PACKSYS
GLOBAL

A Member of Brückner Group

capLAB & capLAB+

Creating Packaging Technology.

Your Benefits

- Reduced labor cost
- Minimized risk of producing bad quality closures
- Closed loop interaction – ensures continous stable closure quality
- Database link to production data server/QC system

Quality inspection today

The majority of plastic beverage closures undergo quality inspection by inline camera systems. Vision inspection does not discover potential functionality errors of a closure which can affect its performance during or after the application to the bottle. Some defects might create an error on the filling line (capping process). Each stop on a filling line can cause huge losses. The industry standard practice for checking the functionality of closures is to periodically take a specified quantity of caps to a laboratory and analyze them. This is time consuming so it is only done a few times each day. If defective closures are found during this process, the closures produced since the last laboratory check are normally scrapped. On the highest speed lines the quantity produced between laboratory checks can exceed 1 million closures.

Quality inspection by capLAB

capLAB is an in-line, automatic integrated unit for testing the functionality of a closure's tamper evident (TE) band. In optional combination with a vision inspection system which can select closures by cavity number, capLAB takes samples from the slitting / folding machine outfeed and measures in-line the pull-off strength of the closure's TE band. The test frequency can either be set by quantity, e.g. every 100'000 caps, or time, e.g. every 3 hours. The closures to be tested can be selected randomly, according to the spindles of the slitting machine or by cavity number of the production mould and by quantity. In addition a test sequence can be triggered manually, e.g. at the start of a production shift.

capLAB+

With the extended version capLAB+, additional tests corresponding to the local markets can be made. It is possible to check the tether for the target values defined by the EU Commission.

In addition, with capLAB+ the density ice test, a further quality test directly at the machine, integrated into the production line, can be carried out in a time and employee-independent manner.

Closed loop

Based on the values found by capLABTM corrective actions may be needed. When a slitting machine is forming the bridges, knife temperature settings would be changed to keep the pull values in target range, means a fully automated process for constant cap quality over lifetime of a knife. Communication to the moulding machine/mould will be available to stop the line in case of a major quality defect. In cases where the root cause of unacceptable TE band performance may be linked to a specific cavity on a mould or spindle on a slitting machine, the operator will be informed to address the root cause directly.

Layout

With the compact design it can be integrated onto existing lines with a integrated vision inspection system. The flexible interface allows various layout options.

Data Management

capLAB+ contains a separate screen for its operation and data analysis. In addition, the database also can be transferred easily to onsite production data monitoring or QC systems. Customized screens showing the measurements per cavity can be accessed directly at the user interface of the injection moulding machine (available for dedicated brands).

Technical data

	capLAB	capLAB+
Guarantee band tear-off value	Yes	Yes
Tether tear-off value	No	Yes
Pressure test	No	Yes
Inspection after cavity	Yes	Yes
Prüfung nach Spindel	Yes	Yes
Prüfung Menge / Zeit	Yes	Yes

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