driven by our clients' priorities, we continue to work towards new milestones in production speed, product quality, testing precision, and glass container strength. The ideas we have today will deliver the improvements of tomorrow.