

Prefero

Complete preform injection moulding systems



The Prefero PET injection moulding machine



Prefero is the core of the Krones preform system. The injection moulding machine is designed as a hybrid machine with electrical positive locking movement. Prefero is not only impressive with a best-in-class lock-to-lock time of a quick 1.9 seconds (400 t). Thanks to an integrated energy recovery system, up to 20 percent of the total energy consumption can be saved as compared to competitors' machines.

At a glance

- Lock-to-lock time of a quick 1.9 seconds (400 t)
- Lateral removal unit with post-cooling system
- Preform interior cooling system
- Energy recovery from positive locking and robot movement reduces the total energy consumption by up to 20 percent*.
- Processing of 100 % rPET is possible.



*Compared to similar machines of the competition

A closed plastics cycle – from a single source



With our Prefero preform system we close the PET plastics cycle with Krones end-to-end solutions and enable customers to establish their own in-house manufacturing facility.

In-house manufacturing with Prefero – benefits to you



- Customised preforms → weight optimisation
- Higher quality → less scratches on the preform surface due to reduced transports
- Less quality controls required
- Larger process window → less risk and waste
- Freedom in design of neck finish and cap possible



Prefero is everything you need for your own preform production



Krones preform system – the Prefero machine with horizontal removal



Horizontal removal robot
with preform post-cooling
system

Plasticizing unit with latest
screw design for improved
melting quality and rPET
processing at high
throughputs



Energy-efficient adaptive
drive unit

Operating interface tailor-
made for preform
production

Electrical locking unit
(energy-efficient knee-lever
system)

Easily accessible tool area

Krones preform system – PET preform moulds by MHT



- 100 percent compatible with the industrial standard
- Tools for various injection moulding machines available, no adjustment required "Plug & Play"
- Fastest cycle times with the highest preform quality
- Temperature control for each individual nozzle
- Long service life
- HP-Stack® technology as mix-and-match option for faster cycles
- DLC neck ring coating available
- Standard TiN core coating
- Reduced water consumption

MHT nano-pitch

- More mould cavities per clamping surface
- Higher output with the same machine size
- Optimal for the trend towards smaller and more lightweight preforms



Why should you choose Krones as your perfect partner for PET preform injection systems?



Krones is your strong, solid and reliable one-stop-shop partner

Krones competence – also for preform manufacturing

Krones is responsible for the entire project

- Everything from a single source: one contact – clear responsibilities
- Service and external coordination for the entire line
- International service support with more than 2000 experts
- Much experience in the Krones family with MHT (preform tools), IPS – Integrated Plastics Systems and Netstal (injection moulding systems), as well as Krones Prefero (preform injection moulding systems)
- Intelligent plant engineering for optimised space requirement
- Development of the packaging including preform design and consultation with regard to neck finish/cap area
- Integrated concept for reduced energy consumption and low packaging weights
- Commercially strong and secure partner
- Best matching with the requirements of your beverage production line
- Solutions for continuous quality monitoring

We deliver the complete solution for your products: From recycling via the granulate to the pallet

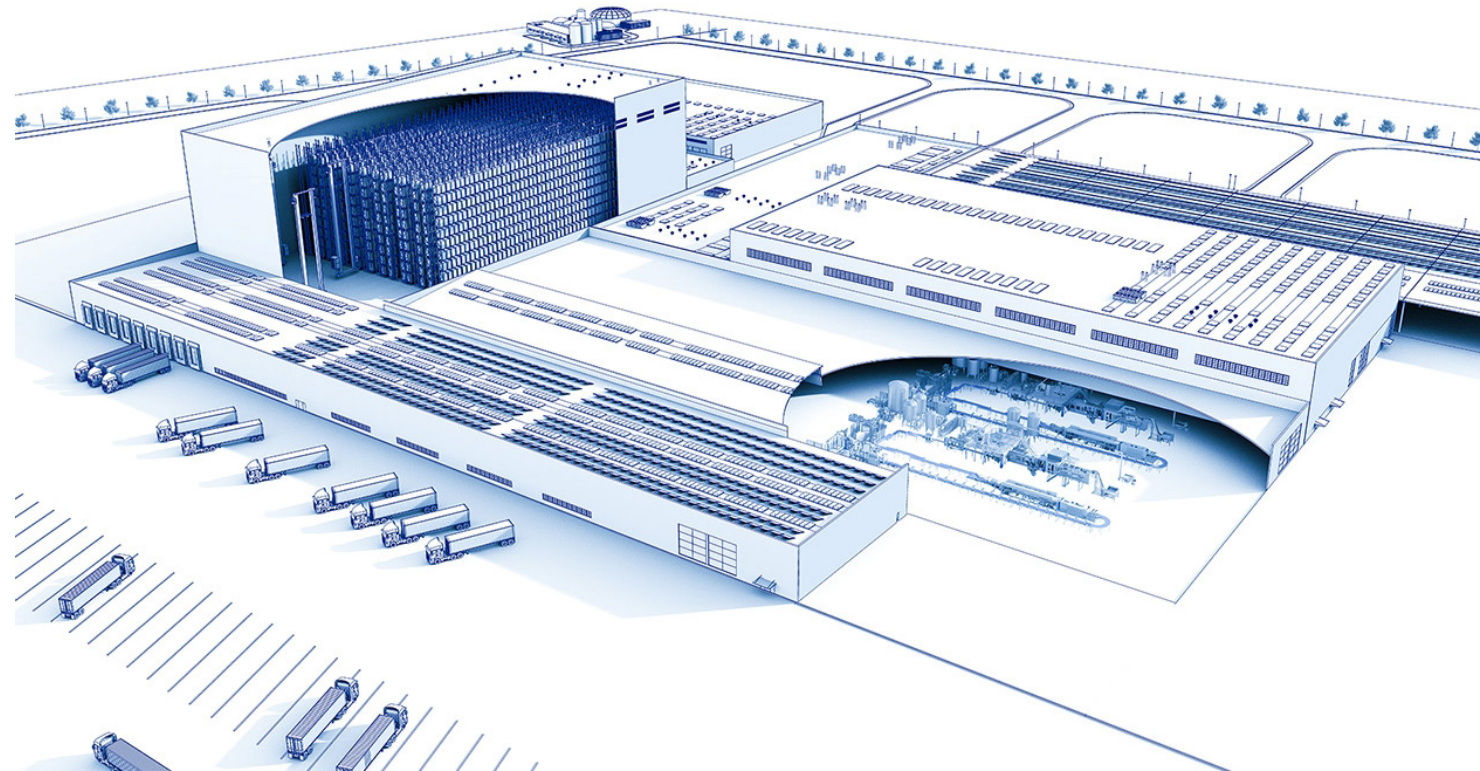


Krones is your turnkey partner for the entire value chain



We develop, plan and implement

- Turnkey factories
- Process lines for the production of beverages and alternative proteins
- Filling and packaging lines
- Material-flow and storage systems
- Recycling systems for PET, polyolefins and other packaging plastic materials



Krones is your turnkey partner for the entire value chain



As a one-stop shop, we also offer:

- Digitalization of entire factories
- The automation of processes
- The development of container and packaging designs
- Consultancy projects along the entire value chain
- Comprehensive services
- Technology and management training
- Components and consumables
- Easy supply through our online shop
- Sale, overhaul and assembly of used machines



Why choose Krones? Because of our experience in plant engineering



- We support our customers in greenfield and brownfield projects.
- We plan all relevant areas at the customer site: process technology, preform injection & bottle blowing, filling and packaging, supply systems, logistics, IT, PET recycling.
- We use our experience, proven tools and processes.
- We emphasise our experience through the use of calculation and simulation tools.
- We follow the typical phase model of line projects.
- We offer our support in the project realisation phase.

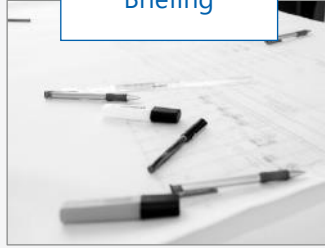


Why Kronos – due to our expertise in packaging design



Concept

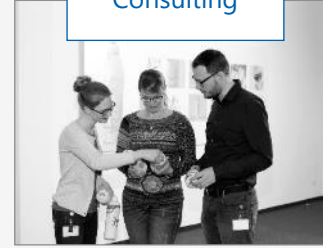
Briefing



Concept development



Consulting

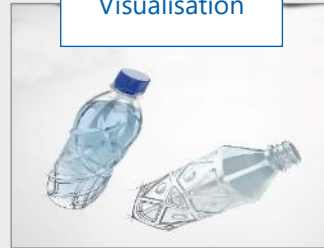


Engineering

Engineering



Visualisation



FEA simulation



3D models



Validation

Preform design



Stretch blowing tests



Laboratory tests



Ready for the market



Why Kronos – due to our expertise in the development of preform and bottle designs



Dedicated preforms depending on bottle and application

- Customised lightweighting solutions
- Higher preform quality
- Process reliability
- Larger process window – for more efficiency of the entire line

Development opportunities and competences

- Plastics technology centre
 - With injection moulding machines (two cavities and 144 cavities)
 - With blow moulders (nine single-head and two rotary machines)
- Approximately 20,000 blow moulds and more than 850 mould tests per year
- Completely equipped bottle laboratory in Neutraubling
- 14 bottle designers in Neutraubling and seven in our centres
- Further laboratories in the USA and China



Why Kronos – due to our intralogistics solutions

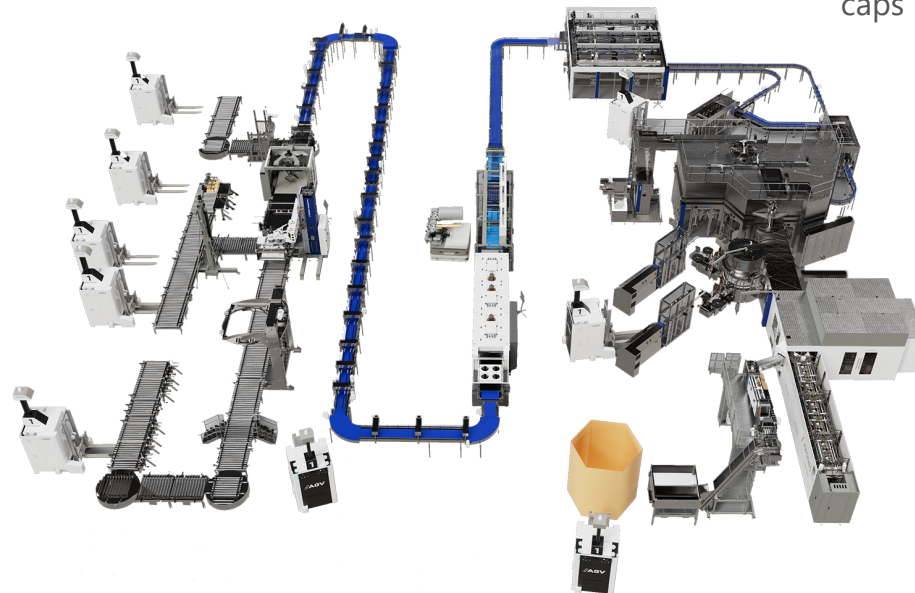
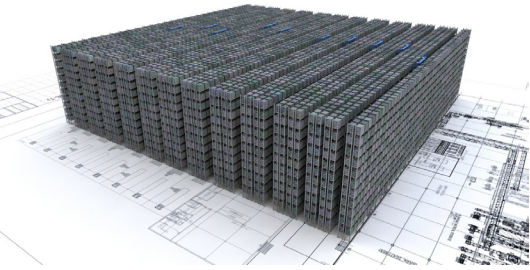


Storage facility and logistics

Bottling and packaging equipment

Storage of preforms and caps

Preform and cap manufacturing



Why Kronos – due to our approach to PET recycling



- More than 20 years of experience in PET recycling
- The only provider worldwide of washing and decontamination technology
- Specialised in the production of food-grade up to 100 percent rPET for the production of preforms (approved by FDA and EFSA)

MetaPure W washing module

- Best-in-class washing process, proven by an independent laboratory
- Gentle treatment of PET flakes during washing
- Less water consumption through smart water management

MetaPure S decontamination module

- Short process time by using flake decontamination
- Gentle treatment of the flakes
- IV increase possible



Benefits to you



In-house manufacturing offers reliability

Your own preform production does not only ensure a reliable delivery chain but also full process and cost control. In addition, quality and hygiene during production are in your own hands.

Cost reduction

The demand-oriented production of preforms optimises storage capacity and handling and reduces transport costs and logistics effort. The reduced logistical effort also means lower energy requirements and CO₂ emissions.

Optimised preform design

By designing the preforms to suit the individual bottle and application, a higher material quality can be achieved and customised lightweight packaging solutions can be implemented.

Ergonomic design and user-friendliness

The accessibility to the machine enables efficient operation and maintenance. Peripherals integrated in the controller and intelligent operator guidance (smart operation) ensure ease of use and thus maximum OEE.

New machine enquiry

You can easily enquire a non-binding quotation in our [Krones.shop](#).



Everything from a single source



Training sessions at the Krones Academy – trained personnel for an increased efficiency of your line

The multifaceted offer by the Krones Academy ranges from operation, servicing and maintenance courses all the way to management training. We will gladly also create your individual training programme.

KIC Krones cleaning agents make your machine shine

Only if the production environment is immaculate, can your product be brilliant.

KIC Krones provides you with the optimum cleaning agents and disinfectants for each individual production step.

Container design

Krones container design - creative, functional, unique with design and production of mould types for all Contiform series. Experience through approx. 20,000 moulds per year.

Krones Lifecycle Service – Partner for Performance

It goes without saying that Krones takes care of your lines also after the purchase of new machines: The Krones LCS experts are always there to help you reaching your goals and turn your wishes into optimal LCS solutions.

KIC Krones lubricants for each production step

Whether for gears, chains or central lubrication systems – our greases and oils are true all-rounders. They can reach every lubrication point, protect your line and ensure gentle treatment for your products thanks to their food-grade quality.

MHT injection moulding tools

No crystallinity or scratches, high surface quality and stability, seamless mould separation: Only perfect tools produce perfect parts. As an independent mould maker, MHT produces moulds with up to 192 cavities.

**SOLUTIONS
BEYOND
TOMORROW**

