



rPET implementation

Lifecycle Service



A good step in the right direction



The demand for more environmentally friendly production in the industrial goods sector has been there for some time - and it's growing. Krones offers its customers suitable products, such as this "green" solution for PET bottles.

rPET implementation allows to use recycled PET preforms in your existing production. In doing so, you can decide how high the share of recycled PET should be - because Krones can enable production with up to 100 %* recycled material.

At a glance

- On-site bottle tests with rPET preform (up to 100 % recycled material)
- Tests for bottle validation
- Guaranteed evaluation of the consistency of the blow moulding process in production operation
- Estimation of the process window

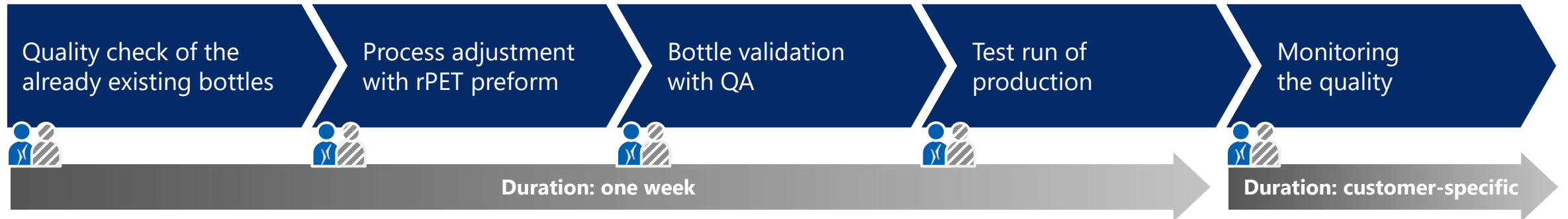
* Depending on the preform quality



Performing the rPET implementation Process



The main components of the rPET implementation process are a quality check of the existing bottle, an effective process change with the new rPET preform, an initial test run during production operation to ensure that everything runs smoothly and there are no defects in the finished product, a quality monitoring to ensure consistent quality for further production and close communication with all stakeholders throughout the process. We achieve the results you require while working in close collaboration with you by providing qualified Krones personnel and the correct internal Krones tools for documentation.



This illustration is an example process.

- Krones personnel
- Customer's personnel
- Optional customer personnel

Recycled material behaves differently



Krones sees "recycled material" not as a description of the material, but as an identification of its origin. Because recycled material behaves differently than virgin material, there are some things you should be aware of if you plan to switch to recycled PET preforms.

- Yellowing, cloudiness and black spots (impurities)
- Homogeneity cannot be assured (deviation of intrinsic viscosity)
- Greater bottle shrinkage (sensitive in hot fill applications Hotfill, NitroHotfill, Aseptic, Moderate)
- Process settings depend on the proportion of rPET. Material quality consistency is an important factor (different colouration of preforms, IV variations, etc.).

The above mentioned defects that can be caused by recycled material depend on the percentage of recycled material in the preform. The higher the percentage, the higher the likely reject rate. Krones will help you select and implement a suitable percentage of rPET.



Implementation of different Contiform machine models



Although rPET implementation is definitely possible in all Contiform machines, the latest Contiform versions offer a wider range of possibilities.

Contiform 1 and 2

→ Fixed stretching speed

Contiform 3

→ Adjustable stretching speed

→ Larger process window

Contiform equipped with PETview

→ Inspection options for preform and bottle

→ Elimination of preforms with black spots



PETview

The optimal tool for quality assurance

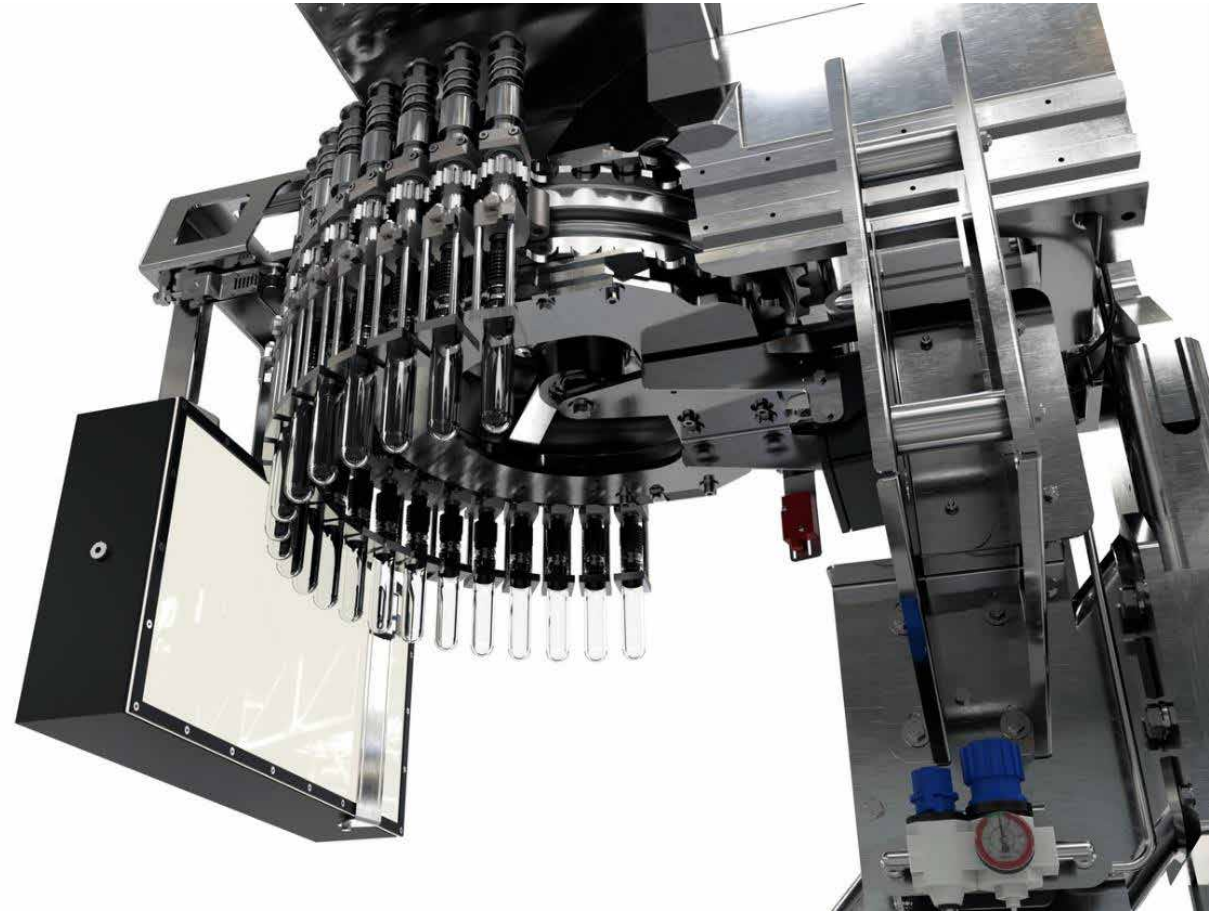
PETview not only inspects the preforms but also containers. In particular, the following functions of the PETview are helpful to assure constant quality:

Preform

Contamination/black spots on the side walls

Container

Contamination/black spots on the contours and side walls



Benefits to you



- The cooperation with Krones helps you to use rPET while realising attractive designs for your containers.
- Krones expertise in rPET implementation with up to 100 %* recycled material.
- Blow-out process and bottle qualification testing by experts. (PET process specialists).
- Practical suggestions for improvements to your production and quality control processes.
- Knowledge sharing with your team.

* Depending on the preform quality



**SOLUTIONS
BEYOND
TOMORROW**

