



# Material Planning & Production Management

## For Sage 100 ERP 2013

457 Palm Drive  
Glendale, CA 91202  
818-956-3744  
818-956-3746  
sales@iigservices.com

[www.iigservices.com](http://www.iigservices.com)



# Material Planning & Production Management 1

Information in this document is subject to change without notice. No part of this document may be reproduced or transmitted in any form or by any means, electronic or mechanical, for any purpose without the express written consent of Information Integration Group, Inc.

## **TRADEMARKS**

*MS-DOS* and *Windows* are trademarks of Microsoft Corporation.

Sage 100 ERP (formerly Sage ERP MAS 90 and 200) is registered trademark of Sage Software, Inc.

All other product names and brand names are service marks, and/or trademarks or registered trademarks of their respective companies.

# Material Planning & Production Management 2

## Table of Contents

<i>Installation Instructions and Cautions</i> .....	3
<b>Wait! Before You Install – Do You Use CUSTOM OFFICE?</b> .....	3
<i>Introduction</i> .....	6
<i>Setup Activity</i> .....	7
<b>Material Planning and Production Setup</b> .....	7
<b>Machine Code Maintenance</b> .....	9
<b>Plant Code Maintenance</b> .....	10
<b>Inventory Management Options</b> .....	11
<b>Warehouse Code Maintenance</b> .....	12
<b>Item Maintenance</b> .....	13
<i>Material Requirement Planning</i> .....	16
<b>Calculate Quantity to Produce/Purchase</b> .....	16
<i>Work Order Generation</i> .....	29
<b>Production Scheduling Board</b> .....	29
<b>Work Order Entry</b> .....	41
<b>Lot Number Generation</b> .....	42
<b>Production Generation</b> .....	44
<b>Auto Scheduling</b> .....	47
<b>Sales Order Entry</b> .....	49
<i>Custom UDFs</i> .....	56
<b>Dispatch Data Entry</b> .....	56
<b>Production Number on the Dispatch</b> .....	59
<b>Dispatch Quick Printing</b> .....	61
<i>MRP Inquiry</i> .....	63
<i>Bill of Materials Inquiry</i> .....	65

## Installation Instructions and Cautions

**PLEASE NOTE:** *Sage 100 ERP must already be installed on your system before installing any IIG enhancement. If not already done, perform your Sage 100 ERP installation and setup now; then allow any updating to be accomplished automatically. Once Sage 100 ERP installation and file updating is complete, you may install your IIG enhancement product by following the procedure below.*

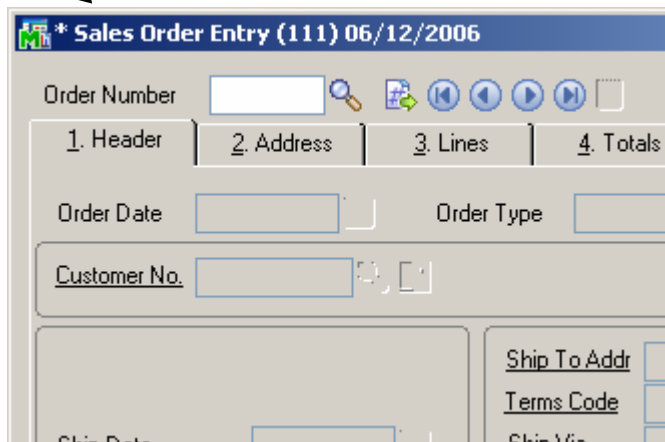
### Wait! Before You Install – Do You Use CUSTOM OFFICE?

**THIS IS AN IMPORTANT CAUTION:** *If you have Custom Office installed, and if you have modified any Sage 100 ERP screens, you must run Customizer Update after you do an enhancement installation.*

**But wait! BEFORE** you run **Customizer Update**, it is very important that you **print all of your tab lists**. Running **Customizer Update** will clear all Tab settings; your printed tab list will help you to reset your Tabs in Customizer Update. **Custom Office** is installed on your system if there is an asterisk in the title bar of some of the screens. The asterisk indicates that the screen has been changed.

An **asterisk** in a window's title bar indicates that the screen has been modified. This means that **Custom Office** is installed.

Follow all the instructions on this page before you run **Customizer Update!**



## Registering IIG products

IIG Enhancement should be registered to be able to use it. If registration is not performed, the enhancement will work in a demo mode for a limited time period. The registration can be still done during the demo period.

Select the **IIG Product Registration** program under the **Library Master Setup** menu of the Sage 100 ERP.

If this option is not listed under the Library Master Setup menu, go to the main menu, and select **Run** from the **File** menu. Type in SVIIGR and click **OK**.

Enhancement	Level	Release Date	Serial Number	Unlocking Key	Status
IIG Enhancement	5.00		AAAAAAAAAAAAAAAA	BBBBBB	Invalid

Enter **Serial Number** and **Unlocking Key** provided by IIG, and click **OK**.

If multiple IIG Enhancements are installed, Serial Numbers and Unlocking Keys should be entered for each enhancement.

Use the **Print Registration Form** button to print IIG Registration Form.

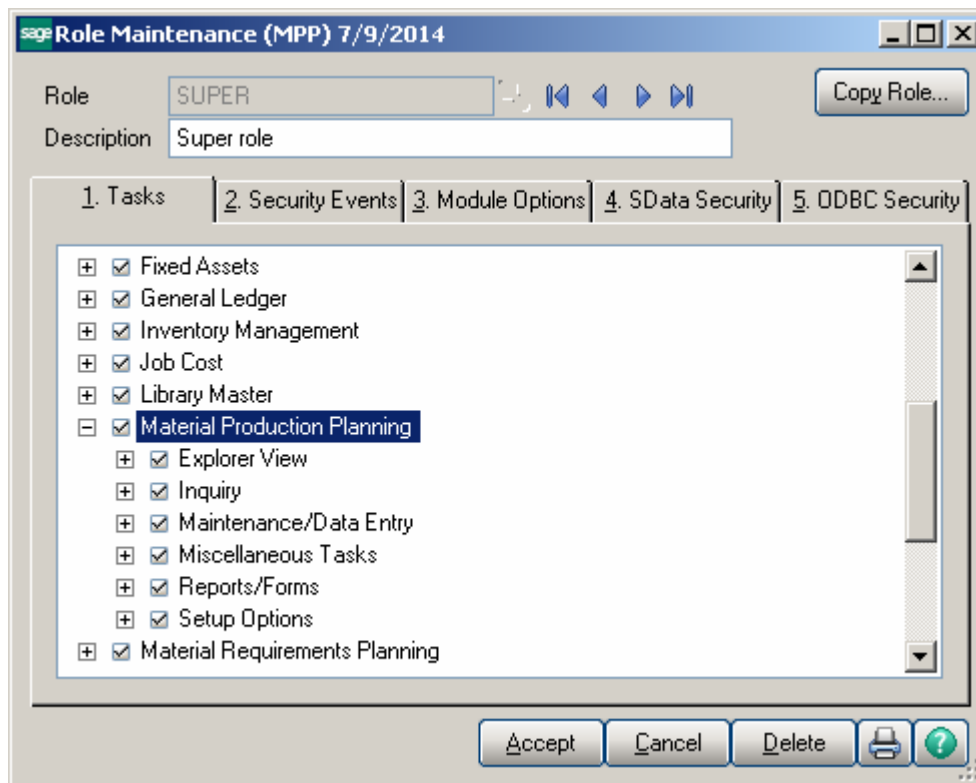
## ODBC Security

After installing an **IIG Enhancement**; it is **very important to verify** whether or not the **Enable ODBC Security within Role Maintenance** check box is selected in the **System Configuration** window of your system. If it is selected you must assign ODBC security permissions and allow access to custom data tables/fields for the Roles defined in your system.



## Role Maintenance

After installing an **IIG Enhancement**, permissions must be configured for newly created Tasks and Security Events.



## Introduction

The **Material Planning & Production Management** enhancement helps you to coordinate production to deliver what customers want accurately, efficiently and on a timely basis. Process takes into account BUF MAX values for items (stocking levels); and items that are produced to meet demand for existing sales orders

It also gives you full visibility into the process, with the ability to quickly adjust production as requirements change.

This enhancement provides the user with the following options:

- Calculation of requirements for finished goods, WIP and purchased products based on:
  - Material requirements to fulfill sales orders for an entered ship date
  - Material requirements based on stocking levels entered (min/max)
  - Showing the raw material requirements for all BOM levels
  - Taking into account existing SO, PO and WO transactions
- Ability to manage production and purchasing functions by:
  - Ability to analyze calculated demand by drilling down to:
    - Item Inquiry
    - Bill of Material Inquiry
    - Where Used Inquiry
    - Vendor / Purchasing Activity
  - Ability to maintain the calculated quantity requirements for each item
  - Auto creation of work orders to manufacture products from:
    - Material Requirements Planning dashboard
    - Sales Order Entry program for MTO items
    - Scheduling Board based on MRP run's calculated requirements
- Auto creation of purchase orders for products based on:
  - Demand based on existing transactions and inventory positions for purchased products
  - Demand calculated for components (all BOM component levels)
- Auto scheduling of work orders based on item's priority code and machine/mold preference entered
- Creation of production tasks (Work Order) based on routings linked to items
- Material requirement check based on work orders scheduled for the next x days

## Setup Activity

### Material Planning and Production Setup

It is necessary to specify the **Work Order Type** and the **Default W.O Customer** in the **Material Planning and Production Setup** screen.

The customer entered here is loaded as the customer number for the work orders generated. The actual customer number is loaded for work orders generated from the sales order entry program

**Work Order Type** – is the default Work order type for the generated work orders. The WO type is used if there is no WO type selected for the Routing step.

Material Planning and Production Setup (MPP) 7/9/2014

1. Main | 2. Entry | 3. Line Entry

Time entry drop box in Dispatch Data Entry: 15

Use Sort File in Quick Dispatch:

Receiving Cost Write Back for:

Standard Cost:  Average Cost:

FIFO/LIFO:  Lot/Serial:

Next Automatic Work Order Number: 0000233

Next Automatic Contract Number: 000000002

Next Automatic Template Contract Number: 00000001

Default Values:

Work Order Type: M Manufacturing

Dispatch Status (Quick Entry): 0 Open

Close Dispatches into the: Sales Order

Default W.O. Customer: 01-SHEPARD

Present Sales Kit as a Set of Regular Items:

Item Contract Instead Of Order Contract:

Retain Work Order History:

Allow Quote Hours in Work Order:

PM Work Order Generate Based On W.O. Close Date:

Commit Quantity During MFG Dispatch Generation:

Don't prompt if machine is not setup with the required skill set:

Don't prompt if machine is busy during the scheduled time:

Accept Cancel



# Material Planning & Production Management 8

Select the **WO Due date from SO Line Promise Date** checkbox to have the Due Date on the header of the generated Work Order populated with respective Sales Order line Item Promised Date.

Select the Dispatch **Ending Date from SO Line Promise Date** checkbox to have the Ending Date on the Dispatch Header populated with respective Sales Order line Item Promised Date.

The screenshot shows the 'Material Planning and Production Setup (MPP)' dialog box for the date 8/8/2014. The interface is divided into three tabs: '1. Main', '2. Entry', and '3. Line Entry'. The '1. Main' tab is active. The dialog contains several sections of settings:

- Enable Schedule Board:**
- Automatically Increment Steps By:** 010
- Integrate with Payroll:**
  - Include History in Payroll Batch:
  - Payroll Overtime Calculation: 8 hours a day
- Generated Document Line Hours Rounding:**
  - Spent Hours Rounding: None
  - Spent Hours Precision in Minutes: 15
  - Minimum Billed Time: 0
- Auto Load:**
  - Machine from Work Order to Dispatches and Labors:
  - Dispatch Starting Date/Time from Scheduled: First
  - First Labor Hours from Dispatch Dates/Times:
  - Allow Use of Overtime Calculation for Labor:
  - Apply Dispatch Date/Time to Labor Lines: None
- Contract Audit:**
  - Contract Changes to Track: None
  - Track Additions in Detail:
- Job Cost Posting:**
  - Default Account: [Empty]
  - J/C Cost Code Segment for Machine Postings: None

At the bottom right, there are three buttons: 'Accept', 'Cancel', and a printer icon. A blue rectangular box highlights the following two checkboxes in the 'Auto Load' section:

- WO Due Date from SO line Promise Date
- Dispatch Ending Date from SO line Promise Date

## Machine Code Maintenance

The **Machine Code Maintenance** program is used to setup machines with respective mold types they can handle. The Machine Codes setup here are available in the Dispatch Board used to generate Work Orders.

During Work Order generation the program validates the Machine Code/Mold type to match the Mold type set on the Item.

Machine Code Maintenance (MPP) 7/9/2014

Machine Code: M001

Machine Name: Machine #1

ABV Name: M1

Labor Cost: .00

Plant Code: UNION Union city

Active:

Molds...

Accept Cancel Delete

Enter new **Machine Code** to add in the system or select an existing one to make changes if necessary; e.g. change the Plant Code, Labor Cost etc.

Press the **Molds** button to assign the mold type to current machine.

The Look up button lists all Machine codes setup in the system:

Machine Code List

Machine Code	Machine Name	ABV Name
A1	Machine A1	
M001	Machine #1	M1
M002	Machine #2	M2

Search: Machine Code Begins with

Find

Filters...

Custom...

Select Cancel

Found 3 records

## Plant Code Maintenance

The **Plant Maintenance** program is used to setup Plant Codes and assign the Default Machine Code to the Plant Code.

The screenshot shows the 'Plant Maintenance (MPP) 7/9/2014' window. It contains the following fields and controls:

- Plant Code: UNION
- Description: Union city
- Default Machine Code: M001
- Machine #1 M1 (text next to the Default Machine Code)
- Buttons: Accept, Cancel, Delete, Print, Help

The Lookup button next to the Plant Code field lists the Plant codes setup in the system.

The screenshot shows the 'Plant Code List' window. It contains a table with the following data:

Plant Code	Description	Machine Code	Name
PL1	Plant 1	A1	Machine A1
UNION	Union city	M001	Machine #1 M1

Below the table, there are search and filter options:

- Search: Plant Code (dropdown), Begins with (dropdown), [text input], Find (button)
- Filters... (button)
- Custom... (button)
- Select (button), Cancel (button), Print (button), Help (button)

At the bottom, it says 'Found 2 records'.

## Inventory Management Options

The **MRP Warehouse Code** has been added on the Main tab of the **Inventory Management Options** to allow setting the warehouse code to be used as the warehouse for transactions generated if **Calculate Quantity to Produce** (MRP run) program is processed at the item level (not at warehouse level).

The screenshot shows the 'Inventory Management Options (MPP) 7/9/2014' dialog box with the following settings:

- 1. Main** | 2. Additional | 3. Entry | 4. Printing
- Require Multiple Warehouses:
- Reorder by Warehouse:
- Default Warehouse Code: 000
- MRP Warehouse Code: MRP** (highlighted)
- Segment Substitution: G/L Segment for Whse Postings: Location
- Track Warehouse Transfers as Issues:
- Calculate Commission by Inventory Item:
- Include in Quantity Available: No POs and WOs
- Inventory Period: Base Inventory Periods On: Calendar Months
- Current Calendar Year: 2014
- Current Period: 03
- Enable Warranty Tracking:
- Integrate with: General Ledger: ; Job Cost:

Buttons: Accept, Cancel, Print, Help

## Warehouse Code Maintenance

The **Include In MRP** checkbox has been added on the **Warehouse Code Maintenance** to allow indicating the Warehouse(s) to be included in MRP run when calculating demand for items at the item level.

sage Warehouse Code Maintenance (MPP) 7/9/2014

Warehouse Code: 000

Description: CENTRAL WAREHOUSE

Name: ABC CENTRAL WAREHOUSE

Address: 1101 W. MAC ARTHUR BLVD.

ZIP Code: 92626

City: COSTA MESA State: CA

Country: [Search]

Telephone: [ ] Ext: [ ]

Fax: [ ]

E-mail Address: [ ]

Contact: [ ]

Include In MRP:

Post to Location: 03 Central Warehouse

Buttons: Accept, Cancel, Delete, Print, Help

## Item Maintenance

The **Planning Code**, **MFG Priority Code** and **MFG Code** fields have been added on the main tab of the Item Maintenance.

**Planning Code** field is an informational field, which supports up to 5 alphanumeric characters and is used as selection field in the Calculate **Items Quantity To Produce** program.

The screenshot displays the Sage Item Maintenance (MPP) 7/9/2014 window. The main tab is selected, showing various fields for item maintenance. The Item Code is BEL25 and the Description is HON 4 DRAWER LETTER FILE W/O LK. The Product Line is WF&A (WORKSTATION FURN & ACCESS) and the Product Type is Finished Good. The Valuation is FIFO and the Procurement is Make. The Unit of Measure is EACH. The Price Code is STD (STANDARD QUANTITY PRIC) and the Default Whse is 000 (CENTRAL WAREHOUSE). The Planning Code is 001, the MFG Priority Code is 1, and the MFG Code is Made to Stock. The Item Molds Machine is Item Molds Machine. The window also shows a table of quantities for different warehouses.

Whse	Description	On Hand	On PO	On SO	On Bk Ord	Committed	On W/O	Req for W/O	Av
000	CENTRAL ...	5.00	25.00	200.00	.00	200.00	30.00	.00	
001	EAST WA...	.00	124.00	272.00	.00	272.00	.00	.00	

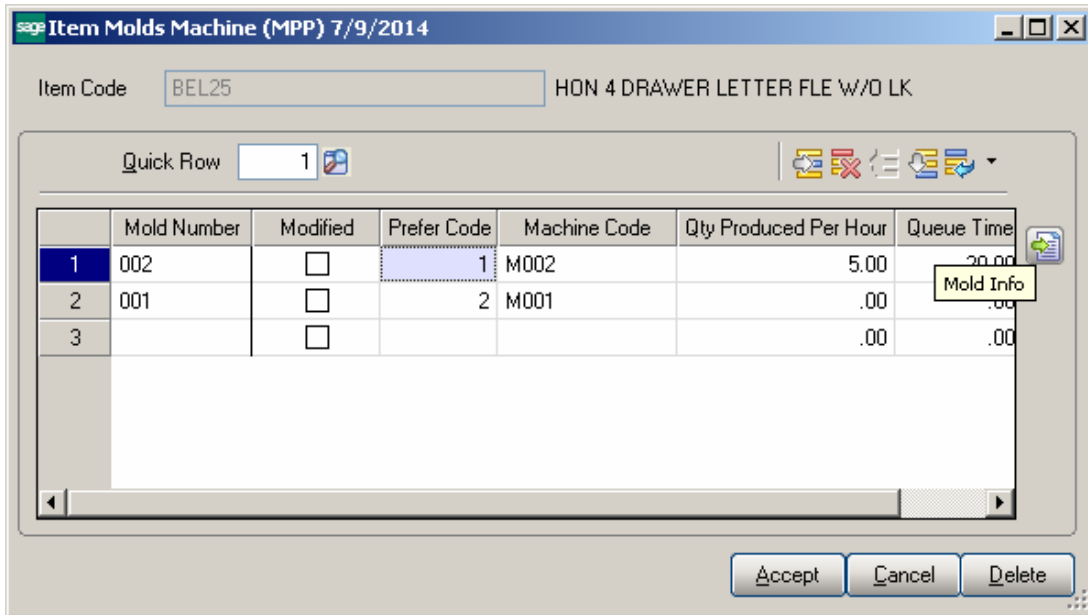
**MFG Priority Code**– is used to define MFG sort for the item. Items are loaded into the MRP grid sorted by the manufacturing priority code entered for each item.

**MRP Code** – is used to define material planning groups to manage purchasing, production and scheduling processes. The following options are available:

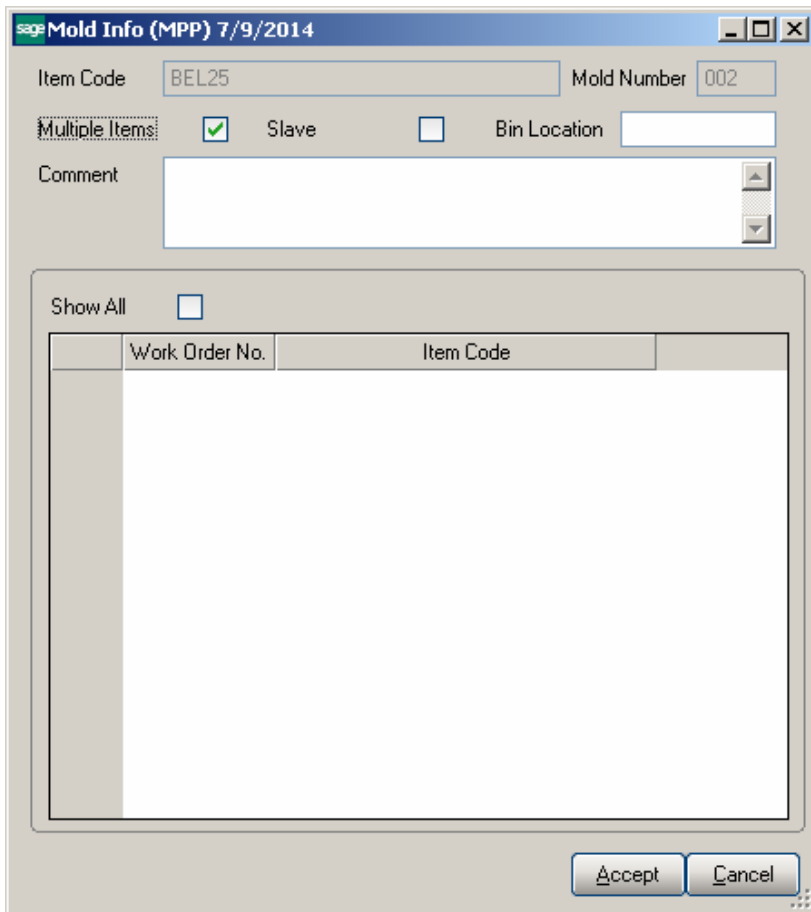
- Made to Order
- Made to Stock

Mold and machine information is setup for each Item in the **Item Molds Machine** grid opened through the **Item Molds Machine** hyperlink button. The information entered here is required for work order generation and auto-scheduling functions.

# Material Planning & Production Management 14



Multiple Items can be linked to the same Mold Number. Press the Mold Info button:



## Material Planning & Production Management 15

The **Mold Info** screen is opened with current Item and Mold number selected. Select the **Multiple Items** checkbox to indicate multiple Items can be assigned to current Mold number. If the selected item is not flagged as **Slave** it is considered to be the master Item. In this case when assigning another Item to current Mold number the **Slave** checkbox will be automatically set upon checking the Multiple Items checkbox:

The screenshot shows the Sage Mold Info (MPP) 7/9/2014 window. The 'Item Code' field contains 'BEL25-VIP' and the 'Mold Number' field contains '002'. The 'Multiple Items' checkbox is checked, and the 'Slave' checkbox is also checked. The 'Bin Location' field is empty. The 'Comment' field is empty. The 'Show All' checkbox is unchecked. The table below has two columns: 'Work Order No.' and 'Item Code'. The table is currently empty. At the bottom right are 'Accept' and 'Cancel' buttons.

The Multiple Items flag (indicating that this mold is used by more than one item) impacts quantity calculation in the Calculate Quantity to Produce/Purchase program. Refer to [Processing Master/Slave Items](#) for details.



## Material Requirement Planning

### Calculate Quantity to Produce/Purchase

The **Calculate Quantity to Produce/Purchase** program added under the **Material Production Planning Main** menu is designated to simplify and speed up the work processes of purchasing and the production managers, enabling them to plan more effectively.

This program allows for processing the selected Items and calculating quantity requirements for each Item based on selected MRP run options. The program calculates also the component requirements for each Item by Warehouse.

Select Field	Operand	Value
Item Code	All	
Material Planning Code	All	
Machine Code	All	

Item Code	Whse	Vendor No.	Qty On Hand	Qty On SO	Qty On BO	Qty On PO	Qty On WO	Qty Req For WO	Qty Avail	MRP Run Req	Qty Avail
-----------	------	------------	-------------	-----------	-----------	-----------	-----------	----------------	-----------	-------------	-----------

#### MRP Run Processing Options:

**Show Items With Zero Req. Qty-** select this checkbox if you don't want to load the Items with zero quantity required into the material production planning grid.

**Calculate Quantity for Item Level** – select this checkbox if you want the demand to be calculated at the Item level (instead of warehouse level). Only the warehouses flagged as “Include in MRP” in the Warehouse Code Maintenance are included in the

# Material Planning & Production Management 17

calculation and the calculated quantities are shown under the Warehouse code selected as **MRP Warehouse** in the **Inventory Management Options**.

**Include Items Based on SO Selection Only** – select this checkbox to include in the demand calculation only the items of the selected Order(s) lines. If the ordered Item is a Bill the program uses the bill of materials structure to disassemble all components into the lowest level items and loads also those items.

**Calculate Demand Based on SO** – this option is enabled upon selecting the **Include Items Based on SO Selection Only** checkbox. If checked the demand is determined based on the open Sales Orders for the selected Ship Date.

**Add SO Items to Selection** – this checkbox is enabled only if the above two options are turned off. It allows for adding also Sales Orders' Items to the Items selected based on other selection criteria.

The **Machine Code** and **Start Date/Time** options are used for Manufacturing WO/Dispatch generation.

The screenshot shows the 'Calculate Quantity to Produce/Purchase' window. It includes several checkboxes for selection options: 'Show Items With Zero Req Qty' (unchecked), 'Calculate Quantity at Item Level' (unchecked), 'Sort by MFG Code' (unchecked), 'Include Items Based On SO Selection Only' (checked), 'Calculate Demand Based On SO' (checked), and 'Add SO Items To Selection' (unchecked). There are also input fields for 'Machine Code', 'Start Date' (7/10/2014), and 'Time' (12:00 AM). A table below shows item requirements and availability for various items, with item 8 (BEL10) highlighted in blue.

	Item Code	Whse	Vendor No.	Qty On Hand	Qty On SO	Qty On BO	Qty On PO	Qty On WO	Qty Req For WO	Qty Avail.	MRP Run Req	Qty Avail
1	1001-HON-H252LK	MRP	01-CONT	.00	.00	.00	.00	.00	.00	.00	6,348.00	
2	1001-HON-H254	MRP	01-CONT	.00	.00	.00	.00	.00	.00	.00	1,816.00	
3	200-230	MRP	01-CONT	.00	.00	.00	.00	.00	.00	.00	1,816.00	
4	230-182-Z	MRP	01-CONT	.00	.00	.00	.00	.00	.00	.00	1,362.00	
5	2480-8-50	MRP	01-UNITED	.00	.00	.00	.00	.00	.00	.00	3,632.00	
6	6655	MRP	01-CONT	.00	6.00	.00	.00	.00	.00	.00	25,392.00	
7	720-100	MRP	01-CONT	.00	.00	.00	.00	.00	.00	.00	20.00	
8	BEL10	MRP	01-CONT	.00	4.00	.00	.00	.00	.00	4.00	.00	
9	BEL10-VIP	MRP	01-CONT	.00	6.00	.00	.00	.00	.00	6.00	4.00	
10	BEL25	MRP	01-AIRWAY	.00	450.00	.00	.00	.00	.00	450.00	.00	
11	BEL25-VIP	MRP	01-AIRWAY	.00	.00	.00	.00	.00	.00	.00	450.00	
12	PLS-TRAY	MRP	01-CONT	.00	.00	.00	.00	.00	.00	.00	454.00	
13	TIP	MRP	01-CONT	.00	.00	.00	.00	.00	.00	.00	450.00	
14	TIP-XI	MRP	01-CONT	.00	.00	.00	.00	.00	.00	.00	4.00	

The following selection options may be applied:

- Item code
- Material Planning Code
- Order Number

- Ship Date
- Warehouse

## MRP columns:

- **Item Code** – item number from inventory master file. The program lists all components (purchased or manufactured) to meet the selected items demand
- **Whse** – the warehouse code for the information or the MRP Warehouse code setup in the I/M options if MRP run is at item level
- **Vendor No** – vendor number for purchase items. The Make or Buy drop down in the inventory file is used to determine if a PO is to be generated for the item.
- **Qty On Hand (QOH)** – quantity on hand for the warehouse
- **Qty on SO (SOQ)** – sales order quantity represents quantity on sales orders for the entered date range or item's demand based on the Bypass Sales Order Selection MRP run option
- **Qty on BO (BOQ)** – backorder quantity, quantity on back orders for the entered date range or item's demand based on the Bypass Sales Order Selection MRP run option
- **Qty on PO (POQ)** - quantity on purchase orders
- **Qty on WO (WOQ)** - quantity on existing work orders
- **Qty Req for WO (QRWO)** component quantity needed for planned work orders
- **Qty Avail (QAVL)** – is calculated using the formula below:  
$$QAVL = QOH - SOQ - BOQ + POQ + WOQ - QRWO$$
- **Demand New Requirements (DNR)** - this value represents the requirements on items entered on the bill of material line's tab for any BOM item with negative Qty Avail (QAVL) value. The Demand New Requirement quantity is calculated for component Items only, it doesn't make sense for Bill parent Item. It is calculated as the Bill Recommended Qty multiplied by the component's Quantity/Bill.
- **Qty Avail MRP Run (MRPQ)**, this value is calculated as follows:
  - $MRPQ = QAVL - DNR$
- **Reorder Method** – MAX, ROP or EOQ.
- **Recommended Qty** – is calculated based on the Reorder method as follows:
  - For Max Stock level Reorder method, if the Qty Available is below reorder, Recommended Qty=Buf Max Quantity –MRPQ (Qty Avail MRP Run)
  - For Reorder Point method if Available quantity is below the Reorder, Recommended Qty=Reorder Point Quantity – MRPQ (Qty Avail MRP Run)
  - For Economic Qty method, if Available is below reorder, Recommended Qty=Economic Ord. Quantity
- **Mold Type**- this field is defaulted to the Mold Type setup for an Item in the Item Mold Maintenance and can be changed here. If there are several Molds setup, the Mold Type with the highest Prefer Code (for example from 001,

003, 005 the one with 001 will be loaded). The user is not allowed entering the Mold Type manually. It is necessary to select from the lookup list.

- **Machine Code**- this field is defaulted to the Machine Code setup for an Item in the Item Mold Maintenance and can be changed here.
- **Include**- select this checkbox to include the line in the Manufacturing WO generation

The following actions are available:

- **Recalculate/Relink**
- **Auto Scheduling**
- **Generate Manufacturing WO**
- **Generate PO**

**Recalculate/Relink**- this button is used for linking/relinking Master/Slave Items in case Multiple Items are being produced through the same Mold.

Pressing the **Auto Scheduling** button will generate and schedule work orders based on the machine/mold information entered for an Item in the **Calculate Quantity to Produce** grid taking into account Shifts setup in the **Week Shift Maintenance**. If the **Start Date** checkbox is selected with a Date/Time entered the Manufacturing Dispatch Starting Date/Time fields will be defaulted to that Date/Time if the Machine specified for an Item is available for that Date/Time and the Ending Date will be calculated taking into account the shifts setup in the **Week Shift Maintenance**.


**Generate Manufacturing WO**- press this button to generate work orders based on the demand calculated. The user may schedule the generated work Orders using the **Schedule Board** program.

**Generate PO**- press this button to generate Purchase Orders for Items with Buy Procurement type. Purchase orders are generated both for components of BOM items or items sold on sales order.

Here is an example of material requirement calculation for Bill Item BEL10.



# Material Planning & Production Management 21

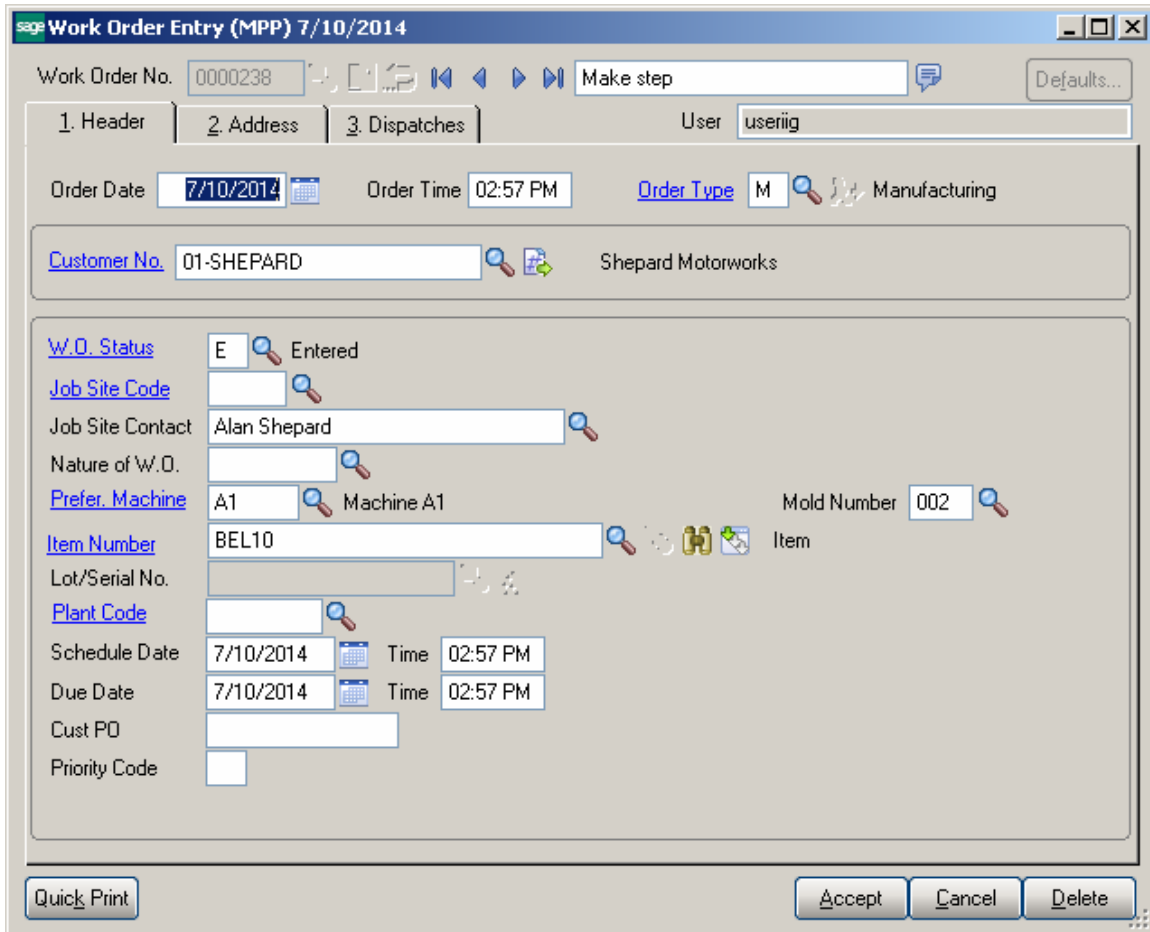
Select the Include checkbox. You can **Include** all lines by pressing the  **Select All** button or just clicking in the box to select an individual line.

The drill down buttons on the right hand of the grid enable drill down to Item Inquiry, Bill Item Inquiry (enabled for Bill Items), Where used Inquiry (enabled for component Items), Item Vendor Maintenance, Item Molds Machine entry and MRP Inquiry.

After selecting the lines and pressing **Accept** the information is saved in a special table (SO068\_XXXItemsQtyToProduce.M4T) used for generating Work Orders from Production Scheduling Dispatch Board.

If Bill Item has options, the BOM option components' quantities will take part in this calculation.

Here is the Work Order with respective Manufacturing Dispatch generated for Make Item# BEL10 by the **Gen Manufacturing** WO button:



Work Order No. 0000238 Make step Defaults...

1. Header 2. Address 3. Dispatches User useriig

Order Date 7/10/2014 Order Time 02:57 PM Order Type M Manufacturing

Customer No. 01-SHEPARD Shepard Motorworks

W.O. Status E Entered

Job Site Code

Job Site Contact Alan Shepard

Nature of W.O.

Prefer. Machine A1 Machine A1 Mold Number 002

Item Number BEL10 Item

Lot/Serial No.

Plant Code

Schedule Date 7/10/2014 Time 02:57 PM

Due Date 7/10/2014 Time 02:57 PM

Cust PO

Priority Code

Quick Print Accept Cancel Delete

The **Customer No** of the generated WO is the **Default W.O Customer** entered in the **Material Planning and Production Setup** window.

# Material Planning & Production Management 22

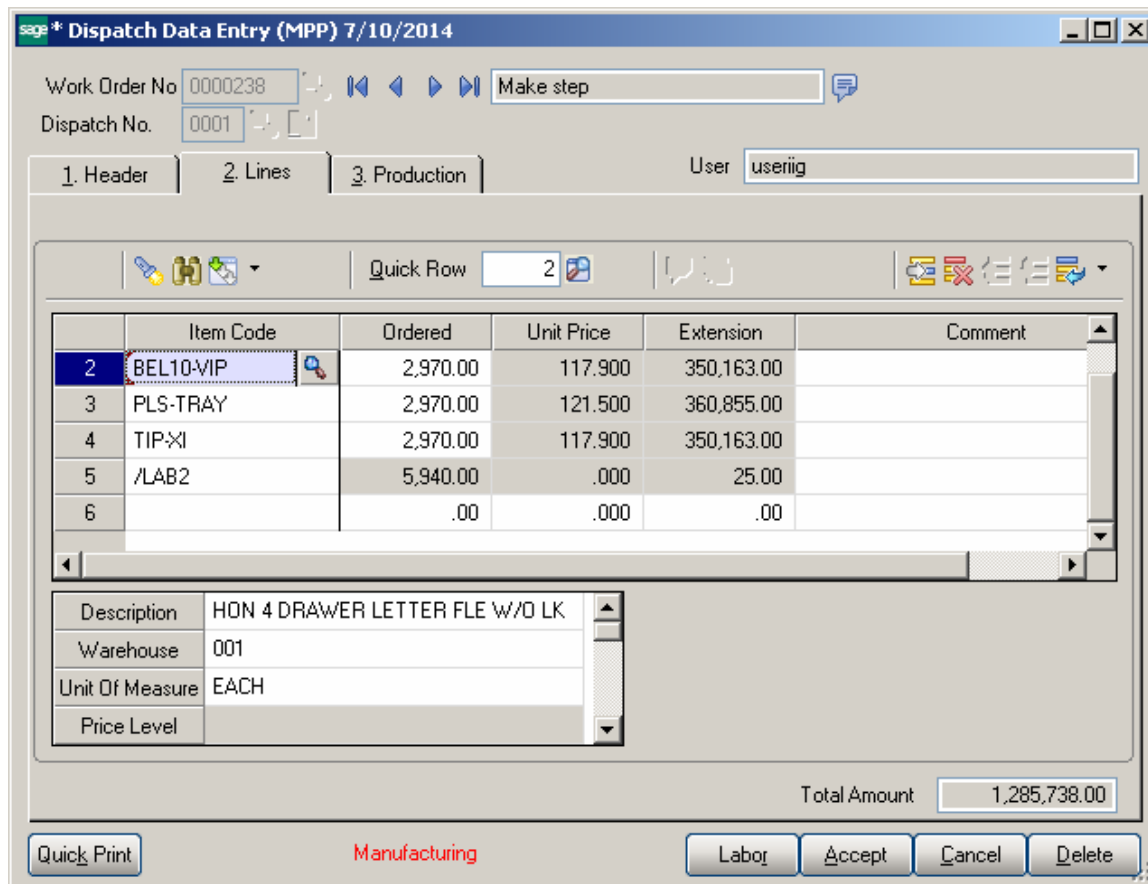
Work Order No. 0000238 Make step Defaults...

1. Header 2. Address 3. Dispatches User useriig

Dispatch No.	Dispatch Date	Machine	Machine Name	Status
0001	7/10/2014	A1	Machine A1	Open

Quick Print Accept Cancel Delete

Components are loaded from the BOM into the WO Dispatch Transaction.



Daily Production entry transactions are created for closed WO transactions.

### ***Processing Master/Slave Items***

The **Recalculate/Relink** action is intended for the Items linked to the same Mold Number.

After the lines are loaded in the grid you may press the **Recalculate/Relink** button to link the Items assigned to the same Mold Number and marked as **Multiple Items** (Master/Slave) in the **Mold Info** screen launched from the **Item Mold Machine** entry.



# Material Planning & Production Management 24

Calculate Quantity to Produce/Purchase

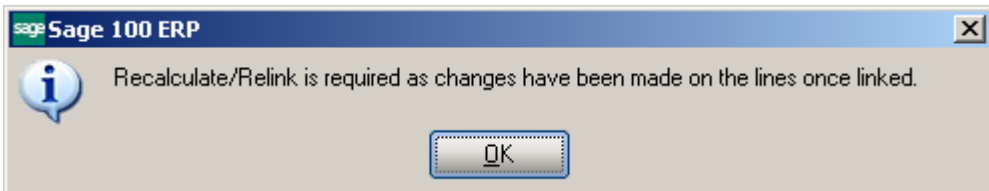
Show Items With Zero Req Qty  Include Items Based On SO Selection Only   
 Calculate Quantity at Item Level  Calculate Demand Based On SO   
 Sort by MFG Code  Add SO Items To Selection

Machine Code: [ ] Start Date: 7/11/2014 Time: 12:00 AM

Item Code	Whse	Qty Avail	MRP Run Req	Qty Avail MRP Run	Reorder Method	Reord. Qty	EOR	Max Qty	Calc. Demand	fold Numbe	Machine Code	Include
38	720-100	MRP	50.00	150.00	200.00	Economic Qty	.00	.00	.00	200.00		<input type="checkbox"/>
39	8953	001	555.00	.00	555.00	Max Stock Le	1000.00	2,000.00	4,000.00	3,445.00		<input type="checkbox"/>
40	8971	001	170.00	.00	170.00	Max Stock Le	600.00	1,000.00	2,000.00	1,830.00		<input type="checkbox"/>
41	8972	001	27.00	.00	27.00	Max Stock Le	2000.00	3,000.00	5,000.00	4,973.00		<input type="checkbox"/>
42	ARS-9101	002	24.00	.00	24.00	Max Stock Le	10.00	20.00	50.00	26.00		<input type="checkbox"/>
43	ARS-9301	001	9.00	.00	9.00	Max Stock Le	10.00	20.00	50.00	41.00		<input type="checkbox"/>
44	BEL10	000	3.00	.00	3.00	Economic Qty	.00	.00	.00	.00	002 A1	<input type="checkbox"/>
45	BEL10	001	32.00	.00	32.00	Economic Qty	.00	.00	.00	.00	002 A1	<input checked="" type="checkbox"/>
46	BEL10	MRP	.00	.00	.00	Economic Qty	.00	.00	.00	.00	002 A1	<input type="checkbox"/>
47	BEL10-VIP	001	68.00	.00	68.00	Max Stock Le	.00	.00	100.00	32.00		<input type="checkbox"/>
48	BEL10-VIP	MRP	30.00	.00	30.00	Economic Qty	.00	.00	.00	30.00		<input type="checkbox"/>
49	BEL25	001	102.00	.00	102.00	Max Stock Le	.00	.00	100.00	.00	002 M002	<input type="checkbox"/>
50	BEL25	MRP	.00	.00	.00	Economic Qty	.00	.00	.00	.00	002 M002	<input type="checkbox"/>
51	BEL25-VIP	000	140.00	.00	140.00	Economic Qty	.00	.00	.00	140.00	001 M001	<input type="checkbox"/>
52	BEL25-VIP	001	122.00	.00	122.00	Economic Qty	.00	.00	.00	.00	001 M001	<input type="checkbox"/>
53	BEL25-VIP	MRP	.00	.00	.00	Economic Qty	.00	.00	.00	.00	001 M001	<input type="checkbox"/>
54	D1000	001	352.00	.00	352.00	Economic Qty	.00	.00	.00	352.00		<input type="checkbox"/>
55	D1400	001	7.00	.00	7.00	Economic Qty	.00	.00	.00	7.00		<input type="checkbox"/>
56	D1700	001	4.00	.00	4.00	Economic Qty	.00	.00	.00	4.00		<input type="checkbox"/>
57	D2000-C	001	2.00	.00	2.00	Economic Qty	.00	.00	.00	2.00		<input type="checkbox"/>
58	GB-EL04MS-07	002	17.00	.00	17.00	Max Stock Le	30.00	70.00	200.00	183.00		<input type="checkbox"/>

Proceed Clear Recalculate/Relink Auto Scheduling Gen. Manufacturing Generate BQ Accept Cancel

Upon pressing the **Recalculate/Relink** button the lines having the same Mold Number, Warehouse and marked as Master/Slave become highlighted in red. After making any change on one of the linked lines it is necessary to Recalculate/Relink the lines again, otherwise the following message will appear while performing other actions (e.g. Auto Scheduling).



Upon pressing Recalculate/Relink button:

- The **Include** checkbox becomes selected for all linked lines if it is selected at least for one line.
- The **Calc. Demand Quantity** on all linked lines is updated with the greater one if it is changed on one of them so that the **Calc. Demand Quantity** becomes the same for all linked Items

# Material Planning & Production Management 25

**Calculate Quantity to Produce/Purchase**

Show Items With Zero Req Qty  Include Items Based On SO Selection Only   
 Calculate Quantity at Item Level  Calculate Demand Based On SO   
 Sort by MFG Code  Add SO Items To Selection

Machine Code:  Start Date:  Time:

Item Code	Whse	Qty Avail	MRP Run Req	Qty Avail MRP Pur	Reorder Method	Reord. Qty	EOR	Max Qty	Calc. Demand	fold Numbe	Machine Code	Include
40	8971	001	170.00	.00	170.00	Max Stock Le	600.00	1,000.00	2,000.00	1,830.00		<input type="checkbox"/>
41	8972	001	27.00	.00	27.00	Max Stock Le	2000.00	3,000.00	5,000.00	4,973.00		<input type="checkbox"/>
42	ARS-9101	002	24.00	.00	24.00	Max Stock Le	10.00	20.00	50.00	26.00		<input type="checkbox"/>
43	ARS-9301	001	9.00	.00	9.00	Max Stock Le	10.00	20.00	50.00	41.00		<input type="checkbox"/>
44	BEL10	000	3.00	.00	3.00	Economic Qty	.00	.00	.00	.00	002	<input type="checkbox"/>
45	BEL10	001	32.00	.00	32.00	Economic Qty	.00	.00	.00	40.00	002	<input checked="" type="checkbox"/>
46	BEL10	MRP	.00	.00	.00	Economic Qty	.00	.00	.00	.00	002	<input type="checkbox"/>
47	BEL10-VIP	001	68.00	.00	68.00	Max Stock Le	.00	.00	100.00	32.00		<input type="checkbox"/>
48	BEL10-VIP	MRP	30.00	.00	30.00	Economic Qty	.00	.00	.00	30.00		<input type="checkbox"/>
49	BEL25	001	102.00	.00	102.00	Max Stock Le	.00	.00	100.00	40.00	002	<input checked="" type="checkbox"/>
50	BEL25	MRP	.00	.00	.00	Economic Qty	.00	.00	.00	.00	002	<input type="checkbox"/>
51	BEL25-VIP	000	140.00	.00	140.00	Economic Qty	.00	.00	.00	140.00	001	<input type="checkbox"/>
52	BEL25-VIP	001	122.00	.00	122.00	Economic Qty	.00	.00	.00	.00	001	<input type="checkbox"/>
53	BEL25-VIP	MRP	.00	.00	.00	Economic Qty	.00	.00	.00	.00	001	<input type="checkbox"/>
54	D1000	001	352.00	.00	352.00	Economic Qty	.00	.00	.00	352.00		<input type="checkbox"/>
55	D1400	001	7.00	.00	7.00	Economic Qty	.00	.00	.00	7.00		<input type="checkbox"/>
56	D1700	001	4.00	.00	4.00	Economic Qty	.00	.00	.00	4.00		<input type="checkbox"/>
57	D2000-C	001	2.00	.00	2.00	Economic Qty	.00	.00	.00	2.00		<input type="checkbox"/>
58	GB-EL04MS-07	002	17.00	.00	17.00	Max Stock Le	30.00	70.00	200.00	183.00		<input type="checkbox"/>
59	GB-EL04MS-25	001	24.00	.00	24.00	Max Stock Le	60.00	200.00	400.00	376.00		<input type="checkbox"/>
60	GB-EQ380-104	001	59.00	.00	59.00	Max Stock Le	100.00	300.00	400.00	341.00		<input type="checkbox"/>

Proceed Clear Recalculate/Relink Auto Scheduling Gen. Manufacturing Generate BQ Accept Cancel

During Auto Scheduling a separate Work Order/Dispatch is generated for each linked line. The Dispatches are created with the same Starting-Ending Dates as the same Mold is used for linked Items.

# Material Planning & Production Management 26

The screenshot shows the 'Dispatch Data Entry (MPP) 7/11/2014' window. At the top, the title bar includes the Sage logo and window controls. Below the title bar, the 'Work Order No' is 0000255 and the 'Dispatch No.' is 0001. A 'Make step' button is visible. A navigation bar contains three tabs: '1. Header' (selected), '2. Lines', and '3. Production'. The 'User' field is 'useriig'. The 'Dispatch Date' is 7/23/2014, and the 'Dispatch Status' is 0. The 'Starting Date' is 7/23/2014, 'Starting Time' is 09:00 AM, and 'Commit Quantity' is checked. The 'Ending Date' is 7/26/2014, and 'Ending Time' is 02:00 AM. The 'Machine' field is M002 (Machine #2 M2) and the 'Mold Number' is 002. The 'MFG Item Code' is BEL25 and the 'Lot/Serial No.' field is empty. At the bottom, there is a 'Quick Print' button, the word 'Manufacturing' in red, and buttons for 'Labor', 'Accept', 'Cancel', and 'Delete'.

After Work Orders are generated the Work Order numbers are shown in the Mold Info screen:

Item Code: BEL25      Mold Number: 002

Multiple Items:  Slave       Bin Location: \_\_\_\_\_

Comment: \_\_\_\_\_

Show All:

	Work Order No.	Item Code
1	0000248	BEL25
2	0000255	BEL25

Buttons: Accept, Cancel

The **Show All** option allows for viewing the Work Order numbers generated for all the Items linked to current one.

Item Code: BEL25      Mold Number: 002

Multiple Items:  Slave       Bin Location: \_\_\_\_\_

Comment: \_\_\_\_\_

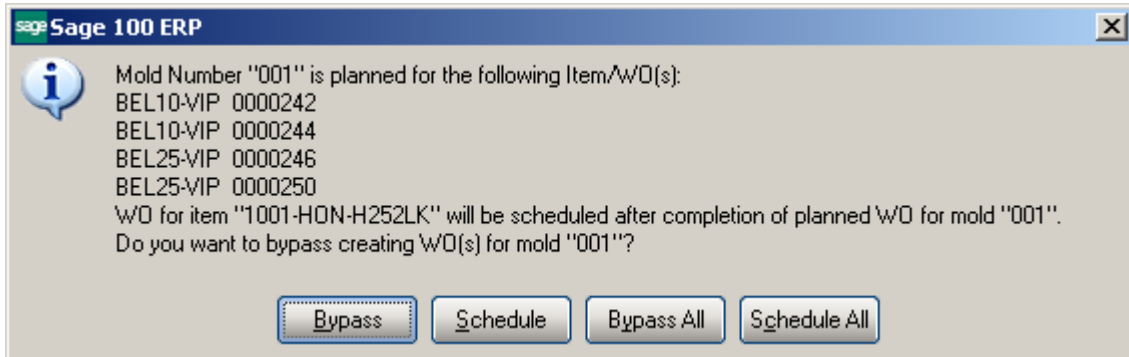
Show All:

	Work Order No.	Item Code
1	0000238	BEL10
2	0000240	BEL10
3	0000248	BEL25
4	0000255	BEL25
5	0000257	BEL10

Buttons: Accept, Cancel

## Material Planning & Production Management 28

Once the Tasks/Dispatches have been generated with a Mold Number already assigned, the following message will appear while pressing **Proceed** button on the **Calculate Quantity to Produce/Purchase** screen:

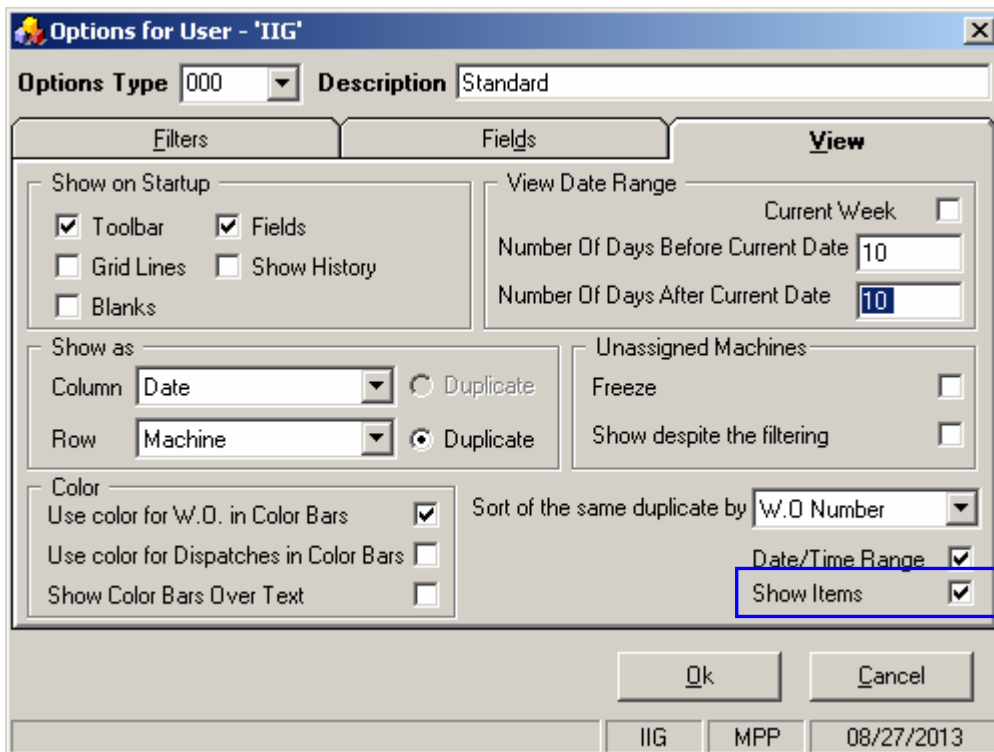


## Work Order Generation

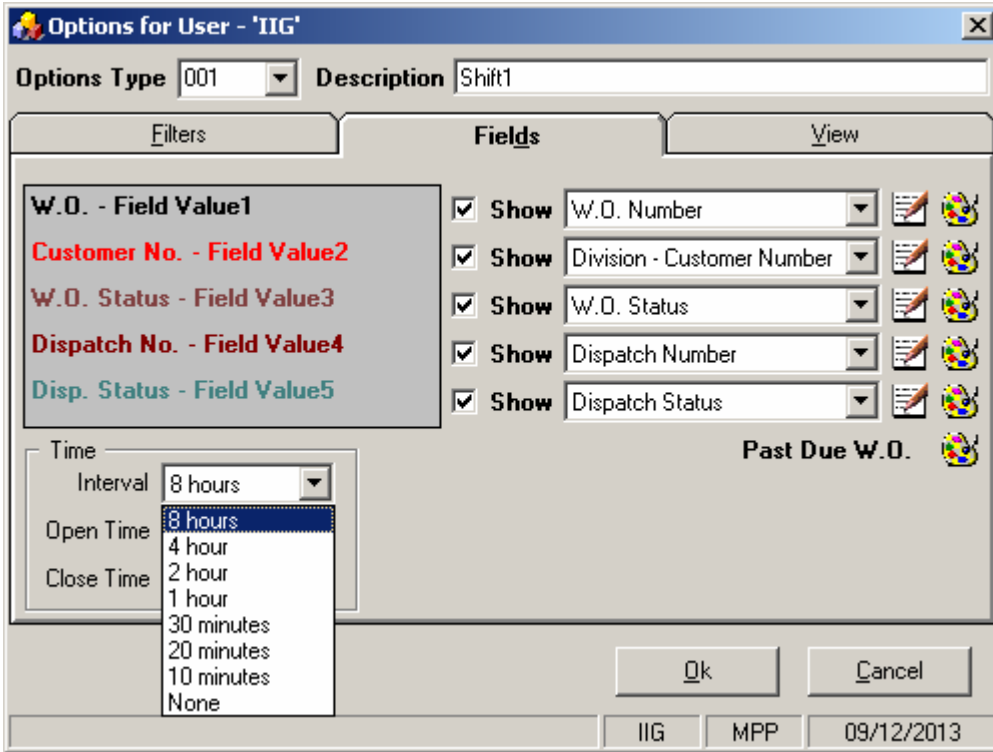
### Production Scheduling Board

Schedule Board provides the following functions:

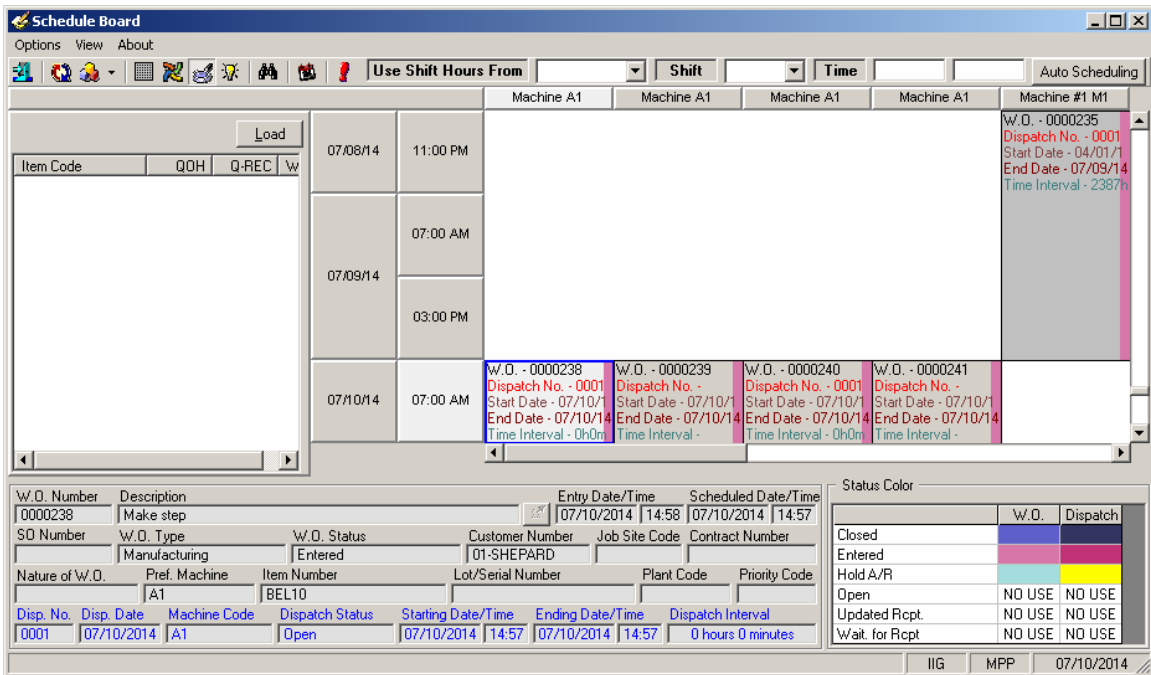
- Ability to create work orders by:
  - a. Manually dragging and dropping work orders into machine and date/time specific cells for items and quantity set by the MRP program. Program will validate that the item dragged can be run produced on the machine selected
  - b. Auto create and schedule work orders based on the demand set by the MRP program
- Visibility over production schedule.
  - a. Work order generated can be dragged and dropped from one machine to another or from one day / shift to another
  - b. Views can be setup to display certain day shift or task by type, Mold Setup, Production, etc. using view selection grid
- Managing daily functions by right clicking on a work order



Select the **Show Items** checkbox to have the Items loaded in the Item list.



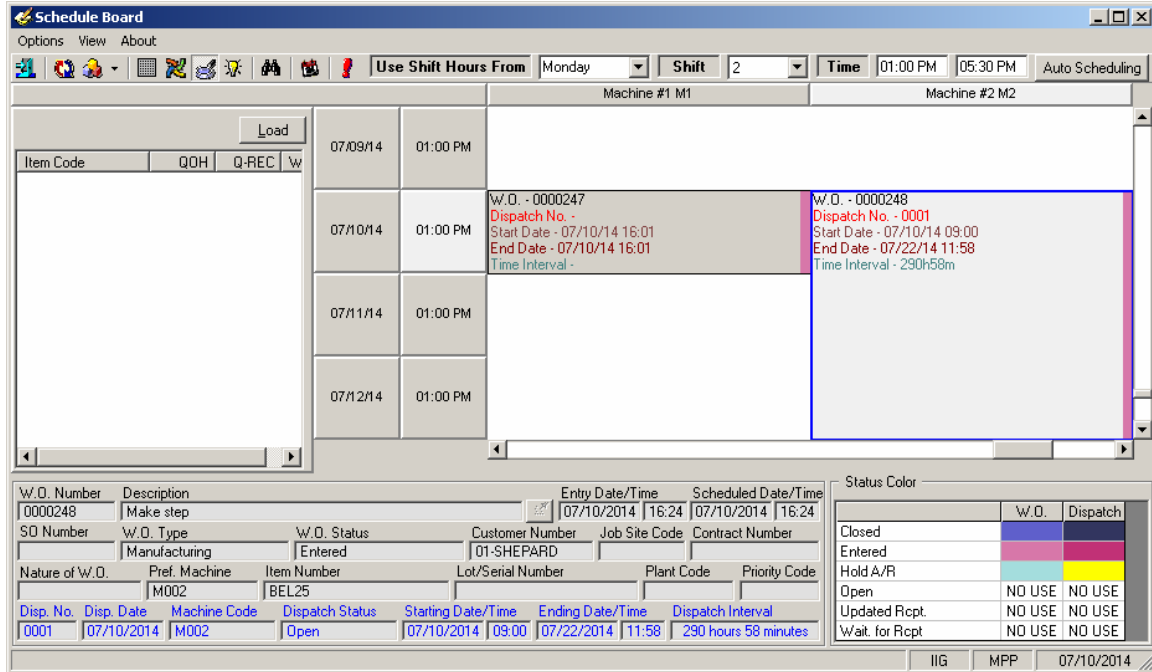
4 and 8 hours intervals added in the Interval drop down allows for showing Work Orders/Dispatches on the Board by 4/8 hours interval:



# Material Planning & Production Management 31

Use **Shift Hours From** drop down allows the user to select a day (Monday, Tuesday, etc.) and specify the Shift for that day. Upon selecting a day with respective shift the starting/ending times are automatically loaded from Shift Maintenance.

The Schedule Board is refreshed automatically to show only the W.O./Dispatches for current Shift.



If no Shift is selected the W.O./Dispatches are shown based on the Time Interval set in the Board Options:

Upon pressing **Load** button the Items processed through the **Calculate Quantity to Produce/Purchase** program and saved in the SO068\_MPPItemsQtyToProduce.M4T table are loaded in the Item list at the left hand of the Board.

**Work Order Generation** can be processed also from **Schedule Board**. The Columns of the **Board** display dates and the **Rows** are Machine Codes setup in the system:

Production Scheduling Board can be used to manage the Production. Work Orders can be moved from one day/shift to next or from one machine to another.

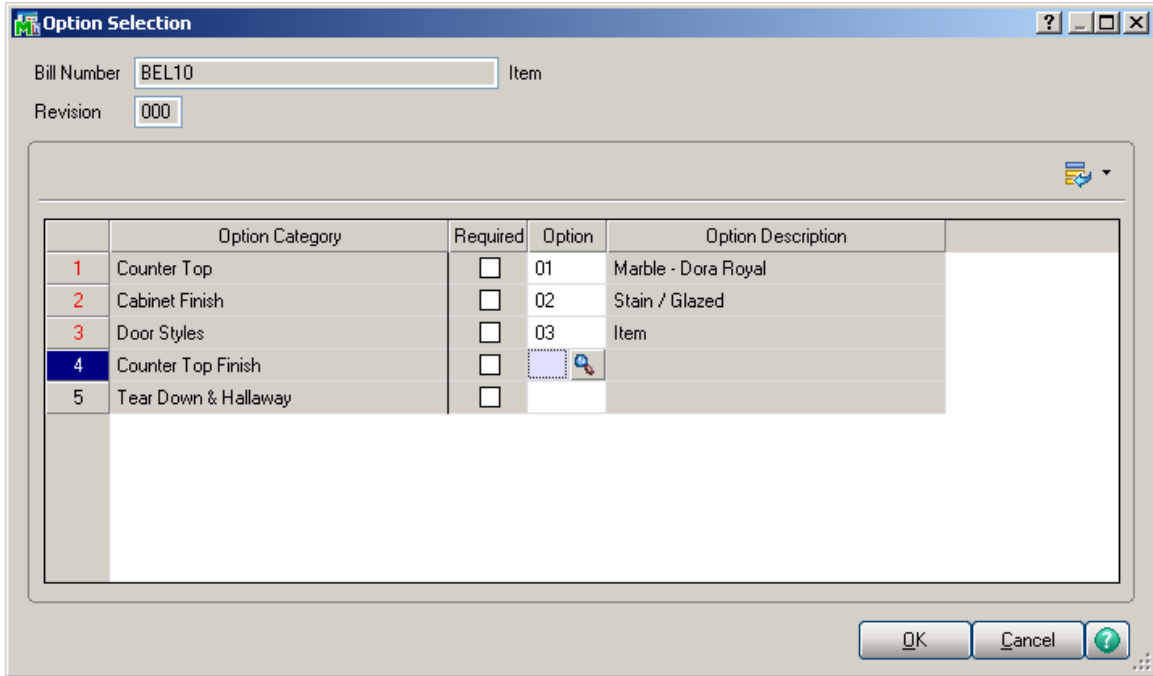
Production Scheduling Board Views can be setup to display machines in a given Plan, Machine Type, or Work Orders for a specific shift. If needed a Board View can be setup to Show the hours of Operation on the Board.

Drag the Item and drop into a cell in the Production Scheduling Board.



The following message appears for the user to confirm new Work Order generation for current Date and Machine code:

If the user selects **Yes** to generate Work Order, the Bill Options Selections screen is opened allowing the user to select Bill option.



The image shows a software dialog box titled "Option Selection". At the top, there are two input fields: "Bill Number" with the value "BEL10" and "Revision" with the value "000". Below these is a table with five rows of options. The first three rows have checkboxes in the "Required" column, and the fourth row is highlighted in blue. At the bottom right of the dialog are "OK", "Cancel", and a help icon.

	Option Category	Required	Option	Option Description
1	Counter Top	<input type="checkbox"/>	01	Marble - Dora Royal
2	Cabinet Finish	<input type="checkbox"/>	02	Stain / Glazed
3	Door Styles	<input type="checkbox"/>	03	Item
4	Counter Top Finish	<input type="checkbox"/>		
5	Tear Down & Hallaway	<input type="checkbox"/>		

Work Order generation is done based on the Routing Number specified on the Bill Item Header.

Bill of Materials Maintenance (MPP) 7/10/2014

Bill Number: BEL10  
 Revision: 000  
 Bill Type: Standard  
 Description 1: Item  
 Description 2:

1. Header | 2. Lines

Drawing Number:   
 Drawing Revision:   
 Routing Number: R1  
 Current Revision: 000  
 Date Last Used: 8/27/2013  
 Maximum Lot Size: 0  
 Print Components:   
 Bill Has Options:

Option Categories	
1	Counter Top <input type="checkbox"/> Required
2	Cabinet Finish <input type="checkbox"/> Required
3	Door Styles <input type="checkbox"/> Required
4	Counter Top Finish <input type="checkbox"/> Required
5	Tear Down & Hallaway <input type="checkbox"/> Required
6	<input type="checkbox"/> Required
7	<input type="checkbox"/> Required
8	<input type="checkbox"/> Required
9	<input type="checkbox"/> Required

Accept Cancel Delete Print Help

The number of Work Orders being generated is based on the Routing steps. Work Orders are generated for all the steps having the Gen. W. O. option selected. Manufacturing Dispatch is automatically created for a Work Order generated for a Routing Step indicated as Mfg.

# Material Planning & Production Management 35

Routing Number: R1  
Description: Routing 1

Step No.	Description	Req. Hours	Gen. W.O.	W.O. Type	Nature Of W.O.	Mfg	Labor Code	Machine
1	Make step	.00	<input checked="" type="checkbox"/>	M		<input checked="" type="checkbox"/>	LAB2	M001
2	Grinding	.00	<input checked="" type="checkbox"/>	P		<input type="checkbox"/>		
3		.00	<input type="checkbox"/>			<input type="checkbox"/>		

Buttons: Accept, Cancel, Delete, Print, Help

Here is a Work Order with respective Manufacturing Dispatch generated for Bill Item: BEL10:

# Material Planning & Production Management 36

Work Order No. 0000252 Make step Defaults...

1. Header 2. Address 3. Dispatches User useriig

Order Date 7/10/2014 Order Time 05:50 PM Order Type M Manufacturing

Customer No. 01-SHEPARD Shepard Motorworks

W.O. Status E Entered

Job Site Code

Job Site Contact Alan Shepard

Nature of W.O.

Prefer. Machine A1 Machine A1 Mold Number 002

Item Number BEL10 Item

Lot/Serial No.

Plant Code

Schedule Date 7/10/2014 Time 05:50 PM

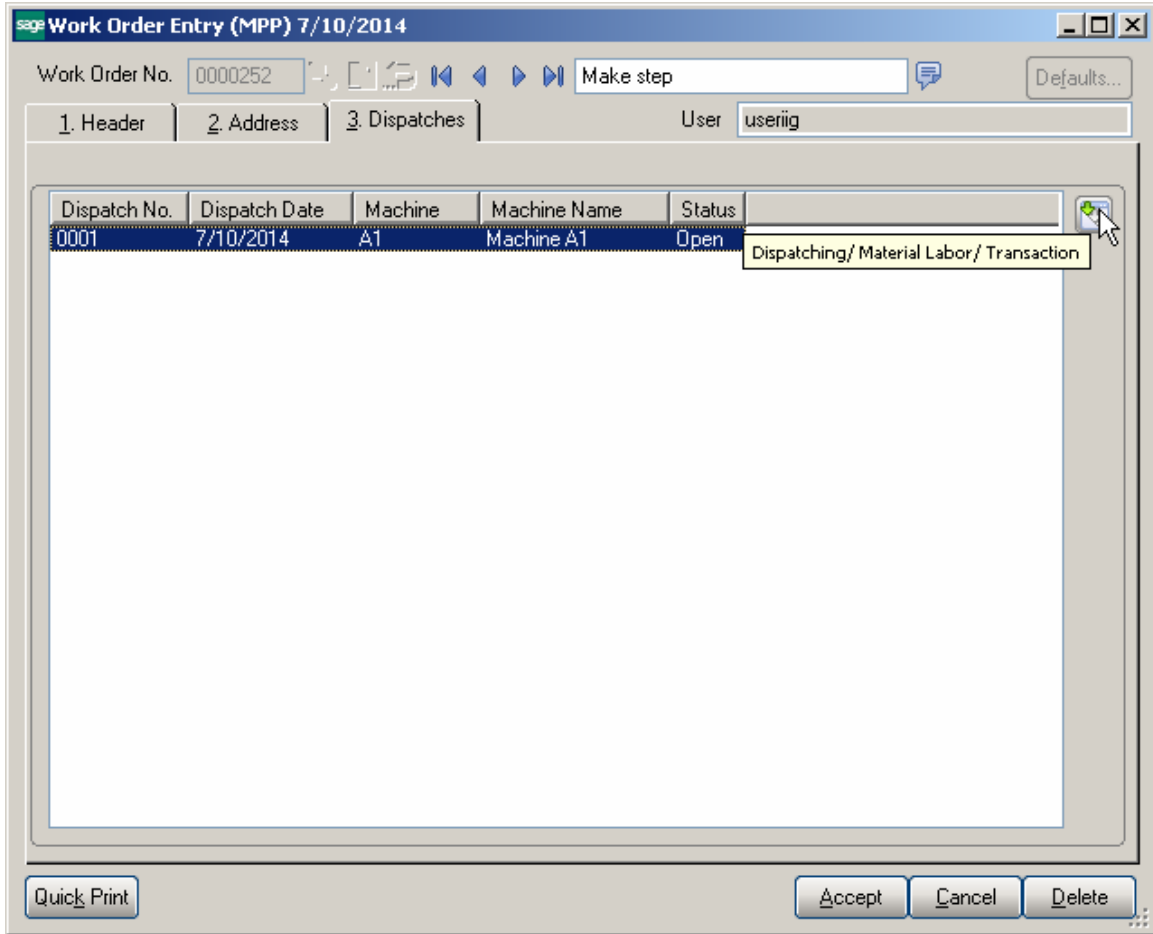
Due Date 7/11/2014 Time 03:00 PM

Cust PO

Priority Code

Quick Print Accept Cancel Delete

*Note: The Customer number is defaulted from **Material Planning and Production Setup** so you may have the Default WO Customer setup in the system.*



Press the Dispatching button to open the Dispatch Data Entry:

sage\* Dispatch Data Entry (MPP) 7/10/2014

Work Order No 0000252 Make step

Dispatch No. 0001

1. Header 2. Lines 3. Production User useriig

Dispatch Date 7/10/2014 Dispatch Status 0 Open

Starting Date 7/10/2014 Starting Time 05:50 PM Commit Quantity

Ending Date 7/10/2014 Ending Time 05:50 PM

Machine A1 Machine A1 Mold Number 002

MFG Item Code BEL10 Lot/Serial No.

Quick Print Manufacturing Labor Accept Cancel Delete

Go to the Lines tab. The Bill Item is automatically exploded in the Dispatch Data Entry with the Component Item of Option Bill added in the lines.

Work Order No: 0000252  
 Dispatch No: 0001  
 User: useriig

1. Header | 2. Lines | 3. Production

Quick Row: 1

	Item Code	Ordered	Unit Price	Extension	Comment
1	BEL10	30.00	75.600	2,268.00	
2	BEL10-VIP	30.00	117.900	3,537.00	
3	PLS-TRAY	30.00	121.500	3,645.00	
4	TIP-XI	30.00	117.900	3,537.00	
5	/LAB2	60.00	.000	25.00	
6		nn	nnn	nn	

Description: Item  
 Warehouse: MRP  
 Unit Of Measure: EACH  
 Price Level:

Total Amount: 13,012.00

Buttons: Quick Print, Manufacturing, Labor, Accept, Cancel, Delete

Bill Options button in the Dispatch Data entry allows for viewing Bill Options:

Bill Number: BEL10 Item  
 Revision: 000

	Option Category	Required	Option	Option Description
1	Counter Top	<input type="checkbox"/>	01	Marble - Dora Royal
2	Cabinet Finish	<input type="checkbox"/>	02	Stain / Glazed
3	Door Styles	<input type="checkbox"/>	03	Item
4	Counter Top Finish	<input type="checkbox"/>		
5	Tear Down & Hallaway	<input type="checkbox"/>		

Buttons: OK, Cancel, ?



# Material Planning & Production Management 40

If the **Commit Quantity During MFG Dispatch Generation** flag is set on the Entry tab of the **Material Planning and Production Setup**, the **Commit Quantity** checkbox will be automatically selected on the generated manufacturing Dispatch to commit the quantities on Work Order. Press the Item Inquiry button on the Dispatch line to see the quantities updated:

The screenshot shows the Sage Item Inquiry (MPP) 7/10/2014 window. The main fields are as follows:

- Item Code: BEL10
- Description: Item
- Product Line: WF&A WORKSTATION FURN & ACCESS
- Product Type: Finished Good
- Valuation: FIFO
- Procurement: Make
- Weight: 35
- Volume: 0.0000
- Inventory Cycle: B
- Unit of Measure: Standard EACH, Purchases EACH, Sales EACH
- Price Code: STD STANDARD QUANTITY PRIC
- Primary Vendor: 01-CONT Container Corporation Of Usa
- Default Whse: 000 CENTRAL WAREHOUSE
- Warranty Code: 30 DAY 30 days from shipment
- Planning Code: 001
- MFG Priority Code: 1
- MFG Code: Made to Stock
- Item Molds Machine: [Item Molds Machine](#)
- Sales: Retail Price 84,000, Standard Price 84,000, Last Sold
- Purchases: Standard Cost 32,750, Average Cost 1,952.185, Last Receipt 8/27/2013
- Last Costs: Item 2,076.243, Allocated .000, Total 2,076.243

The Quantities table is as follows:

Whse	Description	On Hand	On PO	On SO	On Bk Ord	Committed	On WO	Req for WO	Av
000	CENTRAL ...	270.00	.00	560.00	.00	560.00	293.00	.00	
001	EAST WA...	7.00	.00	3,119.00	.00	3,119.00	3,112.00	.00	3.
MRP	MRP wareh...	.00	.00	34.00	.00	34.00	34.00	.00	

For component Items the Req for WO field is updated with respective quantity from manufacturing dispatch Quantity Ordered:

Item Code: BEL10-VIP  
 Description: HON 4 DRAWER LETTER FLE W/O LK

1. Main | 2. Additional | 3. Quantity | 4. History | 5. Transactions | 6. Orders | 7. Cost Detail

Product Line: WF&A WORKSTATION FURN & ACCESS  
 Product Type: Finished Good  
 Valuation: FIFO  
 Procurement: Make

Unit of Measure: Standard EACH  
 Purchases EACH No. of EACH 1  
 Sales EACH No. of EACH 1

Price Code: STD STANDARD QUANTITY PRIC  
 Default Whse: 000 CENTRAL WAREHOUSE  
 Planning Code: 001 MFG Priority Code: 2 MFG Code: Made to Order

Sales: Retail Price 131.000, Standard Price 131.000, Last Sold  
 Purchases: Standard Cost 82.500, Average Cost 2,471.908, Last Receipt 8/27/2013  
 Last Costs: Item 1,733.550, Allocated .000, Total 1,733.550

Whse	Description	On Hand	On PO	On SO	On Bk Ord	Committed	On WO	Req for WO	Av
000	CENTRAL ...	245.00	244.00	.00	.00	.00	1,022.00	293.00	
001	EAST WA...	84.00	212.00	5.00	.00	5.00	2,922.00	3,113.00	
MRP	MRP wareh...	.00	.00	6.00	.00	6.00	10.00	34.00	

The Components defined for the Bill Item are loaded into the created Work Order. Users can change the quantity loaded if actual quantity used is different than component quantity entered in the Bill of Material program.

The actual Labor defined for the Bill item is loaded into the Created Work Order. Users can change the labor based on actual Labor hours for the production.

The Quantity On WO for Bill Item is equal to the Quantity Ordered in the manufacturing dispatch.

## Work Order Entry

In addition to the **Production Scheduling Board**, the **Work Order Entry** program can also be accessed from the **Material Production Planning Main** menu for creation of Work Orders.

Work Order No. 0000254

User useriig

1. Header | 2. Address | 3. Dispatches

Order Date 7/10/2014 Order Time 06:13 PM Order Type M Manufacturing

Customer No. 01-ABF American Business Futures

W.O. Status E Entered

Job Site Code 2 American Business Futures

Job Site Contact John Quinn

Nature of W.O.

Prefer. Machine M001 Machine #1 M1 Mold Number 002

Item Number BEL10 Item

Lot/Serial No.

Plant Code UNION Union city

Schedule Date 7/10/2014 Time 06:13 PM

Due Date 7/10/2014 Time 06:13 PM

Cust PO

Priority Code

Quick Print Accept Cancel Delete

## Lot Number Generation

The **Mold Number** assigned to the work order is used when generating Lot/serial number for Make Item with Lot/Serial Valuation.

Pressing the **Lot/Serial Number** generation button added next to the Lot/Serial No field will generate the lot number based on the specified mold number and Julian date.

# Material Planning & Production Management 43

The screenshot shows the Sage Dispatch Data Entry (MPP) 8/8/2014 window. The interface includes the following fields and controls:

- Work Order No: 0000277
- Dispatch No: 0001
- User: useriig
- Dispatch Date: 8/8/2014
- Dispatch Status: 0
- Starting Date: 8/8/2014
- Starting Time: 02:11 PM
- Ending Date: 8/18/2014
- Ending Time: 02:11 PM
- Machine: M002 (Machine #2 M2)
- Mold Number: 002
- MFG Item Code: 2480-8-50
- Lot/Serial No.: 2456878002
- Quantity on WO: 5.00

Buttons at the bottom include: Quick Print, Manufacturing (text), Labor, Accept, Cancel, and Delete.

The generated lot number is saved in the work order transaction and is loaded into the Daily Production Entry transaction, created when manufacturing dispatch is closed.

## Production Generation

B/M Production is automatically generated upon closing the Dispatch. If Batch processing is enabled for Production Entry the B/M Production Entry Batch screen is opened upon changing the Dispatch status to “C” (Closed).

The following screen is opened with the quantity on work order defaulted to Quantity Produced. The user is allowed for entry of quantity produced

Here is the Production Entry generated after the manufacturing Dispatch is closed:

# Material Planning & Production Management 45

sage Production Entry (MPP) 7/10/2014

Production Number 0000038 Defaults...

1. Header 2. Lines

Production Date 7/10/2014

Bill Number BEL10 Item

Bill Type Standard

Revision 000

Option Code

Quantity 30.00

Unit of Measure EACH

Effective Date 7/10/2014

Parent Warehouse MRP MRP warehouse

Component Warehouse MRP MRP warehouse

Explode Sub-Assemblies

Accept Cancel Delete

# Material Planning & Production Management 46

Production Number: 0000038

1. Header | 2. Lines

Quick Row: 1

Lot/Serial Number: [ ]

	Component Item Code	Quantity/Bill	Extended Quantity	Comment
1	BEL10-VIP	1.00	30.00	
2	PLS-TRAY	1.00	30.00	
3	TIP-XI	1.00	30.00	
4	/LAB2	2.00	60.00	
5	/LAB2	.01	.15	Labor Description: Machin
6		.00	.00	

Description: HON 4 DRAWER LETTER FLE W/O LK  
Revision: 000  
Warehouse: MRP  
Unit Of Measure: EACH

Accept Cancel Delete [Print] [Help]

Actual Inventory and Labor information from the Work Order transaction will be loaded into the Daily Production Entry transaction.

After the Production is updated the Bill Item Qty On Hand is updated with quantity produced and the Qty On WO and Qty Req For WO are released.

The screenshot shows the Sage Item Inquiry (MPP) 7/10/2014 window. The Item Code is BEL10 and the Description is Item. The window is divided into several sections:

- Product Line:** WF&A, WORKSTATION FURN & ACCESS
- Product Type:** Finished Good, Weight: 35
- Valuation:** FIFO, Volume: 0.0000
- Procurement:** Make, Inventory Cycle: B
- Unit of Measure:** Standard: EACH, Purchases: EACH, Sales: EACH, No. of EACH: 1
- Price Code:** STD, STANDARD QUANTITY PRIC, Primary Vendor: 01-CONT, Container Corporation Of Usa
- Default Whse:** 000, CENTRAL WAREHOUSE, Warranty Code: 30 DAY, 30 days from shipment
- Planning Code:** 001, MFG Priority Code: 1, MFG Code: Made to Stock, Item Molds Machine
- Sales:** Retail Price: 84.000, Standard Price: 84.000, Last Sold: [empty]
- Purchases:** Standard Cost: 32.750, Average Cost: 1,789.911, Last Receipt: 7/10/2014
- Last Costs:** Item: 1,932.550, Allocated: .000, Total: 1,932.550
- Quantities Table:**

Whse	Description	On Hand	On PO	On SO	On Bk Ord	Committed	On WO	Req for WO	Av
000	CENTRAL ...	270.00	.00	560.00	.00	560.00	293.00	.00	
001	EAST WA...	39.00	.00	3,119.00	.00	3,119.00	3,112.00	.00	3.00
MRP	MRP wareh...	30.00	.00	34.00	.00	34.00	4.00	.00	

## Auto Scheduling

When Work orders are generated from **Calculate Quantity To Produce** program by **Auto Scheduling** button, the work orders are auto-assigned to machine code specified on the **Calculate Quantity To Produce** screen.

The duration of dispatch is calculated based on the information entered for each mold/machine combination (**Recommended Qty/QtyProduced PerHour + Queue Time**) taking into account the Shifts setup in the Week Shift Maintenance. If there is Start Date specified on the **Calculate Quantity To Produce** screen that Date/Time is taken into account when checking for Machine availability.



# Material Planning & Production Management 48

sage\* Dispatch Data Entry (MPP) 7/11/2014

Work Order No. 0000265    Make step

Dispatch No. 0001

1. Header    2. Lines    3. Production    User: useriig

Dispatch Date: 7/18/2014    Dispatch Status: 0    Open

Starting Date: 7/18/2014    Starting Time: 09:00 AM    Commit Quantity:

Ending Date: 7/20/2014    Ending Time: 07:28 PM

Machine: M001    Machine #1 M1    Mold Number: 001

MFG Item Code: BEL10-VIP    Lot/Serial No.:

Quick Print    Manufacturing    Labor    Accept    Cancel    Delete

sage Week Shifts Maintenance (MPP) 7/11/2014

Week Day: Friday

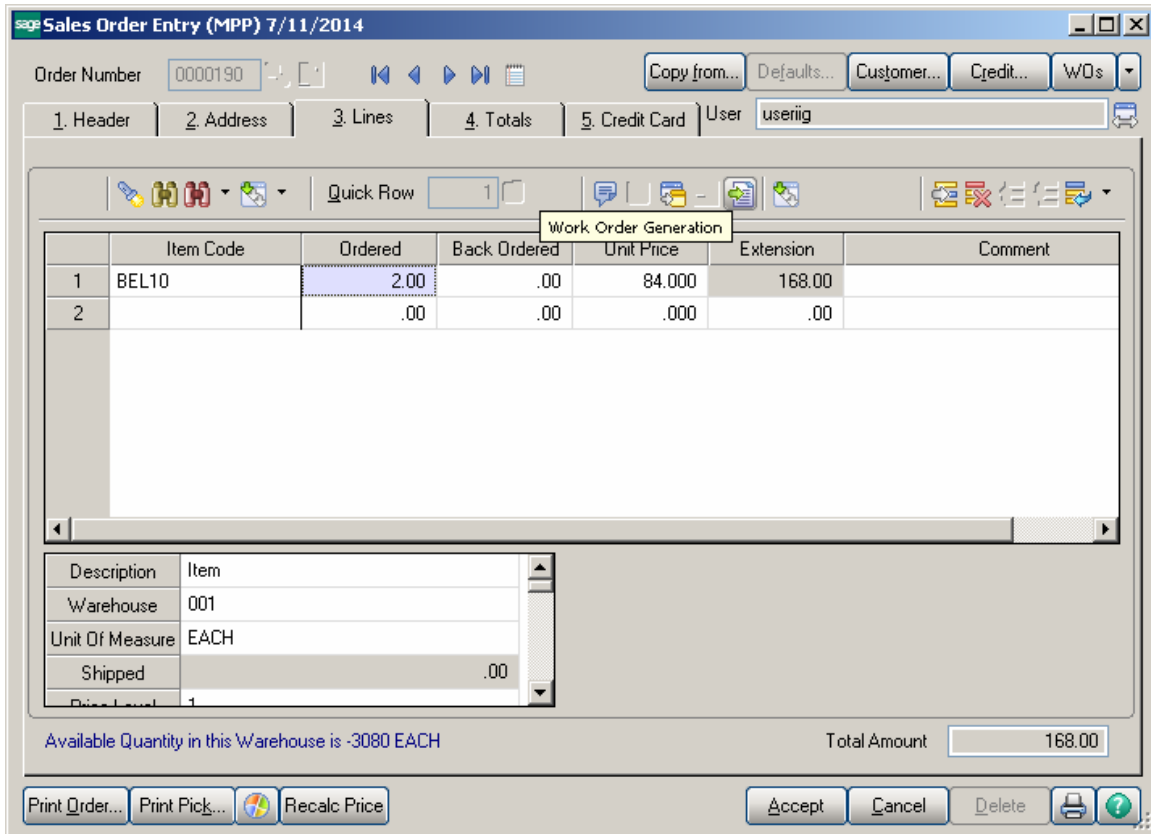
Quick Row: 1

	Shift	Start Time	End Time
1	1	09:00 AM	01:00 PM
2	2	01:00 PM	06:00 PM
3			

Accept    Cancel    Delete

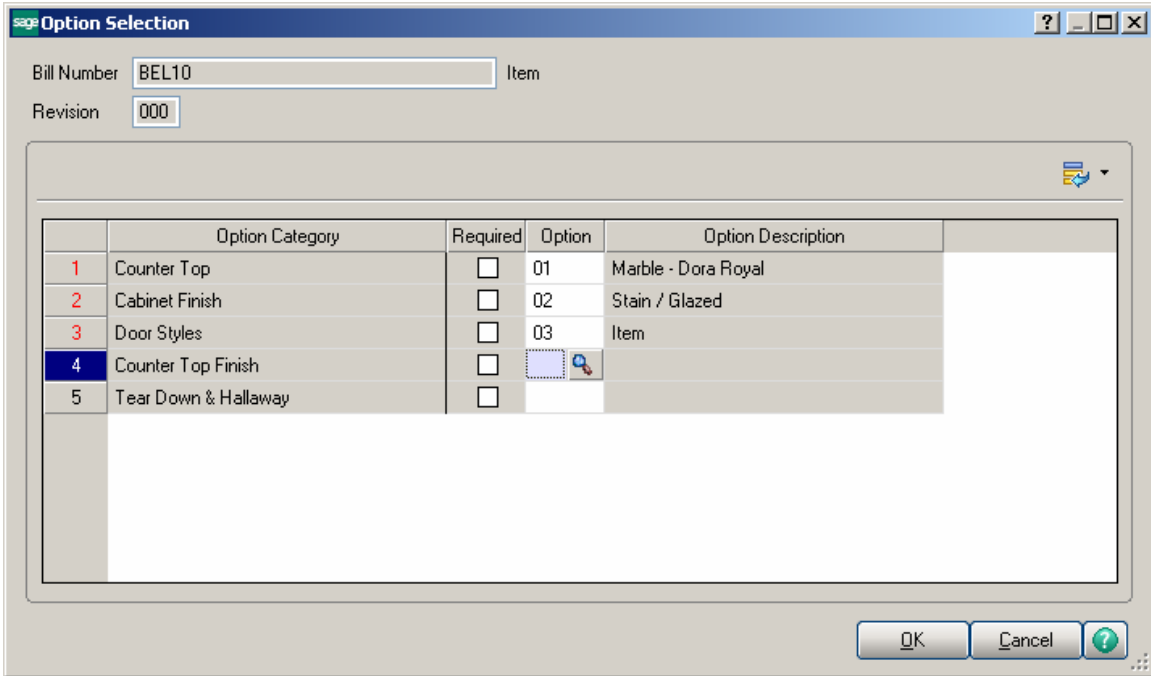
## Sales Order Entry

This enhancement provides also ability of creating Work Orders from the Sales Order Entry program.

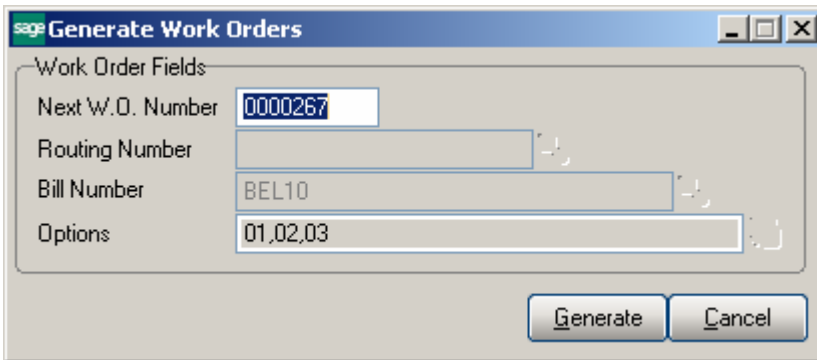


Press the **Work Order Generation** button to generate Work Order(s) for the selected Bill Item based on the Routing entered for current Bill Item in the Bill of Materials Maintenance.

If the selected **Bill Number** has options, the Options Selection screen is displayed allowing the user to select options.



The Generate Work Orders screen is opened with the Bill number selected and disabled



Work Orders are generated for all the steps of Routing having the **Gen. W.O** option flagged in the **Routing Maintenance**. For the steps having **Mfg** checkbox selected in the Routing Maintenance Dispatches are automatically created under the Work Order with a Labor Code and **Machine Code** specified for that Step of the Routing.

# Material Planning & Production Management 51

sage Routing Maintenance (MPP) 7/11/2014

Routing Number: R1  
Description: Routing 1

Step No.	Description	Req. Hours	Gen. W.O.	W.O. Type	Nature Of W.O.	Mfg	Labor Code	Machine
1	0010 Make step	.00	<input checked="" type="checkbox"/>	M		<input checked="" type="checkbox"/>		
2	0020 Grinding	.00	<input checked="" type="checkbox"/>	P		<input type="checkbox"/>		
3		.00	<input type="checkbox"/>			<input type="checkbox"/>		

Accept Cancel Delete

Press the **Edit/View** button to see the Work Orders generated for the Sales Order Bill line:

sage Sales Order Entry (MPP) 7/11/2014

Order Number: 0000190

1. Header 2. Address 3. Lines 4. Totals 5. Credit Card User: useriig

Item Code	Ordered	Back Ordered	Unit Price	Extension	Comment
1 BEL10	2.00	.00	2,836.000	5,672.00	
2	.00	.00	.000	.00	

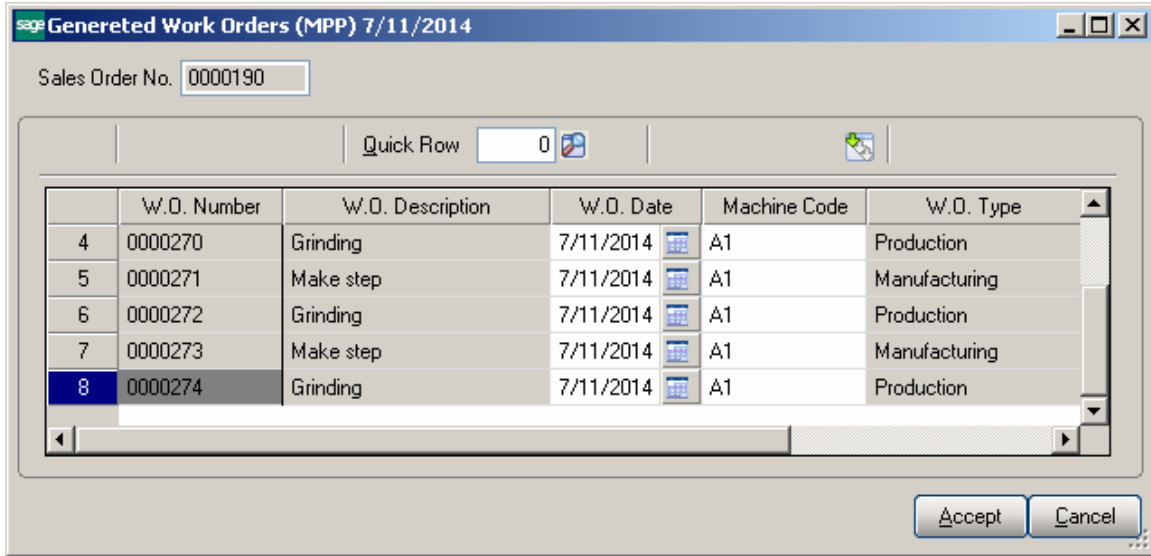
Quick Row: 1

Description	Item
Warehouse	001
Unit Of Measure	EACH
Shipped	.00
Price Level	1

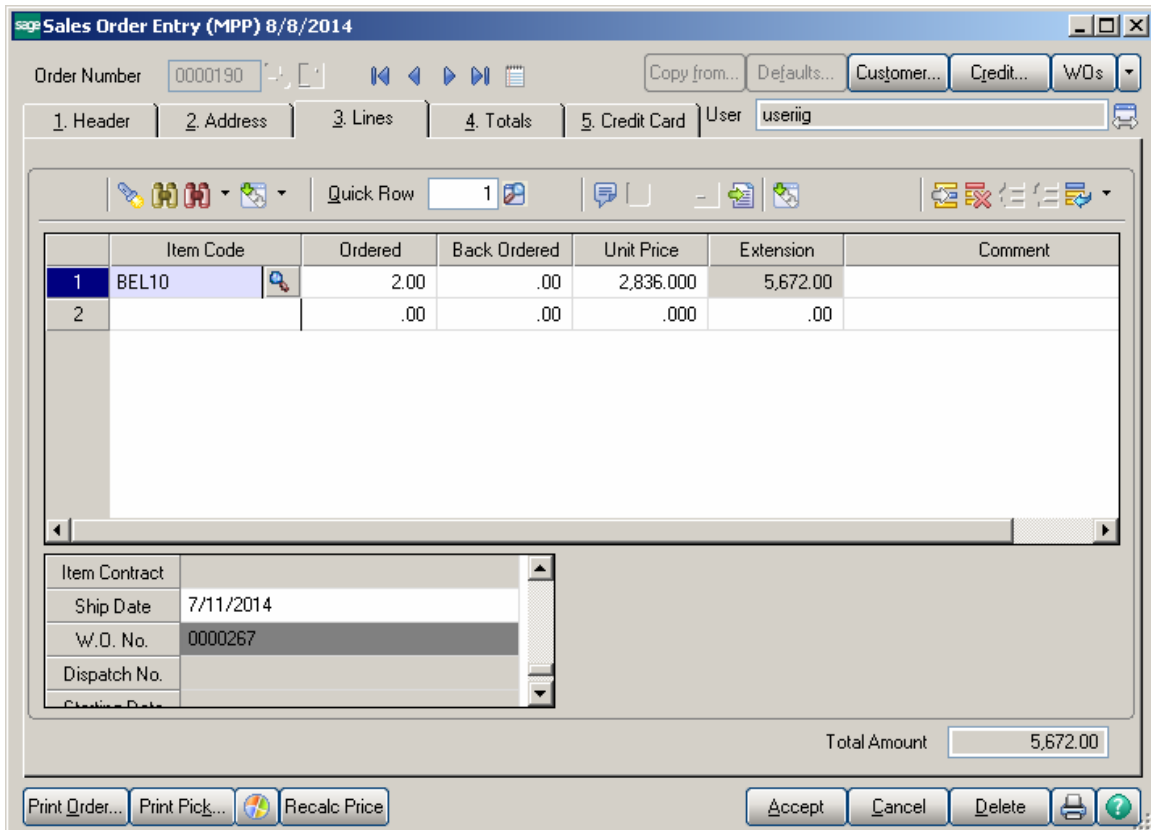
Total Amount: 5,672.00

Print Order... Print Pick... Recalc Price Accept Cancel Delete

# Material Planning & Production Management 52



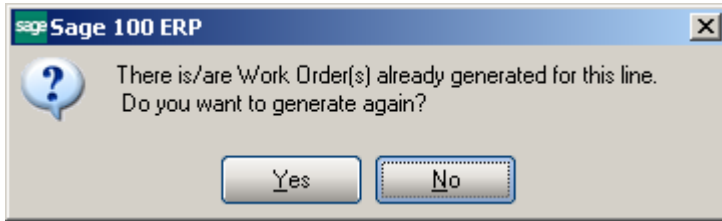
The Number of the Work Order generated from a SO line is loaded in the **W.O. No.** field in the Sales Order secondary grid.



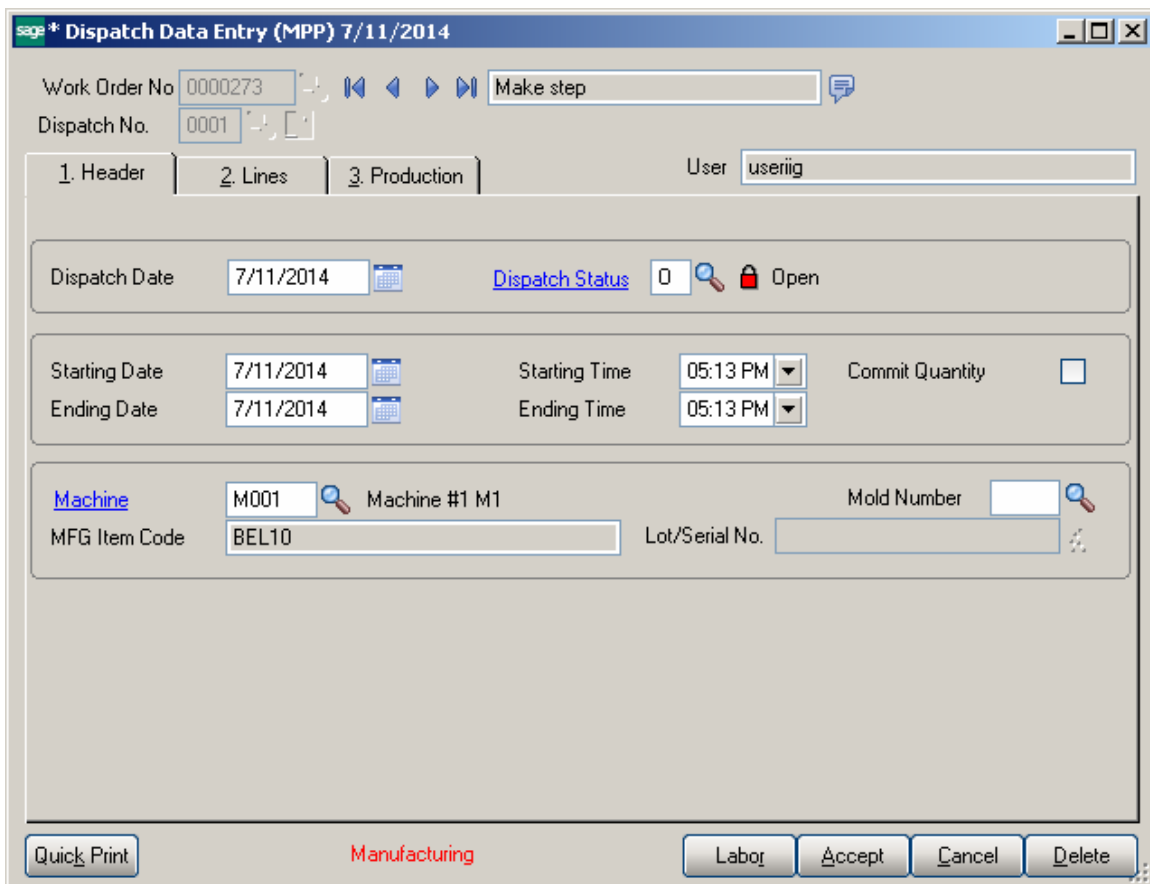
If there are multiple WOs generated for a line, the last Work Order number is displayed.

# Material Planning & Production Management 53

The user may generate a new Work Order for a sales Order even if there are Task s already generated. In this case a prompt appears about the Task(s) already generated for Sales Order.



Here is the Dispatch automatically created for Mfg WO:



The Bill Item Components are loaded from the BOM into the WO Dispatch Transaction.

# Material Planning & Production Management 54

sage\* Dispatch Data Entry (MPP) 7/11/2014

Work Order No. 0000273    Make step

Dispatch No. 0001    User useriig

1. Header    2. Lines    3. Production

Quick Row 1

	Item Code	Ordered	Unit Price	Extension	Comment
1	BEL10	2.00	2,836.000	5,672.00	
2	BEL10-VIP	2.00	131.000	262.00	
3	FINSTNGLAZE	36.00	.000	.00	
4	PLS-TRAY	2.00	135.000	270.00	
5	SLBMDR	96.00	.000	.00	
6	TIP.XI	2.00	131.000	262.00	

Description	Item
Warehouse	001
Unit Of Measure	EACH
Price Level	1

Total Amount 6,571.00

Quick Print    Manufacturing    Labor    Accept    Cancel    Delete

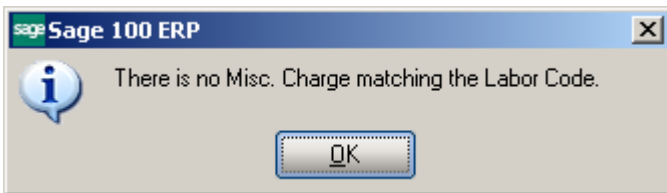
Work Order No.  Dispatch No.  Dispatch Date  Starting    
Ending

	Labor/Mold Type Code	Description	Hours Spent
1	LAB2	Machine#002 Labor	2.50
2			.00

Machine Code

Accept Cancel Delete

To be able to enter a Labor line in the **Labor Charge Data Entry** it is necessary to have Miscellaneous Charge Item matching the Labor Code setup in the Miscellaneous Item Maintenance. The following message appears if no Misc. Charge is found with the Item Code matching the Labor Code entered:



Daily Production entry transactions are created when Dispatch is closed. The Labor line added in the Labor Charge Entry is loaded in the generated Production lines as a **Miscellaneous Charge** line.



## Custom UDFs

### Dispatch Data Entry

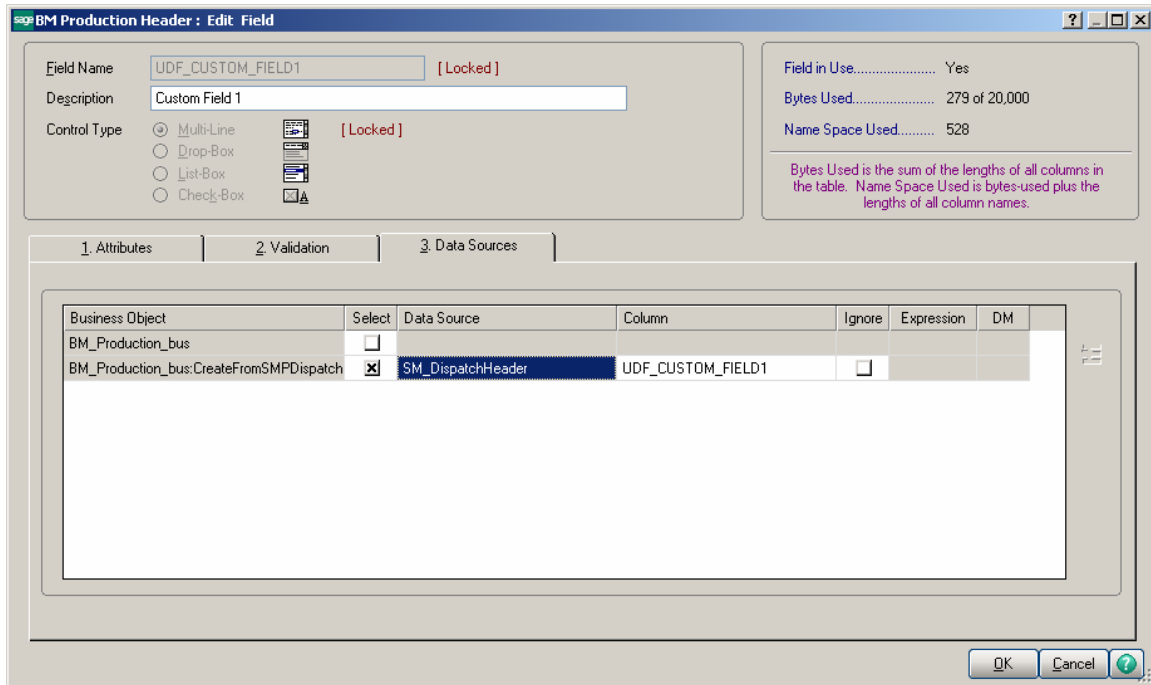
The **Dispatch Data Entry** program has been modified to allow transferring the Dispatch UDF fields' values to respective UDF-s added on the B/M Production Entry.

The screenshot shows a software window titled "sage \* Dispatch Data Entry (MPP) 7/11/2014". At the top, there are input fields for "Work Order No" (0000273) and "Dispatch No." (0001), along with a "Make step" button. Below this, there are tabs for "1. Header", "2. Lines", and "3. Production", with the "Production" tab selected. A "User" field shows "useriig". The main area contains three custom fields: "Custom Field 1" with the value "Test Prod", "Custom Field 2" with the value "200.00", and "Custom Field 3" with the value "7/11/2014" and a calendar icon. At the bottom, there are buttons for "Quick Print", "Labor", "Accept", "Cancel", and "Delete". The word "Manufacturing" is displayed in red text in the bottom center.

# Material Planning & Production Management 57

In order to have the UDF data transferred from Dispatch Data Entry to Production Entry, the UDF fields' names added on the Dispatch Data Entry should match the ones added on the Production Entry.

It is necessary to select the Data Source and respective column on the Data Sources tab of the Edit UDF screen:



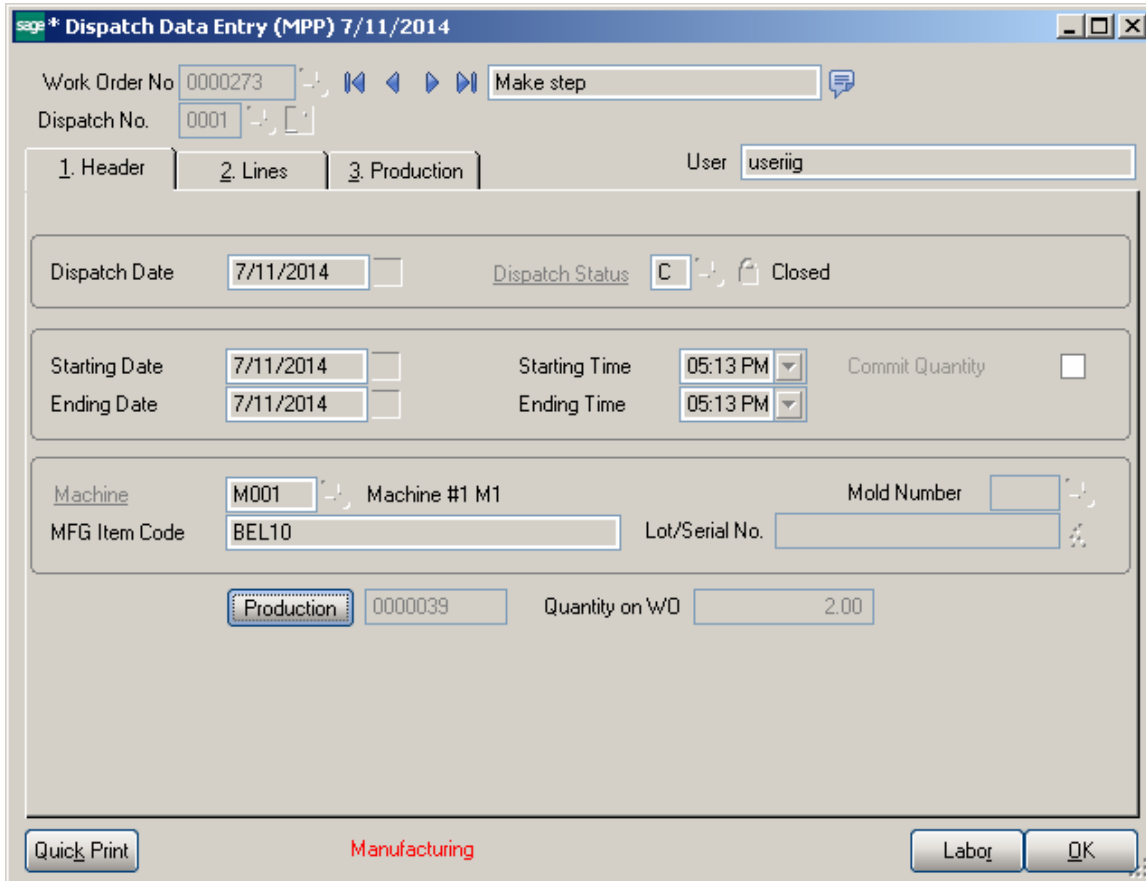
If the UDF fields are created correctly and the data source specified, the UDF fields values are transferred to the Production Entry generated upon closing the Manufacturing Dispatch.

# Material Planning & Production Management 58

The screenshot shows a software window titled "sage \* Production Entry (MPP) 7/11/2014". At the top, there is a "Production Number" field containing "0000039" and a "Defaults..." button. Below this are three tabs: "1. Header", "2. Lines", and "3. Production", with the third tab selected. The main area contains three custom fields: "Custom Field 1" with the value "Test Prod", "Custom Field 2" with the value "200.00", and "Custom Field 3" with the value "7/11/2014" and a calendar icon. At the bottom, there are buttons for "Accept", "Cancel", "Delete", a printer icon, and a help icon.

Production Number on the Dispatch

The **Production** button has been added on the Dispatch Header to provide a link to the Production Entry. The field added next to the **Production** button is populated with Production Number generated upon closing the manufacturing Dispatch.



Upon pressing the **Production** button respective Production Entry Lines tab is accessed:

# Material Planning & Production Management 60

sage Production Entry (MPP) 7/11/2014

Production Number 0000039

1. Header 2. Lines

Quick Row 1

Lot/Serial Number

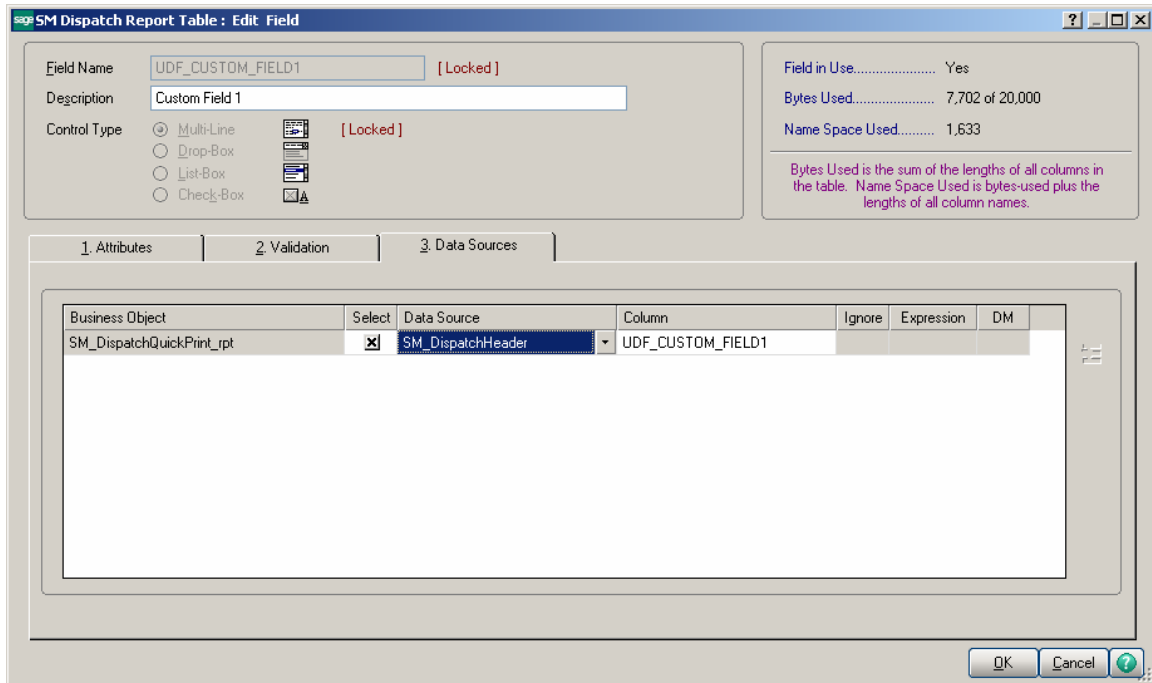
	Component Item Code	Quantity/Bill	Extended Quantity	Comm
1	BEL10-VIP	1.00	2.00	
2	FINSTNGLAZE	18.00	36.00	
3	PLS-TRAY	1.00	2.00	
4	SLBMDR	.00	.00	ExtendedQuantity=96 (
5	TIP-XI	1.00	2.00	
6	/LAB2	2.00	4.00	
7	/MISC_CHARGE1	3.00	6.00	

Description	HON 4 DRAWER LETTER FLE W/O LK
Revision	000
Warehouse	001
Unit Of Measure	EACH

Accept Cancel Delete

## Dispatch Quick Printing

The **Dispatch Quick Printing** program has been modified to allow printing custom UDF fields and the generated Production Number. In order to have the UDFs populated in the SM\_Dispatch worktable it is necessary to add those UDF fields in the SM Dispatch Report Table and select respective data source:



Here is the SM\_Dispatch Worktable with the UDF fields populated:

# Material Planning & Production Management 62

File Name: D:\MAS\MAS500\MPP\MAS90\MAS\_MPP\SMMPP\SM\_Dispatch\Wrk\IG071117424530.M

Key Size: N/A Rcd Size: 7,936 Rcd Count: 9 Company: MPP Type: Keyed

0.....10.....20.....30.....40.....50.....60.....70..

110	LineDiscountPercent.....	.00
111	LaborSkillCode\$.....	[ ]
112	LineType\$.....	[ ]
113	TechnicianCode\$.....	[M001]
114	LineDesc\$.....	[ ]
115	StartingDate\$.....	[ ]
116	StartingTime\$.....	[ ]
117	OvertimeStartDate\$.....	[ ]
118	OvertimeStartTime\$.....	[ ]
119	Overtime\$.....	[ ]
120	ImportToJC\$.....	[ ]
121	HoursSpent.....	.00
122	BillingRate.....	.00
123	RetainerFactor.....	.00
124	OvertimeFactor.....	.00
125	GeneratedProductionNo\$.....	[0000039]
126	UDF_CUSTOM_FIELD1\$.....	[Test Prod]
127	UDF_CUSTOM_FIELD2.....	200.00
128	UDF_CUSTOM_FIELD3\$.....	[20140711]

Key Scan and Display Options

Key Column Separator: [ ] Key Scan Filter: [ ] Formatted Display: [x]

Key No.: [ ]

Key: [ ]

Buttons: Edit... Delete Print Help

## MRP Inquiry

The **MRP Inquiry** program has been added under the **Material Planning and Production Management** Inquiries menu to allow reviewing information for an item by Transaction type and Required Date . The demand, supply, and Proj. On Hand quantities for an item can be viewed. The information can only be viewed.

Type	Document No.	Required Date	Demand	Supply	Proj. On Hand
------	--------------	---------------	--------	--------	---------------



# Material Planning & Production Management 64

sage MRP Inquiry (MPP) 7/11/2014

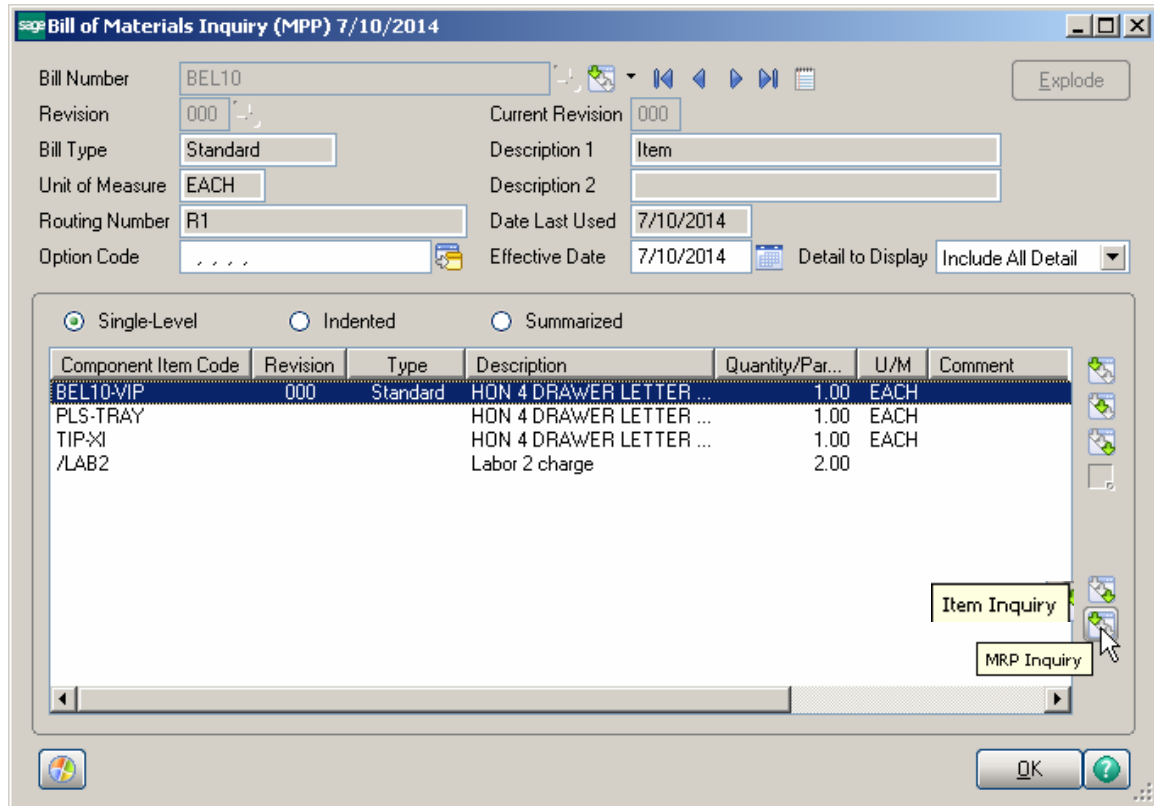
Item Code: BEL10-VIP      U/M: EACH  
 Description: HON 4 DRAWER LETTER FLE W/D LK      On Hand: 805.00

	Type	Document No.	Required Date	Demand	Supply	Proj. On Hand
1	PO	0010019	3/20/2013	.00	239.00	1,044.00
2	PO	0010019	3/20/2013	.00	208.00	1,252.00
3	PO	0010024	3/20/2013	.00	3.00	1,255.00
4	PO	0010035	3/20/2013	.00	4.00	1,259.00
5	PO	0010040	3/20/2013	.00	2.00	1,261.00
6	SO	0000178	8/24/2013	5.00	.00	1,256.00
7	SO	0000179	8/24/2013	6.00	.00	1,250.00
8	WO	0000163/0001	9/3/2013	35.00	.00	1,215.00
9	WO	0000196/0001	9/12/2013	257.00	.00	958.00
10	WO	0000204/0001	10/29/2013	1,560.00	.00	602.00
11	WO	0000198/0001	10/31/2013	.00	257.00	345.00
12	WO	0000208/0001	11/4/2013	.00	257.00	88.00
13	WO	0000238/0001	7/10/2014	2,970.00	.00	3,058.00
14	WO	0000240/0001	7/10/2014	4.00	.00	3,062.00
15	WO	0000242/0001	7/10/2014	.00	2,923.00	139.00
16	WO	0000244/0001	7/10/2014	.00	10.00	129.00
17	WO	0000267/0001	7/11/2014	2.00	.00	131.00
18	WO	0000269/0001	7/11/2014	2.00	.00	133.00
19	WO	0000271/0001	7/11/2014	2.00	.00	135.00

OK

## Bill of Materials Inquiry

The **Item Inquiry** and **MRP Inquiry** buttons added to the **Bill of Materials Inquiry** screen allows for drill down respectively to Item Inquiry and MRP Inquiry for the selected component line.



# Material Planning & Production Management 66

sage Item Inquiry (MPP) 7/11/2014

Item Code: BEL10-VIP  
 Description: HON 4 DRAWER LETTER FLE W/O LK

1. Main | 2. Additional | 3. Quantity | 4. History | 5. Transactions | 6. Orders | 7. Cost Detail

Product Line: WF&A WORKSTATION FURN & ACCESS  
 Product Type: Finished Good  
 Valuation: FIFO  
 Procurement: Make

Unit of Measure: Standard EACH  
 Purchases EACH No. of EACH 1  
 Sales EACH No. of EACH 1

Price Code: STD STANDARD QUANTITY PRIC  
 Default Whse: 000 CENTRAL WAREHOUSE  
 Planning Code: 001 MFG Priority Code: 2 MFG Code: Made to Stock

Primary Vendor: 01-CONT Container Corporation Of Usa  
 Warranty Code:   
[Item Molds Machine](#)

Sales: Retail Price 131.000  
 Standard Price 131.000  
 Last Sold:   
 Purchases: Standard Cost 82.500  
 Average Cost 1,651.510  
 Last Receipt 7/10/2014  
 Last Costs: Item 1,733.550  
 Allocated .000  
 Total 1,733.550

Quantities

Whse	Description	On Hand	On PO	On SO	On Bk Ord	Committed	On WD	Req for WD	Av
000	CENTRAL ...	783.00	244.00	.00	.00	.00	1,022.00	293.00	
001	EAST WA...	52.00	212.00	5.00	.00	5.00	2,994.00	3,153.00	
MRP	MRP wareh...	30.00	.00	6.00	.00	6.00	40.00	4.00	

OK [Print] [Help]

# Material Planning & Production Management 67

sage MRP Inquiry (MPP) 7/10/2014

Item Code: BEL10-VIP      U/M: EACH  
 Description: HON 4 DRAWER LETTER FLE W/O LK      On Hand: 805.00

	Type	Document No.	Required Date	Demand	Supply	Proj. On Hand
1	PO	0010019	3/20/2013	.00	239.00	1,044.00
2	PO	0010019	3/20/2013	.00	208.00	1,252.00
3	PO	0010024	3/20/2013	.00	3.00	1,255.00
4	PO	0010035	3/20/2013	.00	4.00	1,259.00
5	PO	0010040	3/20/2013	.00	2.00	1,261.00
6	SO	0000178	8/24/2013	5.00	.00	1,256.00
7	SO	0000179	8/24/2013	6.00	.00	1,250.00
8	WO	0000163/0001	9/3/2013	35.00	.00	1,215.00
9	WO	0000196/0001	9/12/2013	257.00	.00	958.00
10	WO	0000204/0001	10/29/2013	1,560.00	.00	602.00
11	WO	0000198/0001	10/31/2013	.00	257.00	345.00
12	WO	0000208/0001	11/4/2013	.00	257.00	88.00
13	WO	0000238/0001	7/10/2014	2,970.00	.00	3,058.00
14	WO	0000240/0001	7/10/2014	4.00	.00	3,062.00
15	WO	0000242/0001	7/10/2014	.00	2,923.00	139.00
16	WO	0000244/0001	7/10/2014	.00	10.00	129.00

OK