



3D scan neck-handling system

Krones Lifecycle Service



A perfect transfer



In order to ensure smooth operation of your Krones line, perfectly matched components are indispensable. Utmost precision is called for, especially at the transfer stations for containers. And that is exactly where our team of experts comes into play: A laser calibration engineer and a Krones expert use state-of-the-art technology directly on site to quickly and reliably detect any deviations in the neck-handling process.

At a glance

- Analysis of the actual position by a laser calibration engineer and adjustment to the original set-point position
- Low line downtimes as the laser calibration usually takes place after or during an overhaul
- After optimisation:
 - Written report with detailed information about the measures taken
 - Production with validated rated output

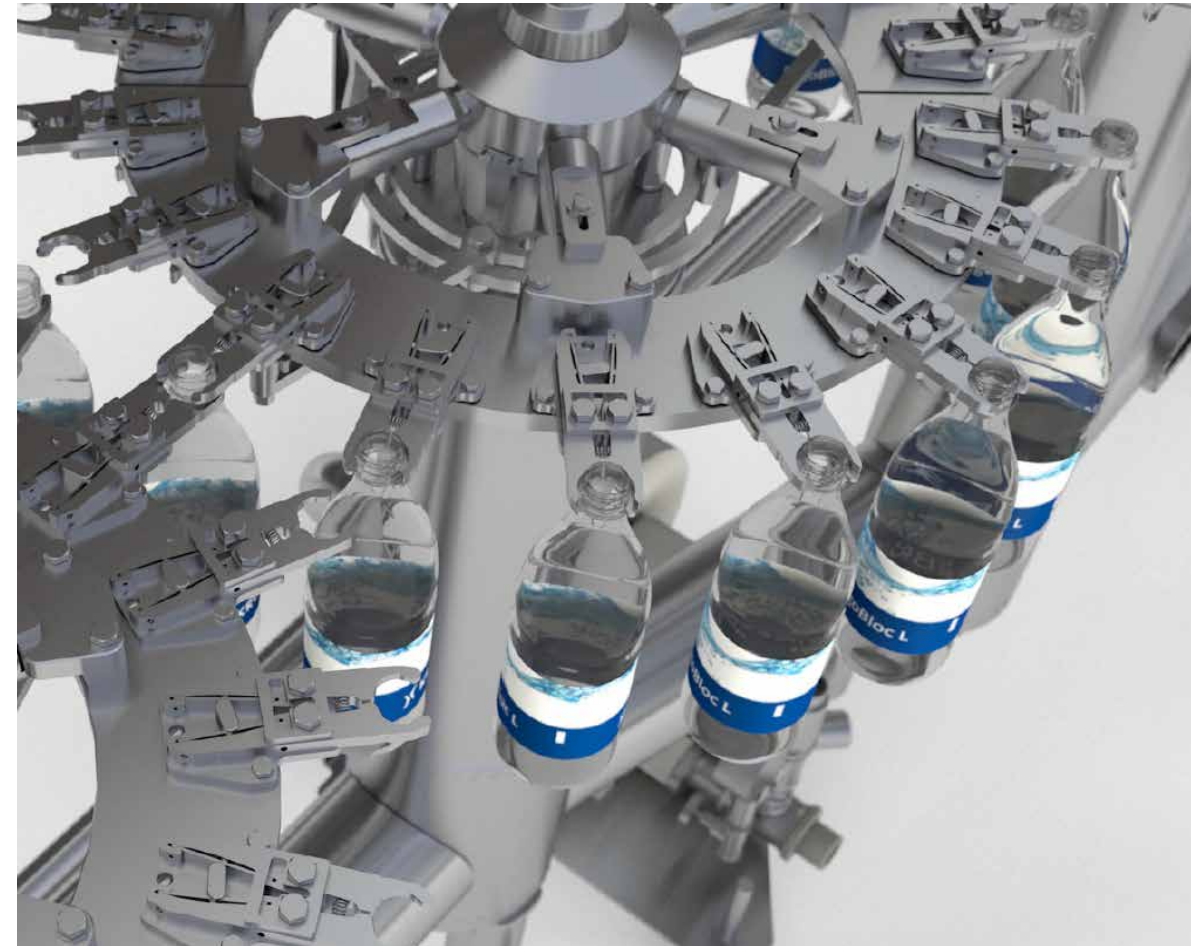


Eliminating deviations



Numerous factors are important in order to achieve the optimum efficiency: One of the most crucial factors is the exact transfer position of the neck-handling grippers to ensure a stable transfer. During production, various reasons can cause transfer positions to deviate from the originally adjusted ones. Often, conventional aids are not sufficient to take the suitable actions.

Together with a renowned expert in the field of 3D laser measurement, we developed a method to quickly readjust the neck-handling grippers with minimum effort to their original positions in order to ensure the usual Krones quality.



Before starting



The right moment

Our experience has shown: We can ensure the best and most lasting result if all neck-handling grippers are replaced by new ones just right before the adjustment or are overhauled, for instance, with the overhaul tool for neck-handling grippers. We therefore recommend carrying out the 3D scan neck-handling process concurrently or after an overhaul or retrofitting process. This will earn you not only the benefit of a top result, but also a minimum downtime.

The right preparations

Our experts, a Krones specialist and a laser calibration engineer, thoroughly deal with the design of your line prior to the measurement and determine an appropriate coordinate system for each of the units. This provides the basis for our appointment on your site and determines the set-point position of the transfer starwheels.



3D laser measurement in detail



After a short preparation phase, the 3D laser is quickly ready for use on site. To this aim, the difference in height, the distances between the column centres, the curve linearity and the axial run-out of the pitch diameter are determined and compared to the set-point position for each transfer starwheel.

Possible differences in these positions are corrected on site and the line is adjusted to a tenth millimetre precision. A second 3D scan checks the result.

To be finally sure that our adjustment has been successful, we carry out several test runs with sample bottles to be provided by you.



The sequence in detail



Preparation of assignment



- Scheduling
- Creation of a set-up drawing
- Determination of the coordinate system
- Manufacture of required measuring adapters
- Briefing

Measurement



- Setup and calibration
- Specification of reference points and reference heights
- Execution of the 3D scan at the neck-handling grippers (filler, labeller, carousel grippers etc.)
- Comparison of actual/set-point position; if required, performing of respective corrections
- Checking the 3D scan
- Test run with sample bottles

Conclusion

Creation and delivery of the report

10 workdays
During production



4 to 6 workdays
Line downtime



5 to 10 workdays
During production



Benefits to you

- Reduced wear in the neck-handling gripper area
- No damage in the neck area
- Trouble-free neck-handling transfer in the block
- No loss of product in the filling process
- Smooth production process in the filling area with validated rated output



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