CapWatcher® Q-LINE

YOUR INLINE-QUALITY LAB

You want the security of high quality closures? You want to maximize your profit by getting more out of your production line? You want to control your processes and avoid producing defective closures? If so, the CapWatcher® Q-Line is the answer for all of these needs!

The **CapWatcher® Q-Line brings the quality lab to your production line.** With its eight high resolution cameras, a precision of 1/100th of a millimeter, more than 40 inspection criteria per closure and a speed of up to 60 closures per second, **the CapWatcher® Q-Line gathers 144.000 cavity related product information per minute.** Additionally, it visualizes them and offers comprehensive opportunities for statistical analysis.

The high performance capacity gives you the security of good closures – not after your quality lab checked it, but right when it is produced.

Your advantages: You are able to adjust single cavities instead of the whole mold, new resins and master batches are easily and fast introduced, material fatigue is detected early and necessary maintenance can be planned.
Above all this stands the usability of your closure. Tamper evident band, thread and sealing elements have to be perfect to secure the functionality of the closure. Because of this, we concentrated on these elements.

For the first time **the CapWatcher® Q-Line inspects the slitting quality of the tamper evident band.** This enables you to identify worn out cutters or problems with the temperature of the blade. A perfect thread is also important for the full functionality of your closure. Therefore **we inspect the whole thread with an in-house-developed imaging process for damages.** Even smallest notches or missing material at the sealing elements – either one- or two-piece closures – can lead to erratic degassing or entering of foreign material. To avoid this, **two autonomous inspection stations inspect for the full functionality of the sealing elements.**
For the first time ever you can also **inspect the closures for their temperature.** This enables determination of the shrinking process of the closure and therefore can ensure that the closure has the exact dimensions needed for the capping process.

Furthermore, every closure receives a time stamp. In times of interlaced production lines, the measured dimensions can be used for a closed loop back to the injection molding machine. This allows for **minimal disturbances and optimal adjustments.**

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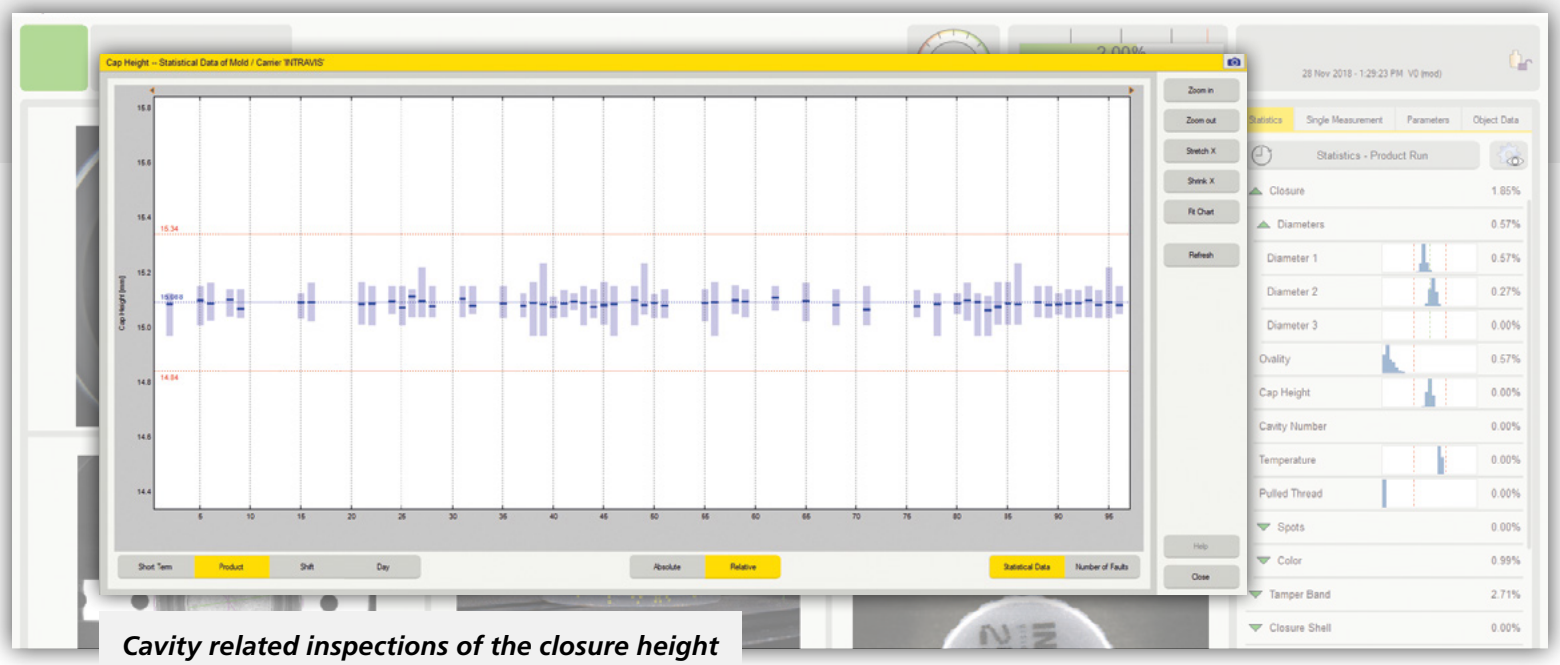

Cavity related inspections of the closure height and spread within the tolerance borders

MEASUREMENT OF THE CLOSURE

- Outer diameter of the closure
- Inner diameter of the seal cone
- Height of the closure
- Height of the tamper evident band
- Length of the injection gate

BASIC INSPECTION OF THE CLOSURES

- Color deviation
- Contamination
- Burned spots
- Ovality
- Temperature
- Thread

INSPECTION OF THE TAMPER EVIDENT BAND

- Cut quality for slitted closures
- Broken bridges
- Webs between bridges
- Folded/unfolded flaps
- Long/short shots and flashes

INSPECTION OF THE HEAD PLATE

- Color streaks
- Flow lines
- Printed images
- Register variations

INSPECTION OF THE INJECTION GATE

- Microholes
- Angel hairs
- Cracks

INSPECTION OF THE SEALING ELEMENTS

- Constant distance between inner and outer seal cone
- Damages of the seal cone
- Long/short shots of the seal cone
- Notches seal cone
- Liner

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WE SOLVE PROBLEMS. BEFORE THEY OCCUR.