



Press Release

PPWR is transforming the packaging market – Extrusion blow moulding technology becomes key to the use of recycled plastic

Berlin (Germany), September 1, 2026: The new EU Packaging and Packaging Waste Regulation (PPWR) marks the beginning of a new phase for the European packaging industry. In the future, packaging is to be designed for recycling, produced with greater resource efficiency and increasingly manufactured using recycled plastics. For manufacturers of extrusion blow moulded packaging, this represents a technological shift. Production solutions are required that enable high recycled content, save material and energy, and at the same time ensure consistent product quality.

For the machinery industry, this development opens up new opportunities: not only new machines, but also the technological upgrading of existing equipment can make an important contribution to this transformation.

PCR presents new challenges for extrusion

Post-consumer recycled material (PCR) can differ significantly from virgin material in terms of their material properties. Variations in viscosity, melt flow index, color and contamination place high demands on plasticization, melt flow and process control.

The challenge is therefore not simply to be able to process PCR. What matters is the ability to process high recycled contents reproducibly and economically while maintaining the required product quality. This requires the extruders, extrusion head and process control to be considered as an integrated system.

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Tri-extrusion: using recycled plastic where it makes sense

Tri-extrusion offers a particularly efficient way of integrating PCR.

Three extruders supply a multi-layer extrusion head with different materials. A typical concept, for example, consists of high-quality outer and inner layers with a core made from PCR material.

This allows virgin material to be concentrated specifically in the areas where it is technically required.

Recycled material is used where it can perform its function without unnecessarily compromising surface quality or other specific product properties.

The result is a combination of:

- reduced use of virgin plastics,
- high recycled content,
- targeted material distribution,
- high product quality, and
- economical production.

This concept can offer significant advantages, particularly for jerry cans, bottles and technical hollow bodies.

The extrusion head becomes a strategic component

In extrusion blow moulding, the extrusion head is the link between material preparation and the actual forming process. In multi-layer applications, it plays a major role in determining how precisely and consistently the individual material layers are produced.

As a result, the extrusion head is gaining new strategic importance in the context of PPWR requirements.

Bekum has extensive expertise in the development and design of extrusion heads for demanding multi-layer applications. One example is the 3BKW55-3, which is designed for Tri-extrusion applications with two vertically arranged extruders.

The vertical extruder arrangement enables compact integration of the additional extrusion units and offers particularly interesting possibilities for retrofits.

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New possibilities for existing machines

Switching to multi-layer production does not necessarily require the purchase of a completely new blow moulding machine.

Depending on the machine type, existing extrusion equipment, available space and the desired production concept, retrofitting the extrusion system and extrusion head can be an economically attractive alternative.

This can turn an existing mono-extrusion line into a multi-layer system – for example, for processing PCR in the core layer.

This creates new opportunities for packaging manufacturers:

Existing investments can continue to be used, production capabilities can be expanded, and new material concepts can be introduced at the same time.

Such a retrofit can be a sensible option, for example, when

- an existing machine fleet remains mechanically and electrically capable,
- new packaging concepts require additional material layers,
- the use of PCR is to be increased in the future,
- the product range is to be expanded, or
- greater resource efficiency is to be achieved without a new machine investment.

The specific technical feasibility always depends on the existing machine, the extruders, the available installation space, the required throughput and the respective application.

Bekum: machine and extrusion head expertise from a single source

This capability is an essential part of Bekum's technological approach.

As a manufacturer of extrusion blow moulding machines, Bekum not only has expertise in complete systems, but also extensive know-how in the design and integration of extrusion systems and extrusion heads.

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This enables Bekum to consider different ways of implementing new production requirements: from new machines and upgrades to existing equipment through to targeted retrofits of extrusion systems and extrusion heads.

This creates a decisive advantage for customers: the question is no longer simply which new machine is required, but first:

How can the existing machine fleet be technically and economically developed to meet the requirements of the next generation?

Sustainability starts with the right material distribution

Processing PCR is only one element. More sustainable production also means reducing overall material consumption and using energy efficiently.

Bekum pursues this approach, for example, with high-performance HiPEX extruders, precise wall-thickness programming and modern multi-layer concepts.

By placing materials precisely where they are needed, properties such as strength, barrier performance and surface quality can be combined with the most efficient possible use of material.

Not every part of a package has to be made from the same material – what matters is that each material is used where it is technically needed.

From PPWR requirements to a technical solution

The PPWR will gradually transform the packaging market. Manufacturers will need to address recyclability, percentage of recycled content, material efficiency and new packaging concepts.

For extrusion blow moulding technology, this means that flexible production systems will become increasingly important.

Tri-extrusion can be a key technology in this context: it enables the targeted integration of PCR while opening up new possibilities for material combinations and product designs.

And it can be more than an option for the next generation of machines.

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Existing systems can also – depending on their technical prerequisites – be upgraded for new production requirements through targeted retrofits of extruders and the extrusion head.

This turns the extrusion head from a conventional machine component into a strategic technology element for transforming the machine fleet.

To achieve this, Bekum combines mechanical engineering, extrusion technology and application expertise. The aim is not only to develop new machines for the circular economy, but also to work with customers to create solutions that enable existing and new production systems to be developed economically.

Because the packaging of the future does not begin with recycling.

It begins with the right material and process technology – and therefore in the extrusion head.

Bekum will exhibit at the following trade fairs in 2026:

- **Colombiaplast, Bogota Colombia - Pavillion 11-16, Stand 4884 (28.09.-02.10.2026)**
- **ABC Conference, Wheeling, Illinois USA - Table #41 (05.-07.10.2026)**
- **Pack Expo, Chicago USA – Booth W-49104 (18.-21.10.2026)**
- **Plastimagen, Mexico City Mexico – Halle B, Booth 2430 (10.-13.11.2026)**

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Image captions:

Caption 1: Production examples – Extrusion Layer Graphic

Caption 2: Production examples – Tri-Extruded Canister Sample

Caption 3: Production examples – Tri-Extrusion Head Type 3BKW55-3 with Vertical Extruder for new machines and upgrades on existing machines

Image sources: All images are from Bekum (unless otherwise indicated)

About Bekum ++++++

Pioneer and Trendsetter in Blow Moulding Technology

Founded in Berlin in 1959, Bekum Maschinenfabriken GmbH is one of the world's leading manufacturers of extrusion blow moulding machines. Founder Gottfried Mehnert conceived the name Bekum as the acronym (Berliner Kunststoff Maschinen). In 2016 the son Michael Mehnert took over. He is responsible for the management of the company as managing director.

The company began to flourish in its founding year with the development of the world's first neck-rim calibration. Numerous innovations and patents followed, confirming that Bekum, with its innovative and customer-oriented machinery solutions, has always been ahead of its time – and remains so to this day. When innovative and economical machinery solutions with high productivity for individual packaging requirements of hollow packaging are in demand, then Bekum, with 65 years of experience in blow moulding technology, is the first choice worldwide.

Product Range and Applications in Food and Non-food

With future-oriented and reliable production processes and fully electric, as well as hydraulic machinery for the commercial production of blow moulded containers ranging from 5 ml to 3000 l, Bekum offers everything for plastic packaging from one source.

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Philosophy of the Company

Building and maintaining long-term relationships with market partners through future-oriented, predictable company policy determine the actions of the first and second generation of the family, represented by Michael Mehnert. This strategy ensures the jobs of dedicated and experienced staff. The preservation of traditional structures, an established network of partners and far-sighted adaptation to change form the basis for continuous development and inspiration for the company in the interest of partners, customers and employees.

Innovation and Technology

Process reliability, availability, efficiency and sophisticated design characterize the high standard of Bekum production lines for blow moulding. Bekum contributes the expertise that has grown based on these references, associated with various patents in blow moulding, to the fulfilment of every customer requirement.

The level of process design is key for process reliability, reproducibility, parts quality and cost-efficiency. A high-quality production line for extrusion blow moulding, consisting of machine, die and automation which is impressive in terms of speed, wear resistance, availability, process reliability and stability alike, is critical for return on investment (ROI) and the level of added value.

Locations & Employees

Bekum employs around 300 people at four locations:

- Berlin, Germany (holding company)
- Siegburg, Germany (sales and service)
- Traismauer, Austria (European production site)
- Williamston, MI, USA (American production site for North America)

Facts and figures

With 18,000 machines delivered and installed worldwide - about half of them still in use - the Bekum Group has achieved by far the largest production of blow moulding machines of any brand. The Bekum Group serves approximately 100 countries around the world directly or through representatives.

Benchmark for Blow Moulding Machines

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