Lantech Intelligent Network Connection®

Lantech®

Leveraging LINC® for Optimizing Stretch Wrappers and Case Erectors in Warehouse Automation

Lantech's IoT Solution for Enhancing Operational Efficiency in Packaging Operations

In today's competitive supply chain landscape, businesses are constantly seeking ways to enhance operational efficiency, reduce costs, and maintain high standards of product quality. This is especially true in the warehouse and packaging environments, where the performance of key equipment such as stretch wrappers and case erectors directly impacts productivity and throughput. Lantech's LINC® (Lantech Intelligent Network Connection) is an advanced IoT machine visibility solution designed specifically for these critical machines, providing businesses with the ability to monitor real-time data, optimize performance, and predict maintenance needs. By integrating LINC® into their operations, companies can significantly improve system uptime, productivity, quality, and cost efficiency.

This white paper explores the capabilities of Lantech's LINC® system, focusing on its application for stretch wrappers and case erectors—two essential machines in the packaging process. It outlines the system's core features, key benefits, and how it enables businesses to optimize their packaging operations with actionable insights, all while driving improvements in cost management and operational performance.

Understanding LINC®: An IoT Solution

Lantech's LINC® system is designed to provide real-time visibility into the performance of packaging machines, specifically stretch wrappers and case erectors. These two machines play critical roles in the packaging process: case erectors form and seal boxes, while stretch wrappers securely wrap palletized products for shipment. Together, they are key to ensuring that products are properly packaged, protected, and ready for delivery.

LINC® allows operators to remotely monitor and manage these machines through a web-based platform, providing comprehensive insights into their operational status and performance metrics. The system integrates directly with stretch wrappers and case erectors, offering key features that enhance the efficiency and reliability of these machines:

Key Features of LINC®

1. Real-Time Monitoring:
LINC® continuously collects and displays data from connected stretch wrappers and case erectors. Operators can track performance indicators such as speed, uptime, cycle time, and any issues like jams or mechanical failures.

2. Predictive Maintenance:
By analyzing historical performance data, the system can forecast potential failures, enabling companies to perform maintenance proactively and avoid unexpected downtime.

3. Actionable Intelligence:
The system provides operators with actionable insights to optimize machine performance, identify bottlenecks, and address inefficiencies in the packaging process.

4. Remote Access and Control:
LINC® provides remote monitoring capabilities, allowing businesses to manage machine data across multiple locations, ensuring optimized performance at all times.

5. Data-Driven Decisions:
With real-time data insights, businesses can make informed decisions regarding machine settings, maintenance schedules, and overall workflow optimization.

Key Benefits of LINC®

The integration of Lantech's LINC® system into packaging operations delivers significant operational benefits. These benefits help optimize efficiency, maintain packaging quality, and control costs across the supply chain.

1. Reduced Downtime and Increased Uptime:

Unplanned downtime is one of the most costly issues in packaging operations, often resulting in production delays, increased labor costs, and missed deadlines. LINC® helps reduce downtime by predicting potential failures in stretch wrappers and case erectors before they occur. The system can send alerts when machines are likely to experience problems, allowing businesses to schedule maintenance proactively and avoid disruptions.

Impact: Businesses can minimize downtime and keep their packaging lines running smoothly, ensuring that products are processed and shipped on time. Increased uptime leads to higher productivity and better resource utilization.

2. Improved Packaging Consistency and Quality:

Maintaining consistent packaging quality is essential for brand reputation and customer satisfaction. LINC® and Load Guardian ensure that stretch wrappers apply the correct amount of pre-stretch and tension to each load, while case erectors form boxes to the correct dimensions and ensure proper sealing. By monitoring these machines in real-time, LINC® helps identify inconsistencies or performance issues that could affect packaging quality, such as improper wrapping or jammed cases.

Impact: By ensuring that packaging machines consistently perform within specified parameters, businesses can reduce product damage, improve load stability, and enhance customer satisfaction with well-packaged goods.

3. Operational Efficiency and Throughput Optimization:

Stretch wrappers and case erectors can be the bottlenecks in the packaging process. LINC® provides visibility into machine speeds, throughput, and cycle times, allowing operators to optimize equipment settings for maximum efficiency. By ensuring that machines operate at optimal performance levels and adjusting settings based on real-time data, businesses can increase throughput and reduce cycle times.

Impact: The result is a more efficient packaging process, where machines run at their full potential, reducing delays and ensuring that packaging operations keep pace with production demand.

Key Benefits of LINC®

4. Cost Reduction

LINC® contributes to cost savings in multiple areas. By improving uptime and reducing unplanned maintenance, companies can lower repair costs and extend the lifespan of their packaging machines. Additionally, real-time monitoring helps prevent inefficient use of resources, such as excessive stretch film or jams, which can lead to corrugate waste.

Impact: Reduced maintenance costs, extended machine life, and minimized resource waste directly contribute to lower overall operational expenses. Additionally, fewer delays and higher productivity allow businesses to operate more cost-effectively.

5. Scalability Across Multiple Locations

For companies operating across multiple facilities or regions, LINC® provides a scalable solution for centralized monitoring. Whether you have a single packaging line or several, LINC® enables businesses to monitor machine performance across all locations from one platform. This centralized control allows for more effective resource management, timely responses to operational issues, and better coordination between multiple warehouses or production plants.

Impact: The ability to monitor and optimize operations across locations ensures consistent performance standards across the business, improving overall operational efficiency and reducing the risk of bottlenecks at any one site.

Use Cases for LINC®

Use Cases for LINC® in Warehouse and Packaging Operations

1. Stretch Wrapper Optimization in High-Volume Warehouses:

In high-volume warehouses, stretch wrappers are used to secure large quantities of palletized goods. By integrating LINC®, operators can monitor the speed and tension of the stretch wrappers in real time, ensuring that the correct amount of film is applied and reducing film waste. Predictive maintenance helps avoid unexpected failures, ensuring that machines remain operational during peak demand periods.

2. Case Erector Performance in Distribution Centers:

Case erectors form boxes for a variety of products, and ensuring that they consistently produce the correct box sizes and securely sealed cartons is crucial. LINC® enables operators to monitor machine performance remotely, adjust settings, and address any issues with case forming or sealing, ensuring a smooth and efficient process from start to finish.

Conclusion

Conclusion

Lantech's LINC® system provides warehouse and packaging operations with a powerful tool for improving machine performance, reducing downtime, and optimizing operational efficiency. Specifically designed for stretch wrappers and case erectors, LINC® offers real-time monitoring, predictive maintenance, and actionable insights that help businesses improve uptime, enhance packaging quality, and reduce costs.

By leveraging the IoT-powered capabilities of LINC®, companies can gain better control over their packaging processes, make informed decisions, and ensure that their operations are always running at peak performance. With LINC®, businesses can maintain a competitive edge by reducing waste, improving throughput, and delivering products to customers faster and more efficiently.