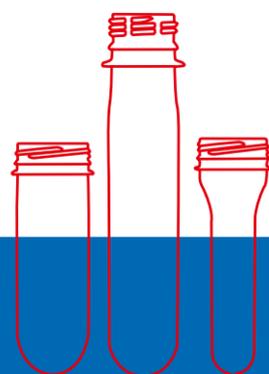




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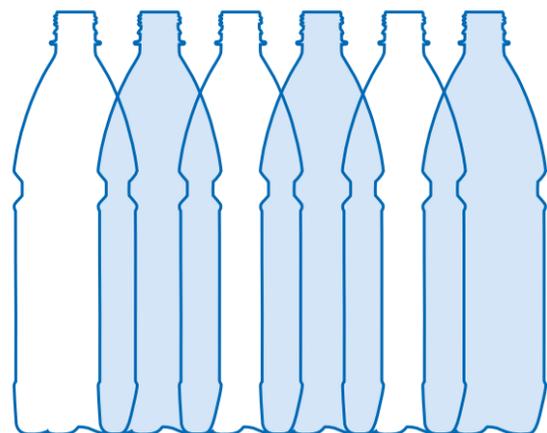
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Partnership

THE PACKAGING MARKET FOR DRINKS IS CHANGING. The packaging market has seen a fundamental change by the successful launch of PET bottles. Therefore, in the middle of the 1990s, the established container glass manufacturer Wiegand-Glas decided to provide sufficient capabilities to the filling companies for the conversion to this new type of PET packaging. State of the art injection moulding machines started the production of PET preforms which was completed by PET bottles blown in-house on latest blowing systems. Quality, flexibility and expertise are the pillars of Wiegand-Glas and, as an associate company, PET-Verpackungen GmbH Deutschland takes full advantage of more than 400 years of competence and tradition in the production and distribution of various drink and food packaging.



When the first PET bottles were introduced to the market in the mid 1990s, consumers were somewhat sceptical about the then uncommon packaging material. Together with our partners in the beverage industry we succeeded in demonstrating and proving the clear advantages of PET, and establishing it as the new standard for the packaging industry.

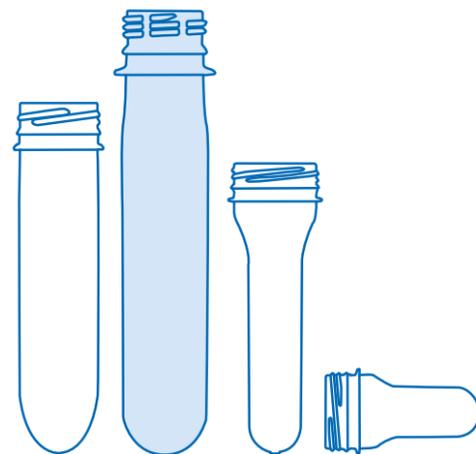
High-quality food products and drinks like wine and champagne are filled further on in traditional glass containers. Therefore, the Wiegand-Glas group continues to offer a variety of glass solutions for these products. PET-Verpackungen GmbH Deutschland stands for new possibilities and trends.

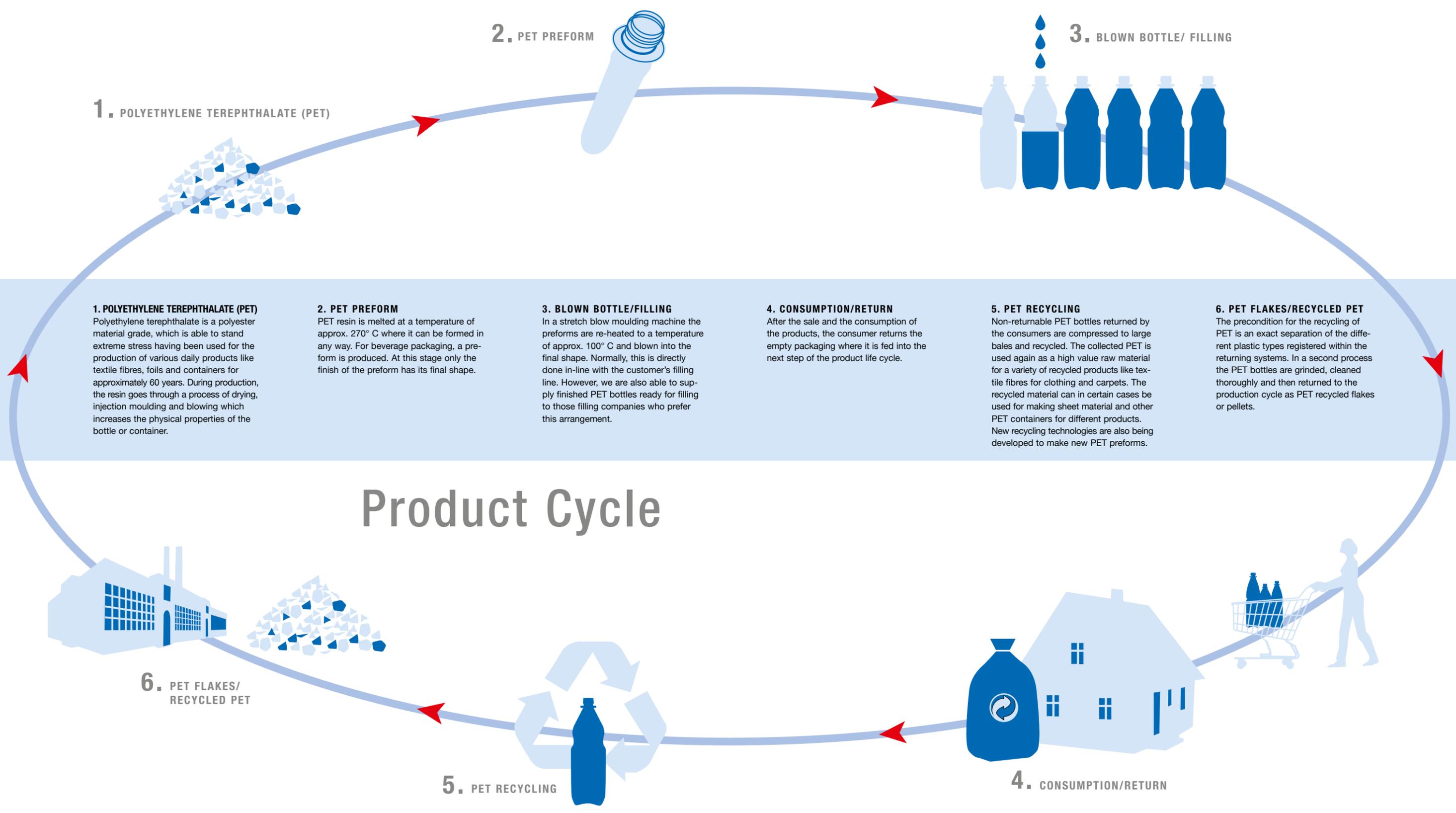
The fast growth of our production capabilities reflects the breakthrough of the PET bottle in the international beverage markets. Located in Großbreitenbach (Thuringia), we are one of the well-known preform and PET bottle manufacturers in Europe today, which requires the continuous upgrade and improvement of our moulds and production systems with the latest technology.

A World of Possibilities



THE MATERIAL FOR CUSTOM DESIGNED PACKAGING. Compared to other packaging materials the PET solution offers clear advantages. The low weight and shatterproof image of PET containers accommodate the consumers' requirements for convenience and in addition reduce the costs in the logistic chain. At the same time PET provides solutions to the increasing market demand for an infinite variety of individual packaging in all shapes, sizes and colours. No matter what your specific needs are, whether the use of recycled material, reduction of Acetaldehyde, UV protection, specific barrier properties or special colours, we are able to help you realize your goals.





1. POLYETHYLENE TEREPHTHALATE (PET)

1. POLYETHYLENE TEREPHTHALATE (PET)
 Polyethylene terephthalate is a polyester material grade, which is able to stand extreme stress having been used for the production of various daily products like textile fibres, foils and containers for approximately 60 years. During production, the resin goes through a process of drying, injection moulding and blowing which increases the physical properties of the bottle or container.

2. PET PREFORM

2. PET PREFORM
 PET resin is melted at a temperature of approx. 270° C where it can be formed in any way. For beverage packaging, a preform is produced. At this stage only the finish of the preform has its final shape.

3. BLOWN BOTTLE/ FILLING

3. BLOWN BOTTLE/FILLING
 In a stretch blow moulding machine the preforms are re-heated to a temperature of approx. 100° C and blown into the final shape. Normally, this is directly done in-line with the customer's filling line. However, we are also able to supply finished PET bottles ready for filling to those filling companies who prefer this arrangement.

4. CONSUMPTION/RETURN
 After the sale and the consumption of the products, the consumer returns the empty packaging where it is fed into the next step of the product life cycle.

5. PET RECYCLING
 Non-returnable PET bottles returned by the consumers are compressed to large bales and recycled. The collected PET is used again as a high value raw material for a variety of recycled products like textile fibres for clothing and carpets. The recycled material can in certain cases be used for making sheet material and other PET containers for different products. New recycling technologies are also being developed to make new PET preforms.

6. PET FLAKES/RECYCLED PET
 The precondition for the recycling of PET is an exact separation of the different plastic types registered within the returning systems. In a second process the PET bottles are grinded, cleaned thoroughly and then returned to the production cycle as PET recycled flakes or pellets.

Product Cycle

6. PET FLAKES/ RECYCLED PET

5. PET RECYCLING

4. CONSUMPTION/RETURN

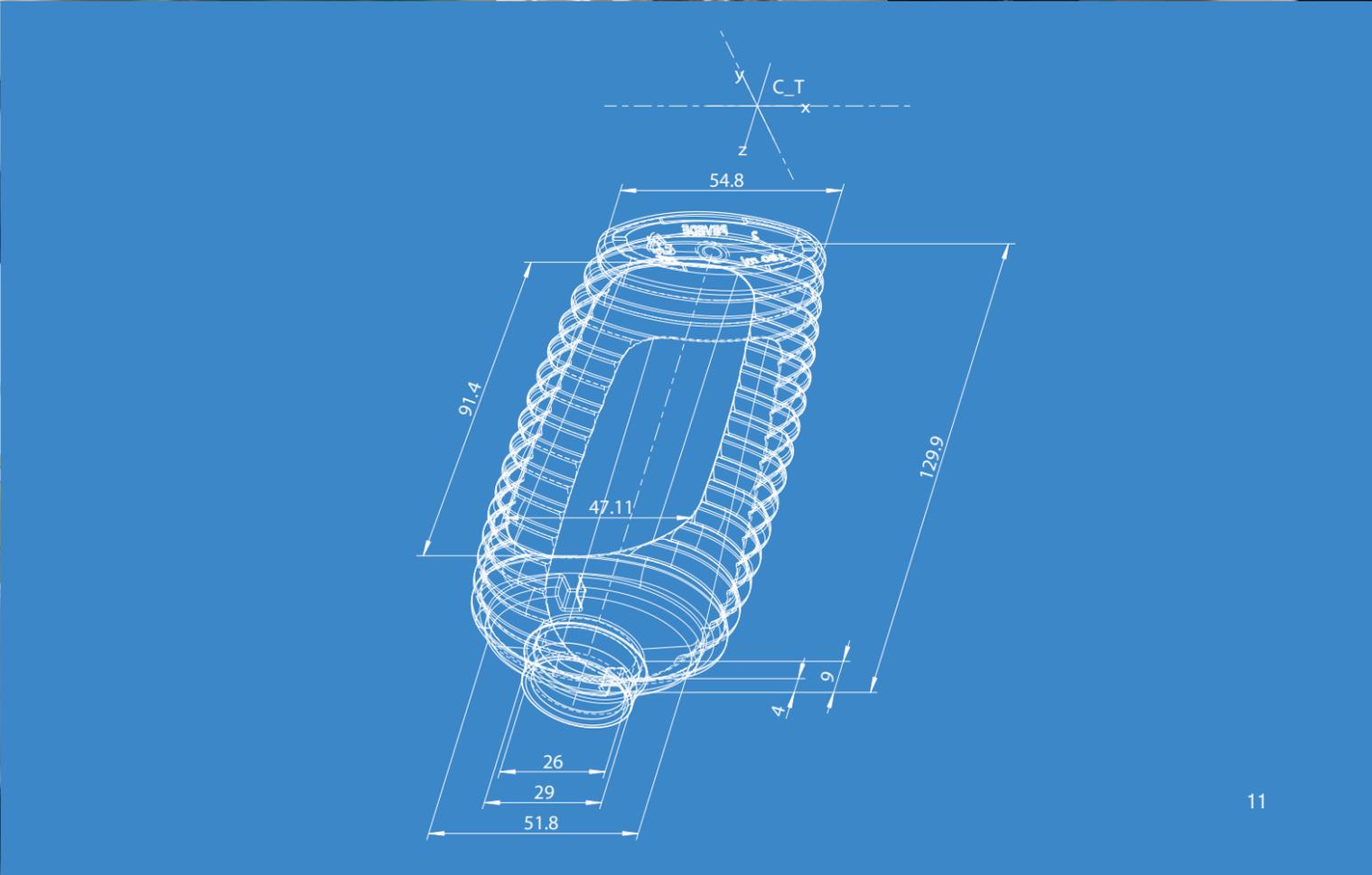
High Productivity

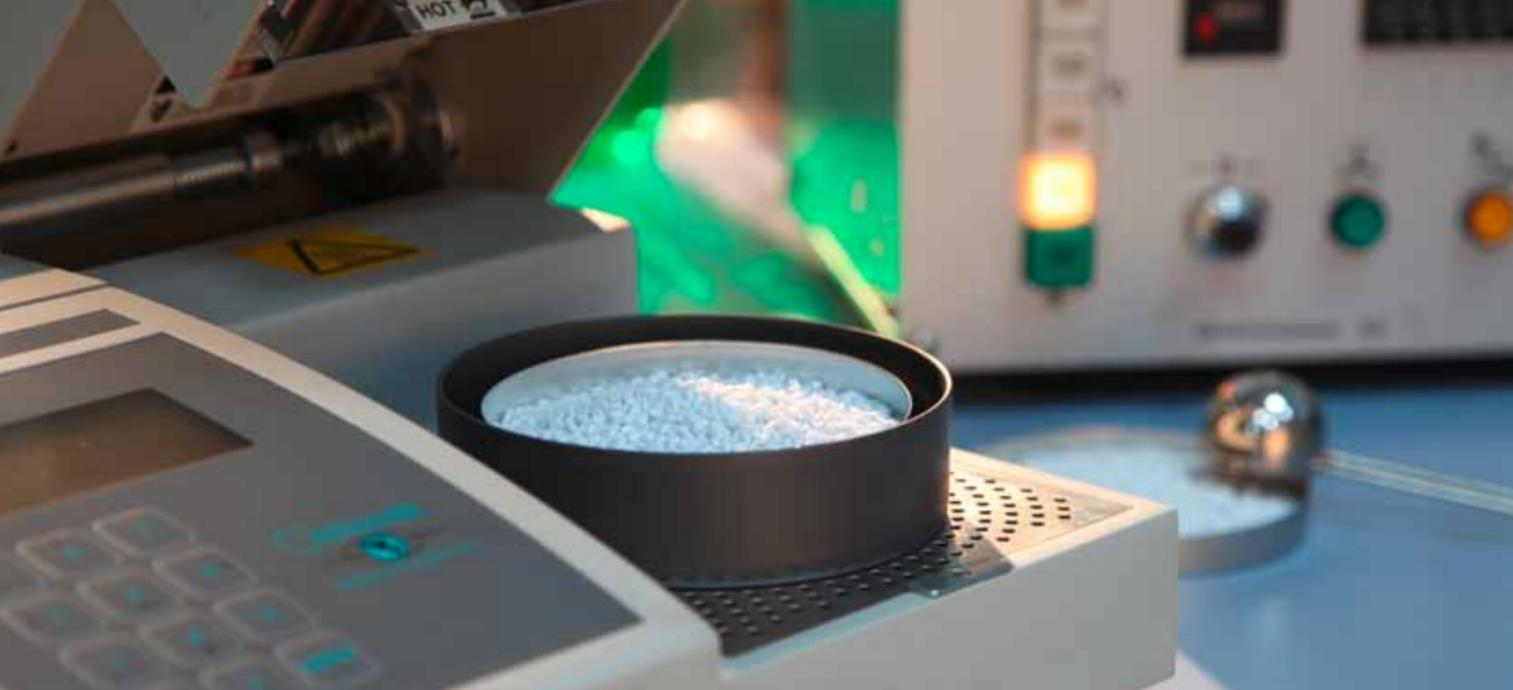
CAPACITY CREATES VARIETY. With our most modern production we produce PET preforms and bottles with volumes ranging from 20 ml up to five litres. Our large storage capacities for raw materials and finished products form the basis for a fast realization of our customers' individual demands. Offering the widest variety of preform and bottle designs, types, colours and weights as well as guaranteeing the security of supply to our customers build an important focus of our company.

In order to guarantee the optimum material properties and performance in the preform and the finished bottle or container, we reduce the remaining humidity in the resin to below 50 ppm.

Our MES/QM system collects and records real time machine and process data which is completed by the generation and tracking of inspection procedures. Through the co-operation of both systems we can guarantee an all-over traceability and the fulfillment of the EU regulation 1935/ 2004.

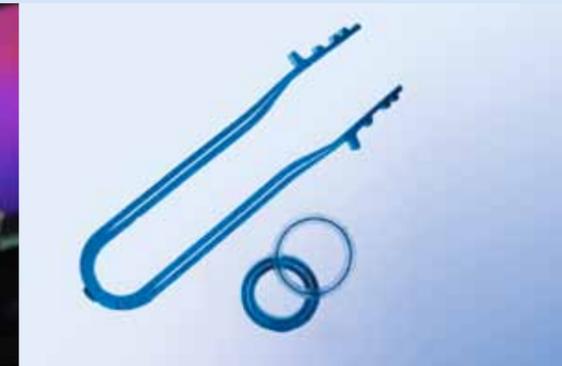
Our machines and systems are state of the art – also concerning the protection of natural resources. As a licensee of PETCYCLE we use a high ratio of recycled PET. The percentage of added recycled materials can be adjusted permanently enabling us to guarantee high-quality products.





Precision

QUALITY IS NO COINCIDENCE. Continuous quality assurance – also done by independent institutes – accompanies every step in the process. Our laboratory is the centre of production. Besides visual inspections and chemical analysis our permanent process control makes sure that any defects will be detected at an early stage. Furthermore, we focus on traceability from raw material to final product, before and after delivery.



Our quality assurance already starts before the resin is filled into our storage silos. And our commitment and involvement continues beyond delivery. Our service includes the optimization of the stretch blow moulding

system at the customer's site as well as the training of your employees, which we are pleased to carry out on request. The record of the complete process data enables us to detect any non-conformity quickly minimizing

the risk to produce defect products. To detect and remove any defects already during production is our target forming the basis of our company's strategy and our products' success in the market.



Flexibility

YOUR STRONG PARTNER. We, as a team, do our utmost to satisfy our customers' wishes quickly and precisely. At your request, we accompany you from the change of your machines to PET bottles to the planning and realization of individual bottle and packaging designs. Please do not hesitate to contact us for all your requirements. As your competent and reliable partner for PET packaging, we will help you succeed in this market.

Today, quick response, reliability and quality are decisive factors for success. With transport companies integrated in the corporate group, we ensure that our products arrive just in time at the filling line of our customer – no matter what quantity, colour or shape.

