Anytime 500 Kanban Replenishment

Industries

- Discrete Manufacturers
- Mixed-Mode Manufacturers
- Light Manufacturing & Assembly
- Repetitive Manufacturing
- Lean Manufacturing
- Wholesale Distribution

Required Modules

- Inventory Management (Sage)
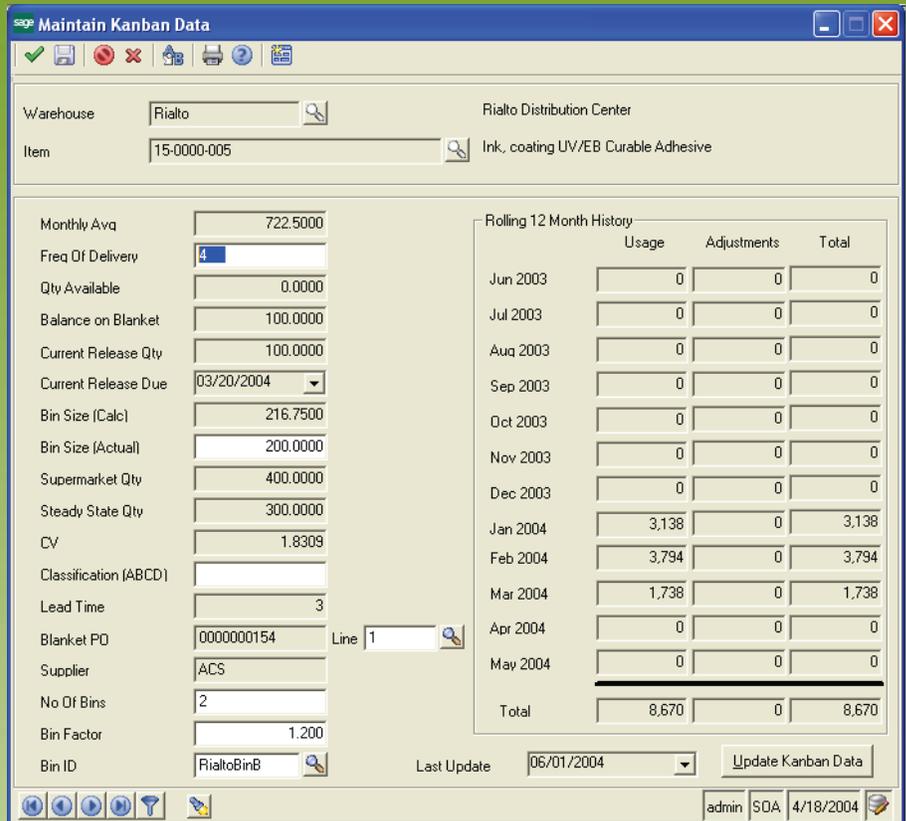- Purchase Order (Sage)

Suggested Modules

- Enhanced MRP (e2b)

Benefits Overview

- Calculate optimal bin size
- Identify which items are good candidates for Kanban Replenishment
- Calculate supermarket quantities
- Classify inventory by preferred replenishment method
- Automate releases from Blanket POs for standard bin sizes
- Replenishment Request Approvals
- Reduce on-hand inventory and carrying costs
- Minimize stock-outs for distribute items or required raw materials

ClientCare Plans

- Free Upgrades and Hot Fixes
- Unlimited Product Support
- Installation Assistance & Training

Maintain Kanban Data

Warehouse	Rialto — Rialto Distribution Center
Item	15-0000-005 — Ink, coating UV/EB Curable Adhesive

Field	Value
Monthly Avg	722.5000
Freq Of Delivery	4
Qty Available	0.0000
Balance on Blanket	100.0000
Current Release Qty	100.0000
Current Release Due	03/20/2004
Bin Size (Calc)	216.7500
Bin Size (Actual)	200.0000
Supermarket Qty	400.0000
Steady State Qty	300.0000
CV	1.8309
Classification (ABCD)	
Lead Time	3
Blanket PO	0000000154 Line 1
Supplier	ACS
No Of Bins	2
Bin Factor	1.200
Bin ID	RialtoBinB
Last Update	06/01/2004

Rolling 12 Month History

	Usage	Adjustments	Total
Jun 2003	0	0	0
Jul 2003	0	0	0
Aug 2003	0	0	0
Sep 2003	0	0	0
Oct 2003	0	0	0
Nov 2003	0	0	0
Dec 2003	0	0	0
Jan 2004	3,138	0	3,138
Feb 2004	3,794	0	3,794
Mar 2004	1,738	0	1,738
Apr 2004	0	0	0
May 2004	0	0	0
Total	8,670	0	8,670

admin SOA 4/18/2004

Automate Manual Kanban Systems with Sage 500 ERP Blanket Purchase Orders

Kanban is a lean manufacturing and replenishment philosophy that originated from Japanese car manufacturer Toyota. Kanban systems utilize a physical card to signal replenishment request.

Most companies deploy a two-bin (or three bin) system where the quantity of product in each bin is the same. The concept is that once the first bin is empty, the Kanban card will signal a replenishment request (purchase order) and the bins will be sized as such that by the time the empty bin is replenished; the second bin will be nearly empty.

The Kanban Replenishment module for Sage 500 ERP utilizes existing inventory usage and other data stored in 500 ERP to calculate Kanban replenishment parameters. Users determine how many bins to use and what size the actual bins will be (quantity per bin). Each item is then linked to a Blanket PO.

A Bin Request task automates the replenishment request by capturing the item and warehouse information and generating a bin request off the pre-defined Blanket Purchase Order. This process may be further automated to use bar-coded Kanban cards.

Buyers can approve replenishment requests and process the order which cuts a release from the Blanket for the Actual Bin Size defined for the inventory item.

Product Features

Maintain Kanban Data
A new task allows users to maintain Kanban data by inventory record. Some fields display related information in Sage 500 ERP (such as lead time and quantity on-hand). Other fields are calculated by the Calculate Kanban task. Users may maintain other fields such as the Actual Bin Size, Frequency of Delivery, and Usage Planning Factor.

Blanket Purchase Orders
Create Blanket Purchase Orders and link lines to Kanban items. Approved bin replenishment requests will release a Purchase Order from the Blanket for the Actual bin size defined for the inventory item.

Bin Replenishment
A new Bin Replenishment Request task allows users to either manually enter an item and warehouse or scan a bar-coded Kanban card to request a release from a pre-defined Blanket Purchase Order. An auto entry checkbox facilitates rapid entry of scanned bar-coded Kanban cards by automatically clearing the screen and returning the focus to the item field for each subsequent scan.

Kanban PO Generation
All bin replenishment requests entered manually or via scanned bar-coded Kanban cards are queued in the Kanban PO Generation task where buyers can review requests prior to processing the request. Errors are displayed if a Blanket does not exist for the item or if the request exceeds the quantity open on the Blanket PO. Buyers may select which transactions to process and others that will be saved in the queue or deleted manually. Utilities are included to update the PO date for all releases approved for the transaction. Additionally, buttons are available to quickly select or deselect all requests in the queue.

Rolling 12-Month Usage
Kanban data is calculated based on a rolling, 12-month usage history by item and warehouse. This is used to determine the CV value and bin sizes for Kanban items.

CV Value
A Coefficient of Variation (CV) statistical value is calculated for inventory transactions to determine the consistency of the quantity used for each inventory item. CV values are used to determine the ABCD value of the item. For example, a good baseline for identifying items that may be good candidates for Kanban replenishment (versus MRP replenishment) may be items with a CV value less than 0.5.

Calculated Bin Size
The Calculated Bin Size is automatically generated based on the Average Monthly Usage divided by the Frequency of Delivery times the Usage Planning Factor.

Actual Bin Size
The actual Bin Size is the user-defined Bin Size which the system will use to determine when to reorder. This value will be calculated automatically but may be overridden.

Monthly Usage
Monthly Usage is the total item usage by month. The usage includes sales order issues, work order issues, and warehouse transfers (out) transactions. This value is calculated based on the prior 12 months.

Monthly Adjustments
Monthly Adjustments are displayed showing the total adjustments for an inventory item by month. The adjustment amount only includes inventory adjustment transactions and not demand adjustments for the prior 12 months.

Monthly Average
The Monthly Average is calculated which represents the average of all usage (including inventory adjustments) per month for the prior 12 month period.

Balance On Blanket PO
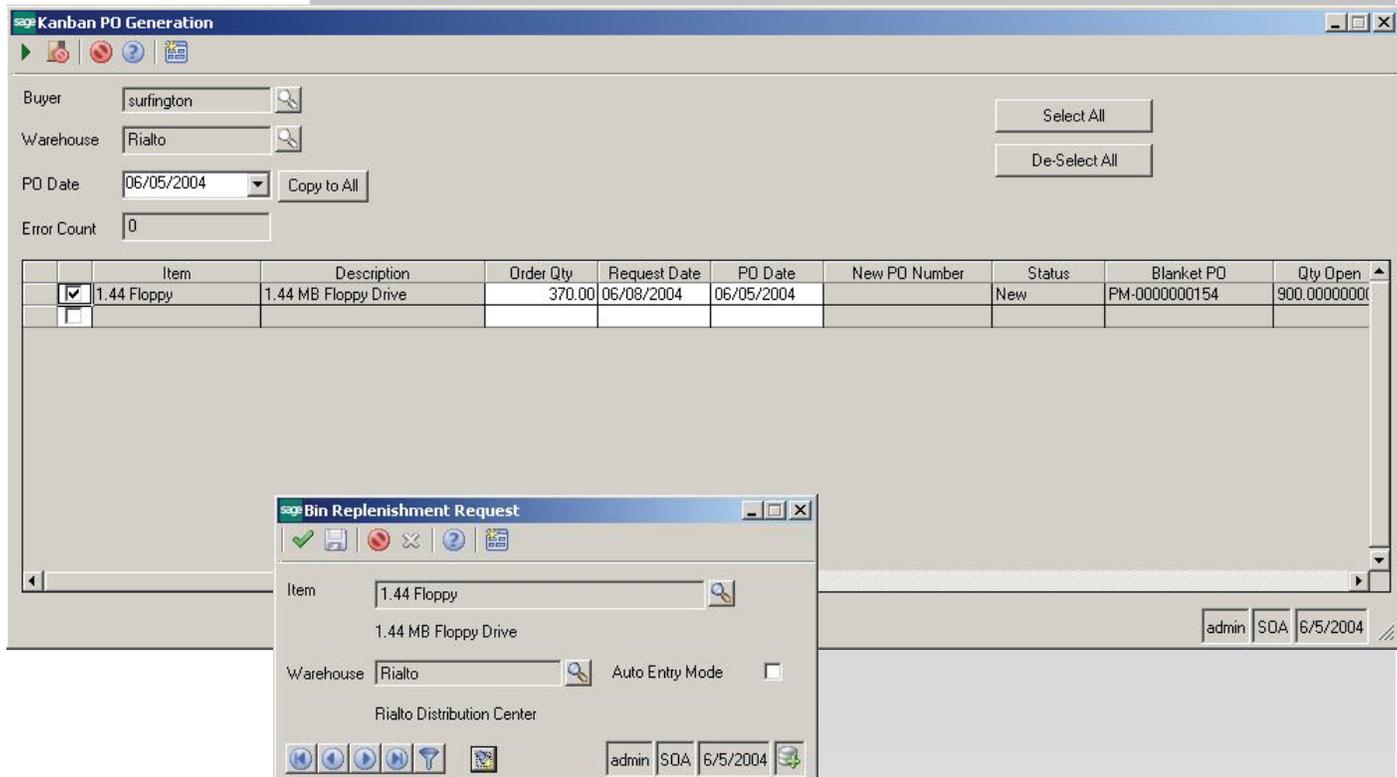The balance quantity of the Blanket Purchase Order (and line) linked to the Kanban item is displayed.

Product Features

Current Release Number
The current release number for the open Blanket Purchase Order is displayed.

Quantity Available
The current on-hand quantity available is displayed for each item / warehouse combination.

Frequency of Delivery
Maintain Kanban data allows the user to define the frequency of delivery for items for each warehouse location. The frequency of delivery is based on the expected deliveries per month and is used in calculations bin sizing.

Dynamic Kanban Update
A SQL job has been created that will optionally update Kanban data for items setup for Kanban replenishment. This will allow users to automate the update data periodically since the rolling 12-month history used for calculations may change over time. The SQL job may be schedule to run at any interval. E.g., monthly, quarterly, or annually. Purchasing personnel can then run reports to identify items that should be reclassified or where bin sizes should be adjusted (increased or decreased).

Supermarket Quantity
The Supermarket Quantity represents the maximum quantity of an item that could be on-hand at any given time. This is calculated based on the number of Bins times the actual bin size.

Steady State Quantity
The Steady State Quantity is the projected average quantity on-hand for an inventory item. It is calculated by multiplying the actual bin size times 1.5.

Classification
Classification or grouping of items by replenishment methods are supported. Classification codes are setup as A, B, C, and D. You could therefore classify A Items as high-volume items with low usage variation. These items could be replenished by a vendor on a regular basis without reorder requests from Kanban or MRP (vendor managed inventories). B Items could represent medium volume and low usage variation items replenished via Kanban. C Items could be low-volume items with high usage variation that are replenished via MRP. D Items could identify obsolete parts and F Items could be used to classify fasteners or miscellaneous parts that are replenished through manual or other methods. Classification codes are available in Enhanced MRP as selection options to exclude Kanban items from MRP generations.

Number of Bins
You may define any number of bins for Kanban. Typically, most items will utilize a two-bin system. Items with longer lead times or more variation in usage might be candidates for a three-bin system.

Usage Planning Factor
The Usage Planning Factor is a user-defined value signifying a factor to be applied when calculating the bin usage. This is in essence a "fudge-factor" to protect the bins from being completely depleted.

Product Features