# Annual stock takes become continuous monitoring

*Nordson's head of sales, component counting, Björn Kronshage, introduces the benefits of x-ray based component counting technology*

**Q** **How has component counting technology advanced and what are the benefits at goods-in?**

The evolution of component counting technology is driven by changing quantities, sizes and packaging types. Large DIP devices in tubes and PTH resistors are relatively easy to count. However, tens of thousands of devices on a reel makes counting by eye difficult. It can be done using a reel-to-reel counter or weight measurement but this is time consuming and inaccurate. Hence the birth of automated x-ray counters.

Some companies still consider component counting a chore, limiting the task to 'important' or 'expensive' components while leaving the smaller, cheaper components to their fate.

X-ray technology with image recognition and counting software is replacing the old, physical, manual counting methods. Modern systems also eliminate handling issues such as removing reels from bags or unwinding/rewinding reels. Processes that used to take minutes are now done in seconds, with improved accuracy. An annual stock take can now become continual monitoring.

Benefits of modern counting technologies include: maximised component flow to production lines; a guarantee that the components ordered and received match; full, per reel, traceability with unique identifiers; improved kitting accuracy; reduced safety stock and last-minute panic orders.

**Q** **When does it make financial sense to invest in counting technology and move the process in house?**

The following is a comparison between traditional reel-to-reel counting and an Assure x-ray counter.

Two hundred average size reels will take between two and 10 minutes each to count manually. Assuming a mean time of five minutes each, this gives a total of about 17 hours or two operating shifts just to count the parts. Using Assure and counting the same 200 reels, the count can be completed in about 35 minutes as it takes 10 seconds per reel regardless of size or part quantity. Even considering handling time on a manual system, it would take 60 to 70 minutes for the 200 reels. Generally, it can take multiple people up to three weeks to manually count

the same number of reels that the Assure can count in a single shift. Also, the Assure will print labels and update ERP/storage systems, within 10 seconds, without removing the reels from their protective bags.

The ultimate contributing factor for ROI is improved assembly line efficiency and reduced machine downtime. This is achieved with precise inventory control and occurs at surprisingly small stock levels.

**Q** **What advice would you offer readers considering investing in component counting technology?**

When investigating the move away from manual inventory control, carefully consider the overall process before making decisions. What are your current storage methods and do you need to automate this process? If your stock is manageable with manual storage after counting do you have an efficient method for recording the stock and ordering new?

Once you have a good understanding of the process flow you can investigate the levels of automation in the counting process. Most systems cover the basics of counting and will reduce costs, time and errors.

**Nordson's** head of sales, component counting, **Björn Kronshage**

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DAGE® Assure™ Flex
X-ray Component Counter

However, explore their capabilities for smaller components; how do they handle odd shapes or multi pins; are inspection algorithms within the software or will you need 'specials' programmed for you. Then come considerations regarding automation (manual load to conveyor belt), integration into the ERP system; and backup/support over following years.

In short, look carefully before deciding on a strategy and counting system. What appears to be the cheapest isn't always the cheapest and it isn't necessarily as simple as it looks. All systems are not the same.

**What makes Nordson Assure stand out?**

Data security is vital, so everything is contained within the system algorithms removing the need for libraries, updates or cloud connection for programming specials. The systems are designed with a small footprint, while offering improved counting due to the low parallax configuration. The company offers a flexible range of systems, from manual to complete automation and storage.
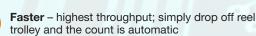
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