

2024

bekumnews

Latest Information for Customers, Partners and Employees



NPE2024 | **MADE FOR YOU**
The Plastics Show

Visit us at booth #W2761

May 6-10, 2024 in Orlando

Special NPE 2024 Edition

Unveiling Innovations, Connecting Industry Leaders,
and Setting Standards

**PACKAGING
MACHINES**

US Built
EBLOW 407D

**INDUSTRIAL
MACHINES**

XBLOW 50 - 200

**EXTRUDERS
& HEADS**

3-Layer Retrofits





Dear Customers, Friends and Partners of Bekum:

Welcome to the NPE 2024 Bekum News Special Edition. It has been six years since the last NPE Show and the entire Bekum Team has been busy working on new innovations as well as refining our core technologies to benefit our Customers and Partners.

Our special Bekum News NPE 2024 Edition will guide you through our journey of the past 6 years and introduce you to the new developments that Bekum has to offer. Visit Bekum's booth #W2761 to view our latest fully electric EBLOW 407D built in Williamston, Michigan USA.

The all-electric EBLOW 407D machine utilizing our patented C-Frame clamping system combined with our exclusive e-Twin-Toggle system will be processing Indorama's FuTuRe-PET® 5507-R25. This live demonstration at Bekum's booth will also showcase the industry launch of Indorama's single pellet solution of #1 recyclable PET with 25% post-consumer recycled content.

In addition, Bekum's machinery program covers the entire Extrusion Blow Molding machinery market, including our new industrial series XBLOW 50–XBLOW 300 with capabilities up to 300 metric tons clamping force and platen dimensions of 2.2 meters x 2.2 meters.

Also, on display will be our new 3-layer spiral head technology coupled with our latest vertical extruders. The presented package is developed to help our existing customers easily transition to a 3-layer system. Bekum has also been working on high performance extrusion systems, with significant energy savings through optimized barrel and feed screw design with directly coupled gearboxes and high efficiency motors.

As a further commitment to the North American blow molding market and to increase production capacity, Bekum America recently completed a 45,000 square feet expansion of our Williamston, Michigan facility.

Last, but far from least, we wish to congratulate Mr. Wolfgang Meyer on his prestigious selection to the Plastics Hall of Fame for the Class of 2024. This is a tremendous achievement and Bekum is proud to have our 3rd Hall of Fame Member! The prior inductees were Bekum's founder, Mr. Gottfried Mehnert, and former President of BAC, Mr. Martin Stark.

Many changes have occurred the last 6 years and our Team at Bekum remains dedicated to helping our customers by offering solutions to increase the sustainability of plastics.

We look forward to seeing you at our booth, and you are always welcome to stop in and tour our facility if you are in the area.

Best regards,

Steven D. London
President & Chief Operating Officer
"NPE 2024 Chairman"



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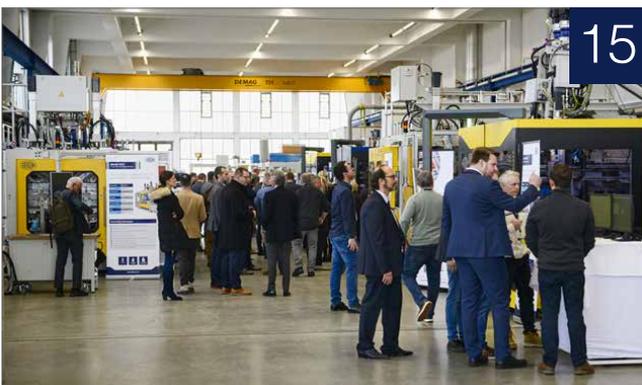
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Discover Bekum's Cutting-Edge Innovations at NPE 2024

Explore Our Booth: Where Visionary Technology Meets Sustainable Solutions



Presentation of the All Electric EBLOW 407D

- Live demo 3 x daily
- Producing 2L PET handleware with 25% rPET
- US manufactured

LIVE

Large Blow Molding Machinery Display

- XBLOW 50, 100, 200 & 300
- Clamping force up to 300 metric tons
- Video presentation & parts display

Info point

- West Hall, Booth #W2761
- You can reach us at (517) 290-8360 or (517) 655-7163
- or by email at npe2024@bekumamerica.com



Bekum America at NPE 2024

Visit our 80' x 50' exhibit to witness all the latest technologies from Bekum. This includes an all-electric

EBM machine demonstration processing Indorama's FuTuRe-PET® 5507-R25 rPET handled bottles and

an extrusion head retrofit package for PCR! Hope to see you there!



Hospitality area

- Tri-Ex Extrusion Head**
- 3-Layer solutions for new and existing machines
 - Spiral flow to optimize PCR loading
 - High-efficiency drives
 - Available independent control for retrofits

- HiPEX 36D Extruder**
- Excellent melt quality and high output
 - Energy savings up to 20%

- Book your appointment**
- Schedule an appointment to meet with a Bekum team member
 - Looking forward to seeing you at Bekum's Booth!

Bekum America to Feature The US Manufactured All-Electric EBLOW 407D

Processing 2 Liter Bottles in rPET



Technical Data	EBLOW 407D
Mold Width	500 mm
Mold Daylight	250 mm
Clamping Force	17 US Tons
Dry Cycle Time	2.0 sec
Mold	2 Liter 2 Cavities
Production Capability	4 Cavities of 1.0 Gallons
Production Capability	6 Cavities of 1.0 Quarts
Production Capability	8 Cavities of 16 – 20 oz.
Production Capability	12 Cavities of 8 – 10 oz.

Already A Very Successful Blow Molding Machine...Now All-Electric! The new machine design in black and yellow dominates the look of the brand new US built EBLOW 407D extrusion blow molding machine, symbolizing performance and quality.

Unique clamping concept – the patented C-Frame

The design of the C-Frame, which utilizes mold platens that move along precise, low-friction linear guides, enables completely symmetrical clamp force distribution along the entire mold area, while maintaining high parallelism of the mold platens. The full clamp force is available independent of the

mold thickness without adjustment. Precise final mold closing control results in ideal article weld formation.

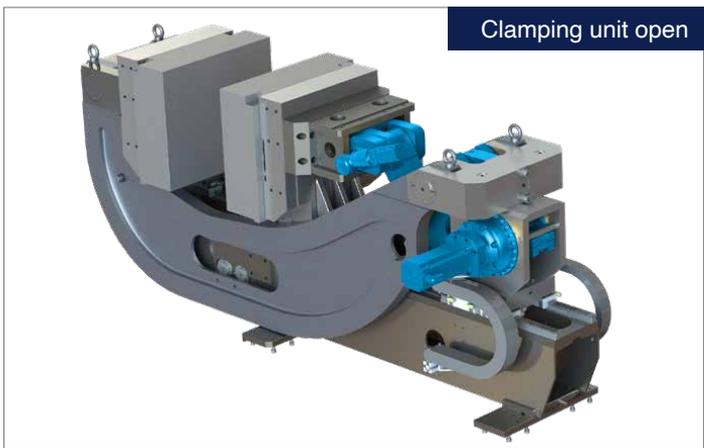
New e-Twin-Toggle clamping drive

The e-Twin-Toggle double crank drive system, offered exclusively by Bekum. Due to the unique bearing of the joints, there is almost no wear-inducing friction and ensures an exceptionally long service life.

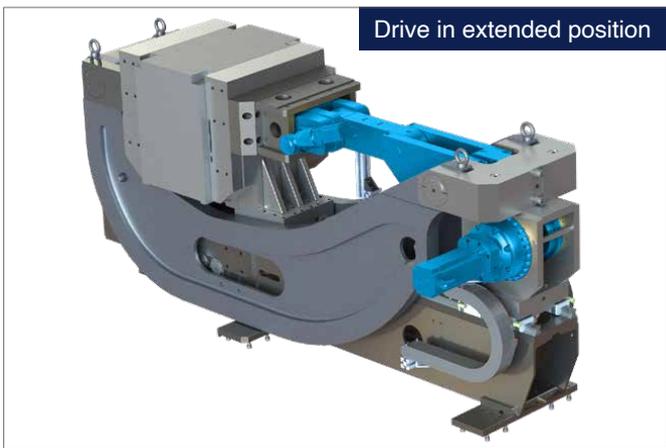
Bekum has automatic mold thickness adjustment as standard. This adaptive adjustment ensures high process stability and therefore consistent article quality. Damage to the locking system and the mold

is ruled out by constant monitoring. This exclusive e-Twin-Toggle drive system ensures short mold opening and closing times, as well as very fast closing force build-up times of less than 100 ms. The fast-acting, precise application of force during the pinch-off process when closure of the blow mold is completed, can significantly improve the article quality of the blow molded products.

Even materials requiring an exact production process, such as PP, PC and PET, benefit from the perfect formation of pinch-off seams, which is an important prerequisite for clean trimming results.



Clamping unit open



Drive in extended position



PACKAGING MACHINES

EBLOW 407D

Bekum America is pleased to introduce the new all-electric EBLOW 407D machine equipped with a clamping force of 17 US tons. In addition to the established C-Frame for the clamping unit, this machine includes high-efficiency electric drives, Bekum's extrusion system for PET processing and the latest Bekum Control 8.0.

The Patented C-Frame Clamp:

- Separation of Closing Forces from Mold Guidance = Extended Mold Life
- Excellent Clamp Force Distribution, Documented During Final Check-Out
- Clamp Force Build-Up: ~100 msec
- EBLOW Machines with up to 500 kN (56 US Tons) are available
- Perfect for PET / PP Handleware



E-TWIN-TOGGLE

e-Twin-Toggle

At the heart of the all-electric EBLOW series machines is Bekum's exclusive e-Twin-Toggle mold closing system with the following outstanding benefits:

- Continuously adjustable clamping force
- Locking Toggle Requires No Energy During The Blowing / Cooling Cycle = Energy Savings
- Fully automatic clamping force monitoring and control in automatic mode
- Force measurement via motor torque and strain gauges
- Servo-motor clamping force adjustment after mold change
- Long service life is assured as the gearbox and motor do not remain under load after full closing force is achieved



New Large Blow Molding Machines for Industrial Applications

Redefining Large-Part Molding with Flexibility and Power!

Modular design for flexible production

The concept of the new Industrial Line is scalable and modular. Whereas the clamping unit is positioned centrally under the platform when accumulator heads are installed, continuous heads require a laterally offset position. A horizontal parison transfer unit supplies the clamping unit with the parison. For different mold sizes, vertical parison transfers can be used to set optimum parison lengths.

The article is removed in a horizontal line using grippers that adapt to your product, or in a fully flexible manner using a standard industrial robot. The platform is designed for one extruder, but can be extended to three with outriggers bolted to both sides. For even more customized requirements, gantries are available that allow the extruders to be placed on opposite sides of the head allowing more room for maintenance tasks.

The centerpiece is the new clamping unit

The heart of this series is the clamping unit with two diagonal tie bars and a two stage hybrid electric closing drive. It consists of a long rapid stroke cylinder, which enables the platens to be opened and closed quickly, while the large diameter stroke cylinder is responsible for achieving high clamping forces.

The closing position of the system can be set individually on the display of the Bekum 8.0 control system. The clamp can accommodate very large variable mold



thicknesses, which are not possible with other electric clamping drives of large blow molding systems. This ensures quick adaptation to their specific requirements. The molds themselves can be easily and quickly exchanged from the side by means of quick change plates, and centering devices immediately returning the mold to its original position. As the design of the clamping drive is unique in industrial blow molding machine applications, it is a patent pending feature.





LARGE BLOW
MACHINES

XBLOW Industrial Series

The new XBLOW Series is flexible high performance blow molding line for drums, L-ring drums and other large-volume containers up to 1,000 liters. Bekum offers turn-key solutions from the mold, post-cooling and post-processing stations as well as quality assurance from a single source.

- Machine Concept is Scalable, Modular and Flexible
- Available in 50, 100, 200, and 300 Metric Tons

- Easily Integrate Article Take Outs or 6 Axis Robots
- Patent Pending Clamping Unit
- Closing Speeds up to 500 mm/s
- Custom Platen Sizes
- Clamping Force Adjustable On The HMI
- Optimized Force Distribution
- Hybrid Option Available
- Extremely Low Noise 71dB(A)
- Low Energy Usage <0.30 kW/kg/hr
- Easy Mold Change
- Mono, Tri-Ex and Co-Ex Capable

to the video



Tri-Extrusion Extrusion Head with Vertical Extruders

Space-Saving And Retrofittable Tri-Extrusion Units



With legislative requirements for PCR usage in plastic bottles on the rise, Bekum will introduce our space saving and retrofittable spiral flow 3-layer extrusion head series. Now with two vertical extruders for the inside / outside layers of a traditional 3-layer configuration.

The vertical extruders of Bekum's new e-series are designed with a focus on low energy consumption, high melt quality, and pressure stability. The newly developed grooved barrel extruders with 30D L/D, complement our extrusion portfolio with sizes ranging from 20 to 40 mm and can be operated both horizontally and vertically.

The tri-extrusion head's manifold and spiral sleeves were designed using the latest CFD simulation software to reduce color change times and improve parison quality.

Plug & Play retrofit on all EBM machines

For a total integrated concept (machine + extrusion head + controls from Bekum). This solution will provide our customers the ability to OEM retrofit their existing Bekum machines with 3-layers for PCR.



High-efficiency drive

Maximize productivity with our high-efficiency extruder drive for higher output and lower energy consumption

New screws

For outstanding melt quality: Our innovative screw designs ensure even melt distribution and the highest product quality

Wall thickness adjustment

Proven hydraulic and electric programming

Spiral flow

Excellent all-around distribution for optimized PCR loading



HiPEX 36D High-Performance Extruder

Increased Output. High Process Stability.
Outstanding Energy Efficiency



HiPEX 36D extruder

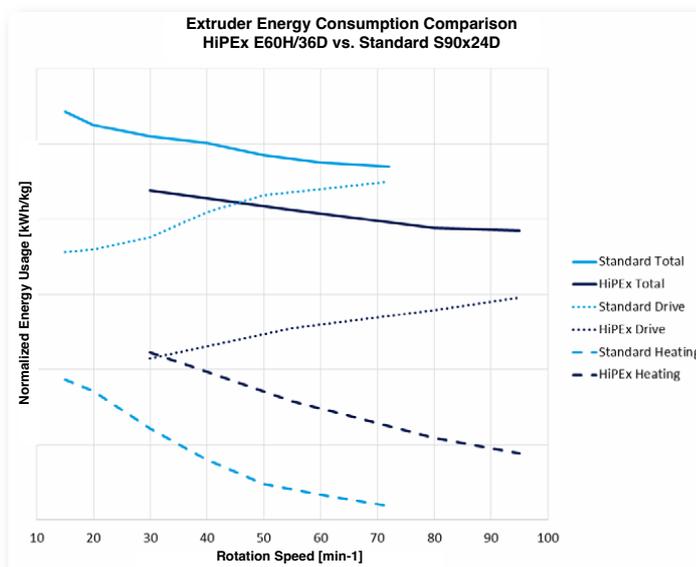
Introducing Bekum's Energy-Efficient HiPEX Extrusion System

Bekum will introduce its first US assembled HiPEX extrusion system. With a 36:1 l/d ratio, this energy efficient extrusion system provides lower pressure in the feeding zone for lower temperatures. This, combined with a direct drive gear box and energy efficient drive system, yields up to 20% energy savings compared to a traditional 24:1 l/d extrusion system.

The new extruders in the HiPEX series are characterized by process stability, high maximum throughput rates and very good melt homogeneity. The use of 36D extruder screws in conjunction with improved mixing zones results not only in high melt homogeneity, but also very good color mixing. Bekum installs high energy-efficient synchronous reluctance motors in its extruder drives, which achieve the highest energy efficiency class IE4

(Super Premium). Electrical losses are almost completely avoided in the slip-free rotor of the reluctance motor. Heat generation is kept at a very low level. In terms of sustainability and environmental protection, the ferrite magnets used in the rotor in place

of rare-earth magnets also represent excellent equipment for extruder motors. For this reason, the all-electric machines are the new benchmark in energy efficiency in class 10 according to EUROMAP 46.1.



Bekum Control 8.0

Bekum America Standardizes the Control System



Bekum Control 8.0

The intuitive Bekum Control 8.0 facilitates the operation of the Bekum blow molding machine with a generously sized control unit, Industry 4.0 capabilities, fully integrated safety technology and remote maintenance connection.

- Large portrait-oriented 24" full-HD touch-screen control unit
- Bekum Control 8.0 allows intuitive operation of the machine
- Industry 4.0 ready for analytical data analysis
- Visualization of throughput values and production status
- Display of electricity, water and air consumption as well as the pressure values of all connected services*
- Fewer switching elements on the control panel

* Requires Industry 4.0 Sensor Package

- Graphical revision of the user interface and improved menu navigation
- Fully integrated safety technology by TwinSafe
- Remote maintenance connection via VPN-encrypted tunnel and a cloud application
- Machine network is separated from your corporate network by a firewall
- Fast and cost-effective support via recorded access
- Mobile hand operating device for comfortable set-up operation
- Eight freely configurable short cut buttons for frequently used functions
- Fast error detection and troubleshooting help
- Well-known Bekum operating and page structure is maintained - thus only a short learning time
- Machine manuals viewable from HMI
- Ethernet Topology view for easy network diagnostics



The US Manufactured EBLOW 407D

All-Electric Blow Molding Machine Built with Bekum Quality

Established in 1979, Bekum America has established itself as the leading supplier of extrusion blow molding machines to the North American blow molding market.

With approximately 100 employees to assist our customers, Customer Support is our most important advantage. This, combined with a huge inventory of comprehensive spare parts, allows Bekum America to offer Factory Support that no other supplier can match!

Contact us and schedule a visit to our Williamston, Michigan USA facility. During your visit, you will witness our vertical integrated manufacturing, including machining, welding, wiring, programming and machine assembly.

This includes an R&D lab with extrusion blow molding machine testing capabilities, including a complete material drying system for processing resins such as PET.



Bekum America Corp. Williamston, MI



Our Dedicated US Team

Plastics Hall of Fame

Induction Ceremony at NPE 2024



Bekum America proudly introduces our third team member being inducted into the Plastics Hall of Fame at the International Ceremony at NPE 2024.



Along with our founder Mr. Gottfried Mehnert and our first Bekum US President, Mr. Martin Stark, we now include Mr. Wolfgang Meyer into this prestigious group of plastics professionals. **Congratulations Wolfgang!**



Do you know our social channels?

YouTube, LinkedIn & more

Social networks serve as tools for research, information gathering, and networking. Bekum regularly provides updates on its social channels regarding current machinery, technology, and product topics, and offers insights into our family business's DNA.

We invite you to follow us on our social channels to receive the latest updates, insights, and success stories.



Bekum Blow Moulding Days 2024

International Audience Experiences Innovation and Expertise Firsthand

For the first time in its illustrious history, Bekum Group proudly welcomed customers and industry experts to the highly anticipated Bekum Blow Moulding Days 2024 at its Traismauer facility in Austria.

The response was nothing short of remarkable, with over 100 esteemed participants hailing from more than 20 countries converging for this momentous occasion. Spanning an enriching two-day period from February 20th to 21st, the symposium provided an unparalleled platform for attendees to immerse themselves in the intricate world of plastic container production.

Against the backdrop of state-of-the-art machinery and innovative technologies, participants were treated to a series of expert lectures, engaging discussions, and captivating live machine demonstrations. From the unveiling of groundbreaking products to insightful exchanges with industry stalwarts, every moment was a testament to Bekum's unwavering commitment to excellence and innovation.



2024 BLOW MOULDING DAYS
20. – 21. February 

The success of the Bekum Blow Moulding Days underscores not only Bekum's dedication to pushing the boundaries of plastic container production but also its steadfast resolve to foster collaboration and knowledge sharing within the industry. As Michael Mehnert, Managing Partner of Bekum, aptly remarked, "We envision the Bekum Blow Moulding Days as more than just an event; it's a cornerstone of

our commitment to our customers, a beacon of innovation, and a catalyst for industry-wide progress."

With eyes set firmly on the future, Bekum looks forward to building on the success of the inaugural Blow Moulding Days, further solidifying its position as a global leader in the plastic container production landscape.



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