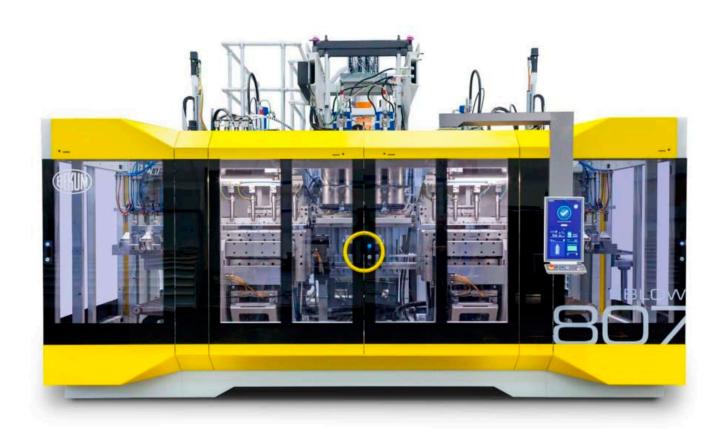


# **Packaging Machines**

High Performance Blow Moulding Machines



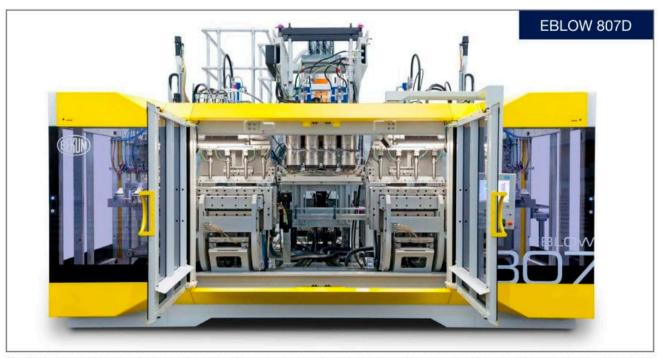






### **ELECTRIC AND HYDRAULIC BLOW MOULDING**

# MATERIAL SAVING AND ENERGY EFFICIENT PACKAGING PRODUCTION



Production of up to  $2 \times 14$  articles per cycle with a blow mould width of 1,060 mm are possible on a double-station blow moulding machine of type EBLOW 807D.

Our packaging machines for consumer, food & beverage, and pharmaceutical packaging are optionally available as electric or hydraulic single and double station machines for economic, round-the-clock production. Centrepieces of our packaging machines are the clamping unit feature a C-frame, which was developed and patented by our specialists, and our own extrusion system, including extruders and extrusion heads. These exclusive technologies will reliably, flexibly and quickly solve your packaging requirements up to 20 litres for standard packaging with and without handle as well as for sterile and multilayer packaging.





Crystal-clear handle containers made of PET are produced reliably and exclusively on Bekum blow moulding machines.

### **Innovative Clamping Unit**

To meet your production philosophy, we offer either the energy-saving electric or the classic hydraulic blow moulding machines. Both types are based on the same, unique clamping concept – the patented C-frame. The design of the C-frame, which utilizes mould platens that move along precise, low-friction linear guides, enables completely symmetrical clamp force distribution along the entire mould area, while maintaining high parallelism of the mould platens. The full clamp force is available independent of the mould thickness without adjustment. A precise clamp force distribution during the clamping process results in ideal article weld formation.

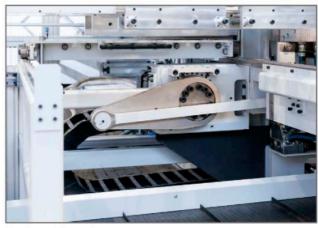
### Quality is the Key

■ For six decades, that's been the Bekum maxim. Our high degree of production experience makes us particularly flexible. We attach great importance to quality, which is why we assemble the main components ourselves. We are flexible when it comes to the question of suitable drive technology. Only then can we offer you the best machine and solution you need for your application.

# Benchmark for Blow Moulding Machines

### The Advantages at a Glance:

- Energy-efficient electrical systems with rotary direct drives
- Many Bekum blow moulding machines achieve the highest energy efficiency class 10 according to EUROMAP 46.1
- Patented clamping unit with maximum closing force of 500 kN
- Symmetrical clamping force distribution with almost 100% closing plate parallelism
- Well-matched extrusion system
- Material savings through cost-effective recycled materials and fillers
- Article weight optimisation and prototype sampling



Electric crank for carriage movement

### 

# FEATURES THAT MAKE THE DIFFERENCE.

MORE PACKAGING. MORE FLEXIBILITY. MORE CONTROL.



### **High Output**

Bekum's high-output technologies, "Multi-Cavity", "Tandem Blow" and "Highspeed" guarantee high output rates and a high overall system efficiency for packaging, bottles and containers of different sizes. When it comes to the Multi-Cavity concept, everything revolves around the maximum number of articles to be produced by each blow mould on our packaging machines.

Smaller packaging units can also be manufacturer reliably and in very high volumes of up to 18,000 pcs./hour using the Tandem Blow method developed by Bekum. In doing so, two articles are produced from one extrusion parison and increases the output rate by 100 percent.



### **Bekum Control 8.0**

- New machine control Bekum Control 8.0 ease the operation of the machine
- Intuitive user interface
- Industry 4.0 ready
- Clear and up-to-date information overview in a customizable dashboard
- Visualization of throughput values and energy consumption
- Display of electricity, water and air consumption as well as the pressures of all supplied media
- Generously dimensioned portrait-oriented 24 "full-HD touch-screen control unit
- Reduction of switching elements on the control panel
- in connection with new control optional hand operating device for quick setup

# Bekum Control 8.0

# Magnetic Quick Change System for Mould and Pins

- New feature for regular production format changes
- For the first time available from Bekum, magnetic quickchange system for blow moulding machines
- Mould disassembly and assembly until/from integrated roller table in 15 minutes per clamping unit - without tools
- Mould transportation with forklift or crane, without a special mould cart
- Requires only a small amount of space
- Blow pins can be changed just as easily and without additional centering effort

Quick Change System

### **Worldwide Service**

- Free initial advice by phone for faster troubleshooting and debugging
- Fault analysis using a secure VPN data connection
- Service hotline for spare parts
- Retrofit, maintenance, modernisation and optimisation of Bekum machines and production lines
- Theoretical and hands-on training, education and Seminars
- Sampling and process development
- Article design consultancy





## **EXTRUSION SYSTEM ACCORDING TO YOUR NEEDS**

FROM A SINGLE SOURCE. MATCHED. REPRODUCIBLE PRODUCT QUALITY.

Bekum is one of the technology leaders in extrusion blow turing quality of these components. Standard and special moulding. For this reason, it is important to us to have materials can be processed superbly - and in the extrusion the core competencies of extrusion for mono, bi-ex and blow moulding of PET, we are the exclusive supplier of wellco-extrusion heads and extruders in-house. We develop, known packaging manufacturers. Using resource-saving design, manufacture and assemble the core processes and technologies, our machines can components independently. Thus, as with the achieve material savings and process recycled blow moulding machine, we have a direct influplastics to produce sustainable packaging and ence on the rheological design and manufaccontainers and contribute to the circular economv. Bi-Ex/De-Co Tri-Ex/Re-Co 1. Outer Layer - Virgin and Color 1. Outer Layer - Virgin and Color 2. Inner Layer - Virgin and Regrind 2. Middle Layer - PCR and Regrind 3. Inner Layer - Virgin Co-Ex 3 Co-Ex 4 1. Outer Layer - Barrier (EVOH/PA) 1. Outer Laver - Virgin 2. Adhesive Laver 2. Virgin and Regrind Laver 3. Inner Layer - Virgin and Color 3. Adhesive Layer 4. Inner Layer - Barrier Co-Ex 5 Co-Ex 6 1. Outer Layer - Virgin 2. Adhesive Layer 2. Virgin and Regrind Layer 3. Barrier Layer (EVOH) 3. Adhesive Laver 4. Barrier Layer (EVOH) 4. Adhesive Laver 5. Inner Layer - Virgin 5. Adhesive Layer 6. Inner Layer - Virgin Co-Ex 7 1. Outer Layer - Virgin and Color 2. Adhesive Layer 3. Barrier Layer (EVOH) 4. Adhesive Layer 5. UV Barrier Layer - Virgin and black Color

Virgin and Regrind Layer
 Inner Layer - Virgin

Multi-layer co-extrusion technology with barrier properties

and regrind processing capabilities



The name HiPEx 36 conceals a completely redeveloped more powerful extruder generation. The main focus lay in the efficiency of the system as a whole. The new HiPEx generation of extruders for the future packaging machine series are characterised by their exceptional process stability, their high maximum throughput capacities and their excellent melt homogeneity. When designing extruders, Bekum places particular emphasis on a high degree of energy efficiency, as extruders are the main energy consumer of blow moulding machines. Thanks to the installation of extruder screw lengths of 36D in combination with improved mixing zones, the screw constantly supplies homogeneous material and better colour mix.

### Standard Grooved Barrel Extruder

A well-matched extrusion system contributes significantly to ensuring product quality. The extruder drive is electromechanical and speed controlled using an energy efficient direct drive from the motor and transmission. The extruder screw and the feed zone geometry are coordinated so that many blowable plastic materials can be processed with high melt strength, low melt temperature and good homogeneity. This extruder generation with extruder screws of the length of 24D have been proven and tested for many years.

### **Bekum Extrusion Heads**

The Bekum extrusion heads for continuous and discontinuous extrusion are constantly undergoing further development. They are a decisive factor for production success. Bekum's Mono, Bi-Ex and Co-Ex spiral mandrel extrusion heads offer short, less shearing and uniform flow channel design with consistent melt and temperature homogeneity. Its big advantage is the uniform wall thickness distribution over 360° around the article. The reproducible production results lead to improved quality and reduced weight, as no thin spots and weld seams have to be compensated for. The big advantage of this technology is the reduced material and colour change times. There is no temperature-related influence on the die position, which reduces the setting times and the adjustment effort when starting production and reduces material usage.





Our Technology

– Your Success



Technical Specification												
Single- and Twin-Station	EBLOW / HYBLOW 307D	EBLOW / HYBLOW 307DL	EBLOW / HYBLOW 407D	EBLOW / HYBLOW 407DL	EBLOW / HYBLOW 707/D	EBLOW 807D						
Mould width, max. (mm)	350	500	500	860	760	1060						
Mould length, max. incl. 50 mm overhang (mm)	350	350	470	470	550	550						
Mould depth, max (mm)	2 x 130	2 x 130	2 x 130	2 x 130	2 x 150 (2 x 180)	2 x 200						
Carriage stroke (mm)	360	520	520	880	800	1100						
Day light opening (mm)	200	200	250	250	380 (320)	335						
Calibrating stroke, max. (mm)	220	220	220	220	220	220						
Clamping force (kN)	100	100	150	200	200 / 240 / 300	300 / 400 / 50						
Calibrating force (kN)	16	16	20	20	30	40						
Article Production Possibilities, max. (L)	4	3	10	2	12	15						

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Center distance									
Cavities	2	3	4	5	6	8	10	12	14
EBLOW / HYBLOW 307D	140	100	70	60					
EBLOW / HYBLOW 307DL	240	140	110	85	70				
EBLOW / HYBLOW 407D	230	150	110	85	70				
EBLOW / HYBLOW 407DL			180	150	125	100	75	65	
EBLOW / HYBLOW 707/D	350	230	160	125	115	85	70	65	
EBLOW 807D	500	330	220	180	150	125	85	75	65

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