Savant Box Build Module

Key features of an embedded Box Build module in an advanced WMS:

The Savant Box Build module uses Intelligent Box Building Algorithm within the Warehouse Management System (WMS) packing process and includes the following features:

1. Intelligent Box Building Algorithm: An intelligent box building algorithm analyzes the dimensions of ordered products and determines the appropriate-sized box or containers for shipping. It considers factors such as product dimensions, weight, fragility, and other criteria to optimize space utilization and minimize wasted space. The system is designed to utilize carrier supplied packaging, your shipping boxes, totes, packs, or envelopes.

2. Dynamic Box Size Selection: The module allows you to enter a selection of container sizes and selects the appropriate container based on the available inventory, type of product, product weight and dimensions, as well as other item specific parameters. It dynamically suggests the most suitable container size for each order or batch, considering the maximum dimensions and quantities of the products being shipped.

3. Box Size Elimination: The box building algorithm eliminates certain box sizes based on the dimensions of the selected products. Boxes that are too small or too large to accommodate the products are excluded from the available options, ensuring efficient utilization of the available box sizes.

4. Multi-Box Packing: The module supports packing products into multiple boxes if required. It provides guidance on the optimal distribution of products across multiple boxes to maximize space utilization and ensure safe packaging. A maximum weight setting of combined products by shipping container can be set to ensure boxes meet carrier and worker safety guidelines.

5. Pre-Shipping Box Build: The Savant Box Build module allows the option to perform box building and shipping label generation prior to shipping. This enables picking products directly into the shipping container, eliminating the need to have both a separate packing and shipping process.

6. Shipping Carton Tracking: This feature provides the carrier's formatted barcode tracking number and shipping label ahead of picking to provide visibility and traceability throughout the picking, packing, and shipping processes with a single tracking number from picking to the ultimate consignee's delivery.

7. Product Verification: The QC Outbound (Packing) Module verifies that the correct products have been picked for an order, ensuring order accuracy, and minimizing shipping errors. Operators can compare the contents of the picked/packed items against the order details to validate their correctness.

8. Integration with Inventory Management: The Box Build module seamlessly integrates with the inventory management functionality of the WMS. It considers real-time inventory levels, product dimensions, and other inventory-related information to determine suitable box sizes and optimize packing operations. Products can be designated to use certain boxes exclusively.

9. Reporting and Analytics: The module provides reporting and analytics capabilities, allowing users to track and analyze packing efficiency, box utilization, and other performance metrics. This information helps identify areas for improvement, optimize packing processes, and make data-driven decisions.

10. Integration with Rest API and External Systems: The Box Build module integrates with Rest API tools and external systems such as ERP software, e-commerce platforms, and carrier systems. This enables seamless information exchange, synchronization of data, and streamlined communication with external systems.

These features collectively enhance shipping operations, improve efficiency, minimize errors, optimize space utilization, and contribute to cost savings in the overall warehouse and logistics processes.

Savant Box Build Sample Use Case:

Step 1: Product Dimension Input
    1.1. Warehouse personnel enter the dimensions of the products into Savant WMS. The system can be configured to halt the receiving process when this information is not already recorded.
    1.2. The product dimensions must be recorded accurately to facilitate the box-building algorithm.

Step 2: Order Processing
    2.1. A distribution company receives an order placed on their website and the order is released into Savant WMS system.
    2.2. The Box Build module is activated for order processing.

Step 3: Box Building Algorithm
    3.1. The Box Build module incorporates a unique box-building algorithm based on the product dimensions, weight and other specifications entered.
    3.2. The box-building algorithm analyzes the dimensions and eliminates certain shipping container sizes that are not suitable for the products to be picked.
    3.3. The algorithm selects the appropriately sized containers for shipping based on available inventory and the selected carrier's guidelines.
    3.4. Warehouse personnel receive guidance from the module on the suitable box sizes for packaging including the following options: banding small boxes, self-shipping cartons, full case cartons not requiring repackaging, or specific shipping cartons as specified by the product settings.
    3.5 Similar products, within an order, can be designated to be packaged together through Product Group settings when larger shipments require multiple number of shipping containers.

Step 4: Box Selection and Shipping Label Printing
    4.1. Operators are presented with a method to print shipping labels by shipping carton size filtered by carrier, priority, self-pack, full case or even the picking zone as well as other user defined capabilities.
    4.2. The use of appropriate box sizes ensures efficient packing, minimizes empty space, and reduces packaging material requirements. Using less packing dunnage with non-fragile items saves weight, packing material costs and lowers shipping costs based on less actual and/or dimensional weight.

Step 5: Product Picking
    5.1. Warehouse personnel access the Savant WMS Box Build module to initiate the product-picking process directly into the system selected shipping container saving an additional step of repacking.
    5.2. A shipping label including a packing slip/content label is printed to help ensure accuracy and completeness.
    5.2. Warehouse personnel pack the products into the selected box(es) according to the provided instructions.

Step 6: Shipping Carton Tracking
    6.1. The Box Build module allows Savant WMS to track the shipping carton or container that each product is placed in during the picking process.
    6.2. Warehouse personnel scan or enter the necessary information to associate each product with its respective shipping carton.

6.3. This tracking feature not only ensures complete visibility and traceability of products and simplifies inventory management, but it also allows for the carrier tracking number to be available even before the order is picked.

6.4. The completed boxes are ready for shipment with designated carriers.

Conclusion:

The Savant WMS Box Build module streamlines order processing, verifies product accuracy, tracks shipping cartons, and incorporates an intelligent box-building algorithm. This use case workflow demonstrates how the module optimizes the picking and packing processes, ensuring accurate product placement, reducing packaging waste, and minimizing steps in the packing and shipping processes. By leveraging these features, distribution companies can enhance efficiency, reduce errors, save costs, and deliver a superior shipping experience to their customers.