

Traceable Packaging and Pharmaceutical **Warehouse** **Operations**

Warehouse operations are one of the most important parts of the pharmaceutical supply chain – for both consumers and manufacturers alike.



An efficiently run warehouse is key to ensuring that life-saving medicines reach customers on time, in perfect condition and with the guarantee that they are the authentic deal and not one of the illegal, counterfeit medicines that continue to blight the industry. With people relying on such essential life-enhancing, and life-saving products, these assurances are vital.

When it comes to pharmaceutical manufacturers, they need a cast-iron guarantee that all regulatory requirements are being met, an essential duty now that governments across the world are introducing such a necessity.

Against such a background, avanco's ARC LES has quickly become established as a significant enhancement to existing warehouse serialization solutions. It is a fully flexible solution that allows pharmaceutical manufacturers to manage main warehouse and shop floor operations on the inbound and outbound processes such as managing good receipts, returns and shipments. Additionally, ARC LES facilitates rework and reaggregation by introducing a scalable implementation through both LES Workstation and LES Mobile.

The future of pharmaceutical warehouse packaging technology

Technology is vital for the future health of the pharmaceutical sector. There is no getting away from it – and nor should we want to do so. Technology helps increase the efficiency of systems, products, and services. It helps track and streamline processes and maintain data flow.

For example, the cloud has rewritten the way computing works, allowing firms to power their systems, and retain full records, without a single server needing to be on site. Indeed, from the perspective of those in charge of packaging lines, with a reduction in costs and overheads being one of their constant priorities, technology will be key to automating multiple processes currently being performed manually.

The substantial initial outlay on technology will be expected to pay for itself further down the line – especially as the right technology can be fully adaptable to the specific needs of an individual company as demands change.

Pharmaceutical warehouse serialization

In an ever-competitive pharmaceutical sector, and against a backdrop of rising pharmaceutical forgeries, efficient serialization solutions are becoming more important than ever before.

Watertight serialization solutions will take full advantage of Industry 4.0. and the technological revolution this is already driving. It also plays a critical role in ensuring consumers have the confidence that the drugs being produced by pharmaceutical manufacturers are the real-deal, and won't result in dangerous side effects, or even death.

More companies than ever are realizing for themselves the importance of serialization solutions. Indeed, the global market is estimated to reach an expected value of USD 14.3 Billion by 2030, growing at a CAGR of 19.30% during the forecast period (2022–2030).

Efficient pharmaceutical shipment management

As with all business sectors, pharmaceutical firms are on a constant quest to streamline their packaging and shop floor operations and increase shipment management efficiency.

Never has this been so important as the present time. Indeed, the advent of Industry 4.0. is presenting a golden opportunity to completely overhaul current, often antiquated systems, that are preventing pharmaceutical businesses from performing at their optimum output level.

Industry 4.0. is already revolutionizing the way the pharmaceutical sector works. Once only possible for international blue-chip corporations, robotics are becoming much more affordable and available to organizations of every size. From picking products at a warehouse to getting them ready to ship, Artificial Intelligence can quickly and safely support manufacturers and we will soon expect to see the implementation of autonomous solutions at all levels of the pharmaceutical supply chain.



Efficient pharmaceutical packaging track and trace

A combination of cyber-physical systems, the Internet of Things and the Internet of Systems will power Industry 4.0 and allow the smart factory to become a reality. As a result of the support of smart machines that keep getting smarter as they get access to more data, the global pharmaceutical sector will become more efficient and productive and less wasteful.

This is where a watertight pharmaceutical packaging track and trace system will really shine. It links together the essential components that modern pharmaceutical businesses need to thrive. These components include operational shop floor efficiency, greater warehouse automation, generating more data which will further optimize the supply chain, and creating customer engagement through product identification.

Furthermore, flexible systems such as advanced's ARC LES will allow a host of essential functions to operate on pharmaceutical packaging lines, such as pharmaceutical rework operations. It automates manual processes and reduces errors, ensures regulatory compliance, can be scaled towards low volume serialization solutions, and increases the flexibility and mobility in warehouse and shop floor operations.

Pharmaceutical packaging serialization – providing anti-counterfeit assurances.

All of us who work in the pharmaceutical sector are profoundly aware of the ever-present, and ever-dangerous issue of counterfeit drugs.

It is predicted that 10% of pharma products worldwide are counterfeit, with the global counterfeit drug market exceeding an eye-watering \$75bn. Research further estimates that the death-toll caused as a result could increase to 10 million people by 2050.

Estimates by the World Health Organization show that between 72 000 and 169 000 children may die from pneumonia every year after receiving counterfeit drugs, and that fake anti-malarial medication might be responsible for an additional 116 000 deaths. Studies show about 9%-41% of medicines sold in low- and middle- income countries are counterfeit. In contrast, in high-income countries, such as the United States, less than 1% of medicines sold are counterfeit.

This is why solutions such as advanced's ARC LES are so critical for the future of pharmaceutical shop floor operations, providing efficiency when it comes to the

essential serialization of the pharmaceutical products that we rely upon across the entire globe.

Low Volume Serialization

Advanced's ARC LES allows low volume serialization customers access to the same technology as the bigger players, or those with a much larger number of products passing through the supply chain.

This flexibility, or the ability to scale up or down as demand dictates, is a core component of ARC LES.



The future of pharmaceutical warehouse and shopfloor operations

Advanced has long argued for a much higher degree of cooperation between the many different components, including competitors, that work within the pharma sector. To us, these partnerships will form the future of Industry 4.0. in the pharmaceutical manufacturing sector.

By working together, the overall pharmaceutical sector will benefit hugely, and together we stand a much greater chance of fighting back against the forgers who continue to cause death and destruction across the globe.

ARC LES has no vendor lock in. ARC LES is the gateway to pharmaceutical digitalization by automating and streamlining warehouse and shop floor solutions. To arrange a demonstration, or to speak to us to find out more about ARC LES, contact us today.

