Matrix Processing
For Sage 100 2018

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Pre-Installation Checklist

Before beginning the installation of this enhancement:

1. Verify you have the following standard modules activated in your MAS system:
   CI
   IM
   AR
   SO
   PO
2. Necessarily follow the steps described in the "**Installation Instructions for MXP2018.txt"** file located in the **Doc** folder of the installation CD.

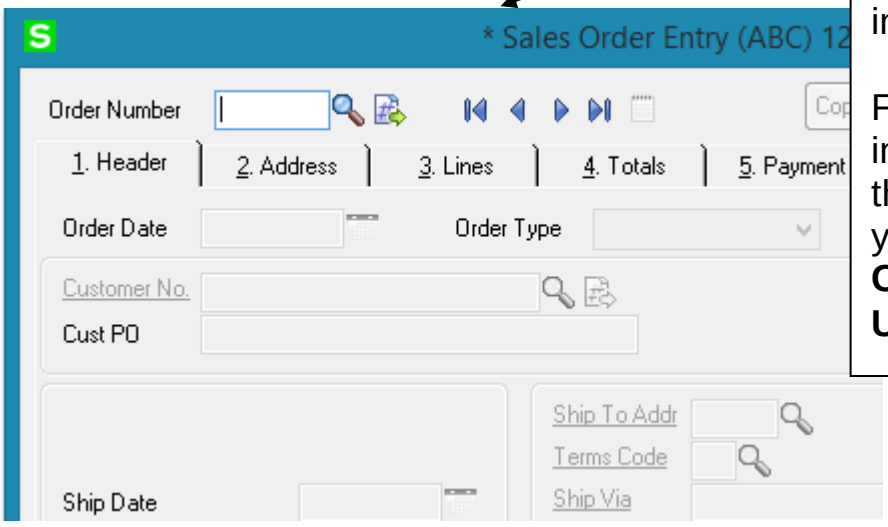
Installation Instructions and Cautions

PLEASE NOTE: SAGE 100 *must already be installed on your system before installing any IIG enhancement. If not already done, perform your SAGE 100 installation and setup now; then allow any updating to be accomplished automatically. Once SAGE 100 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 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.

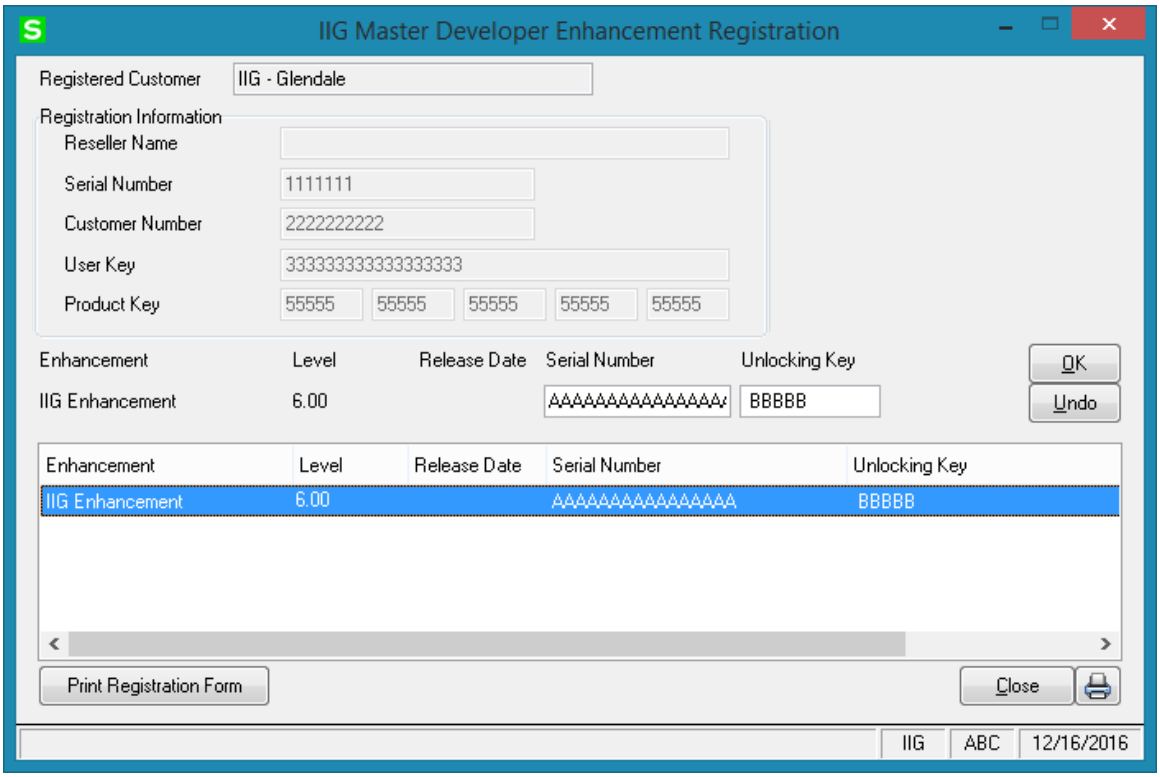
Follow all the instructions on this page before you run **Customizer Update**!

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.

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**.

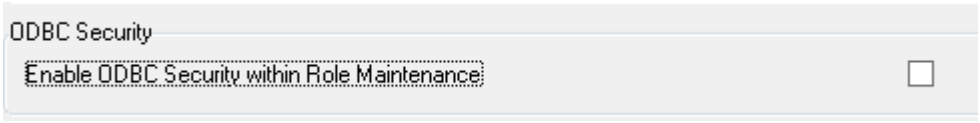


Enter **Serial Number** and **Unlocking Key** provided by IIG, and click **OK**.

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.

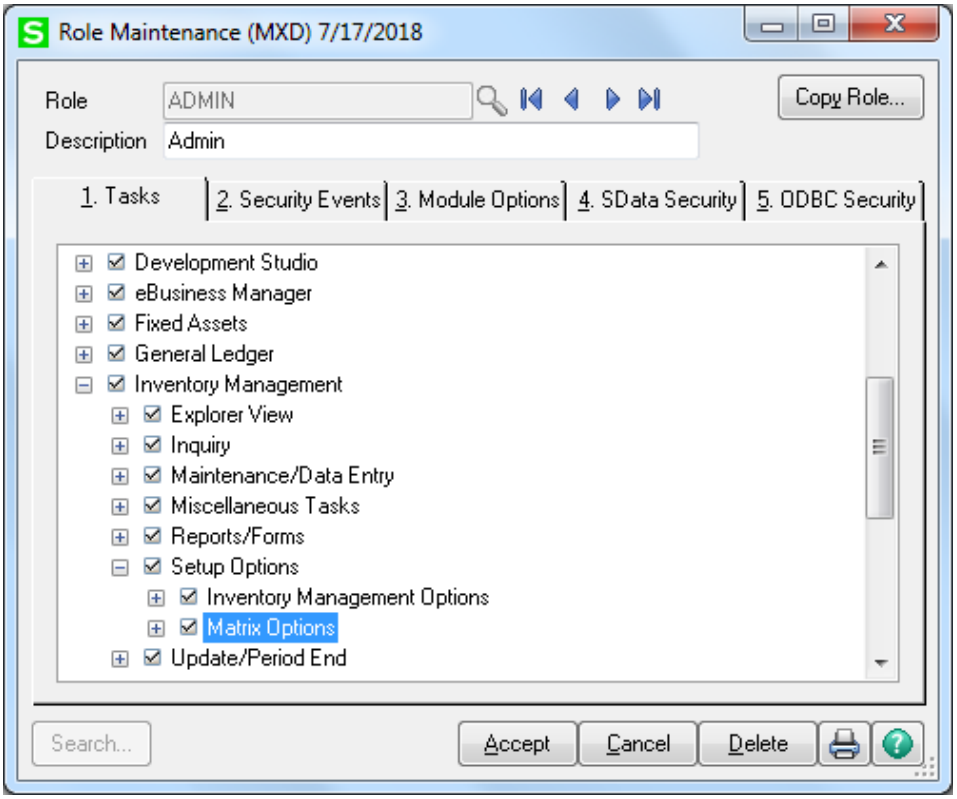
ODBC Security

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 **Matrix Processing (MXP)** enhancement provides the key functionality needed to fulfill the size and color requirements of the Apparel Industry.
This enhancement enables Size and Color Matrix Processing that makes it possible to handle Lot Number Names as pairs of two separate Category Codes (usually Size and Color), which allows presenting set of the Lot Numbers of the same item in Matrix form.
Items flagged as Matrix will use Matrix Distribution Grid instead of standard Lot/Serial Distribution screen.
Matrix Distribution Grid is available in:

- Purchase Order Entry
- Receipt of Goods Entry
- Return of Goods Entry
- Sales Order Entry
- Invoice Data Entry
- Shipping Data Entry
- Inventory Transaction Entry
- B/M Production Entry
- B/M Disassembly Entry
- RMA Data Entry
- RMA Receipts Entry

Matrix Items can use System Matrix Codes or have their own, item-specific Matrix Codes, to be used to construct Lot Numbers.

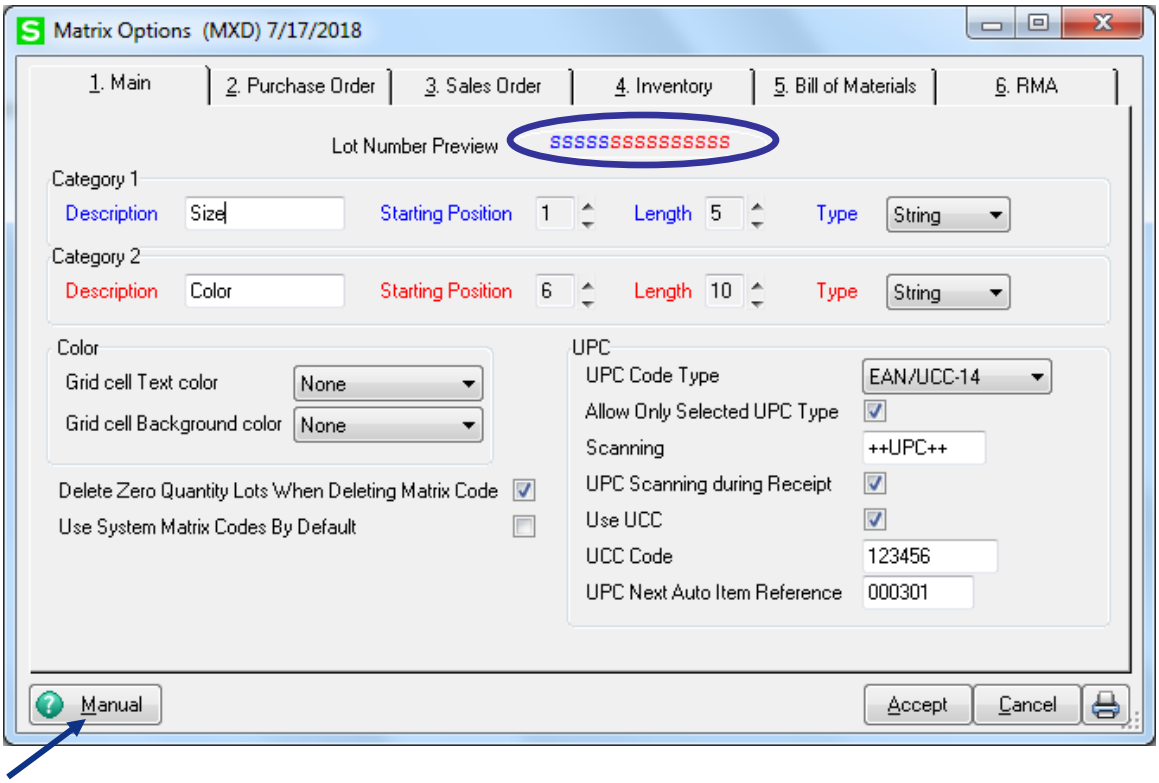
Prepacks by Matrix Codes can be defined for each Item to be used in sales orders.

Several reports such as: **Matrix Sales History Report, Matrix Stock Status Report**, **Matrix Committed Report,** etc, have been provided for Matrix items.
The **Matrix Grid** printing form has been added to the graphical printing Form Templates to allow printing the **Matrix Distribution** grid information on the **Sales Order**, **S/O Invoice, Picking Sheet**, **Packing List** and **Purchase Order** printings.
It is necessary to have the **Retain Lot/Serial Item History** option set to **Lot Items** in the **Sales Order Options** be able to view sales history for Matrix Lots.

Setup

Matrix Options

Select the **Matrix Options** program under the **Inventory Management Setup** menu.

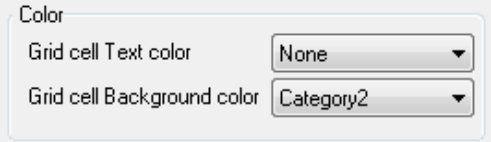


The Manual button allows for viewing MXP enhancement document in a PDF format. On the **Main** tab, select options for Matrix Code Categories and grid colors.

Enter **Descriptions** for **Categories** 1 and 2.

Enter Starting **Position**, **Length** and **Type** of the Matrix Codes for Categories 1 and 2. The program will interpret the part of the Lot Number from the Starting Position with the number of symbols equal to Length as Matrix Code of the corresponding Category. Type can be Numeric or String. Code parts of the Lot Numbers will be checked against the Type. The Code of a Category with Numeric Type can contain only digits. The Category 2 Code cannot be positioned before the Category 1 Code.

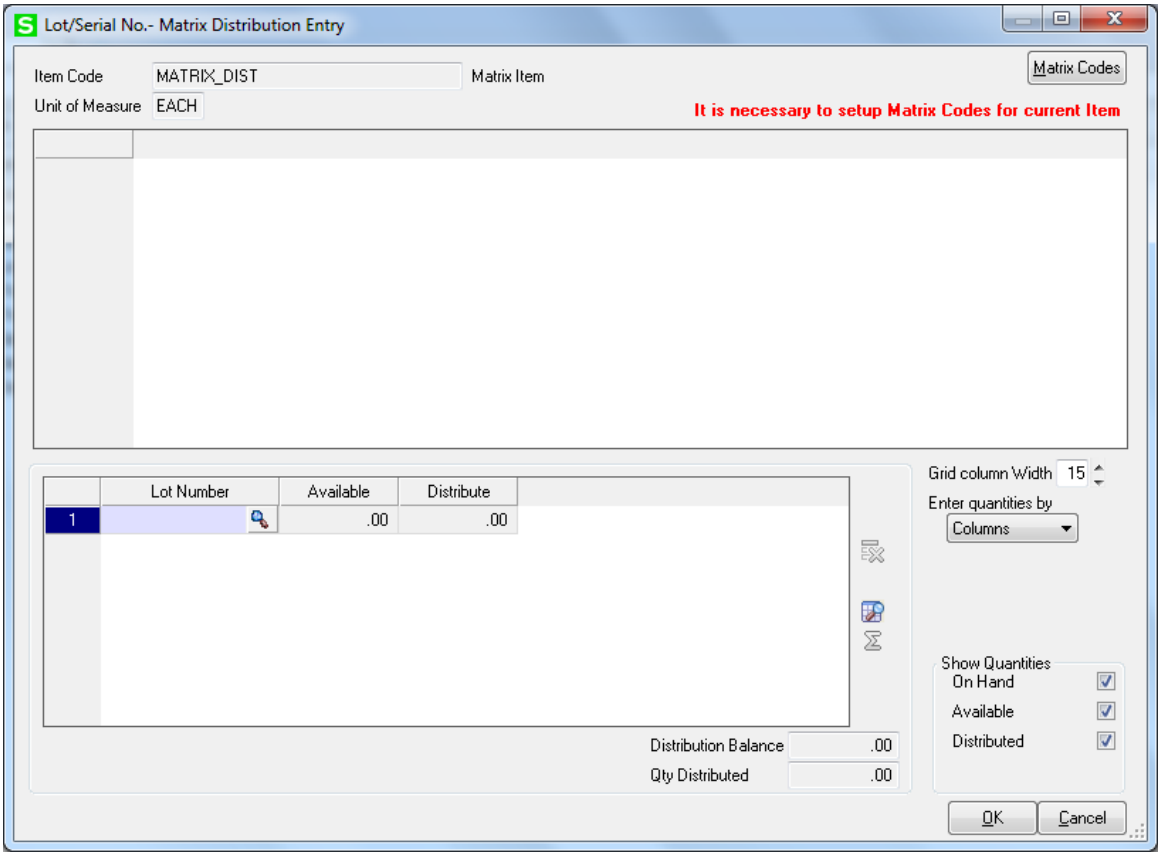
The **Lot Number preview** displays the format of the Lot Number with the selected settings. The symbols written in **blue** represent a **Category 1** Code; symbols in **red** represent a **Category 2** Code. Code symbols are: "**S**" for String Type Code, "**N**" for Numeric Type Code.



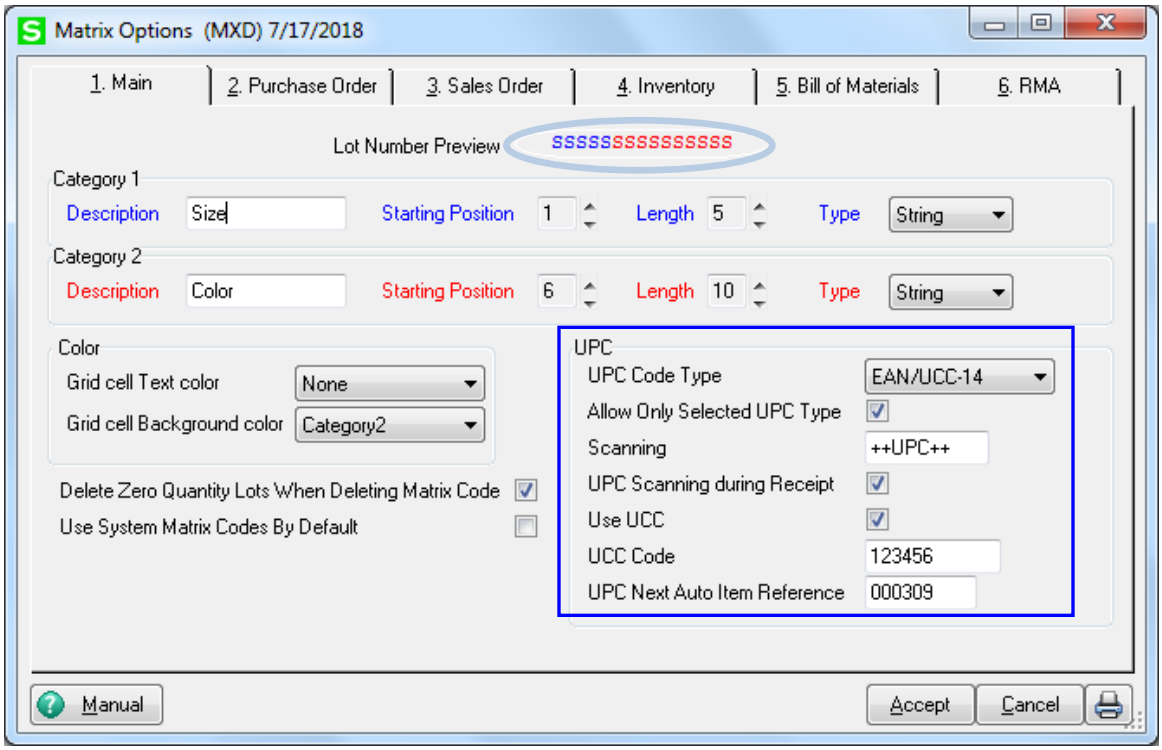
Select a Category in the **Grid cell Text color** field. The text in the cells of the matrix distribution grid will be displayed in the colors assigned to the Codes of the selected Category. Colors are assigned in the **Matrix Code Maintenance** program.

Select a Category in the **Grid cell Background color** field. The cells of the matrix distribution grid will have the background of the colors assigned to the Codes of the selected Category. Colors are assigned in the **Matrix Code Maintenance** program.

Check the **Delete Zero Quantity Lots When Deleting Matrix Code** box to have the Lot Numbers, which do not have Quantity, deleted when respective Matrix Code is deleted for an item from the **Matrix Code Maintenance**. This option does not affect deletion of the System Matrix Codes.
Check the **Use System Matrix Code by Default** box if you want the System Matrix Codes to be applied by default for Matrix Items not having Matrix Codes setup. This option is not set by default. If this checkbox is not selected in the Matrix Option the user will be prompted about adding Matrix Codes when entering a Matrix item not having Matrix Codes setup. The Matrix Codes button on the **Matrix Distribution Entr**y allows the users, having respective permission, to set up Matrix Codes.



The **UPC** options are set up for using **Universal Product Codes** for Lot Numbers of Matrix items.

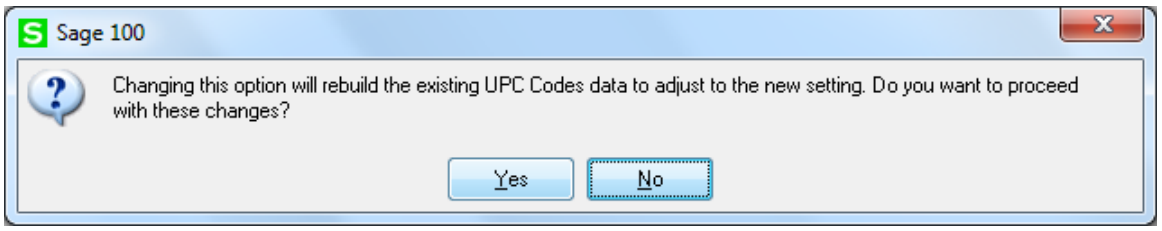


The **UPC Code Type** determines the default length to be used for the code – 12, 13 or 14 digits. The available options are UCC-12, EAN/UCC-13, EAN/UCC-14.

Check the **Allow Only Selected Type** box to force the programs to reject UPC Codes of the lengths different from the selected.

Generally, if the **Allow Only Selected Type** box is cleared, the enhancement uses 14 digits for UPC Codes. If the entered UPC Code is 13 or 12 digits long, the program adds one or two zeroes correspondingly to the beginning of the Code. The default length determines possible **UCC Code** and **Item Reference** combinations.

Changing the **Allow Only Selected UPC Type** option, after UPC Codes are used in the system, can lead to problems connected to the already entered and used UPC Codes after rebuilding the data.



In the **Scanning** field, enter the code, which will indicate the start of scanning UPC codes, when scanned once.

Check the **UPC Scanning during Receipt** box to enable display of the UPC field when scanning UPC codes of the lots not having one in the Receipt of Goods Matrix Grid.

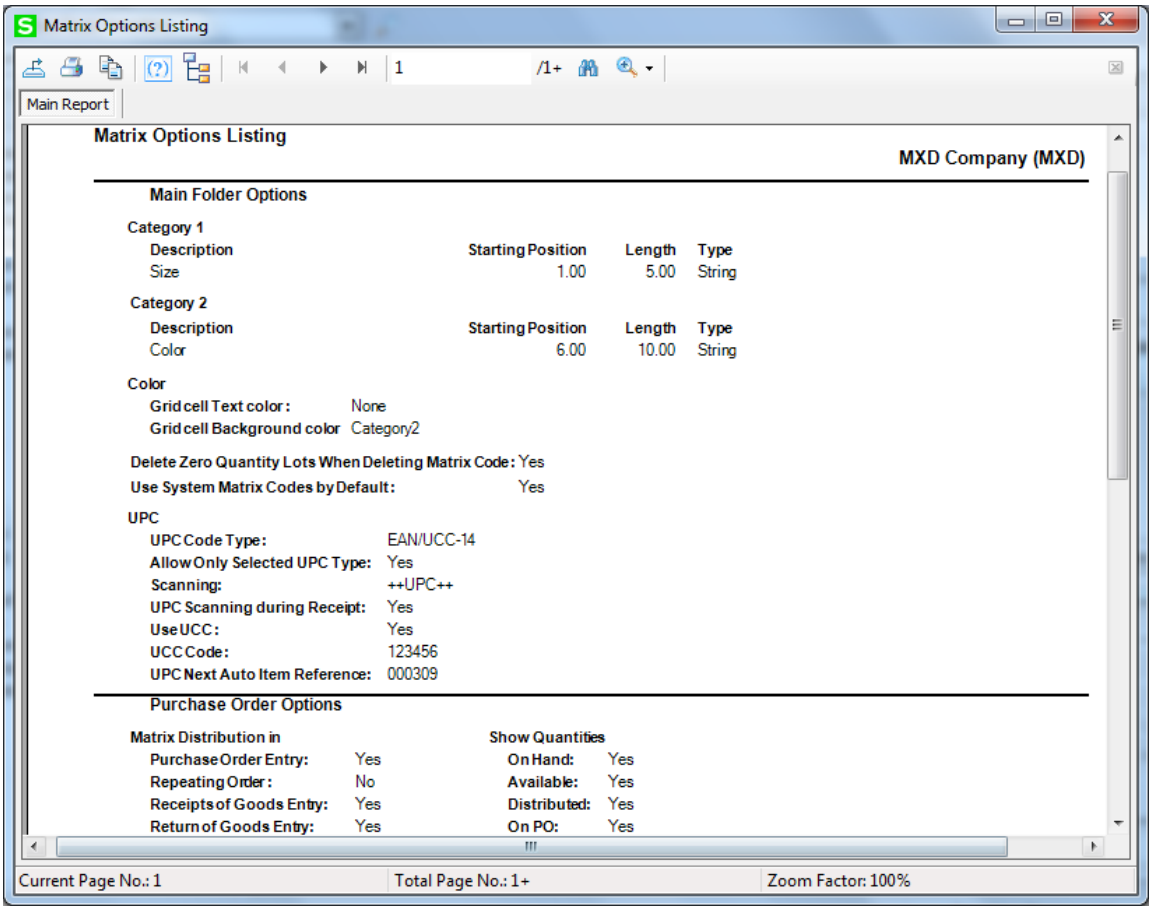
Check the **Use UCC** box if your company manufactures rather than purchases and sells finished goods

The **UCC Code** is the company code, which will be used as the default for the part of the UPC codes. The **UCC Code** cannot be shorter than 6 digits.

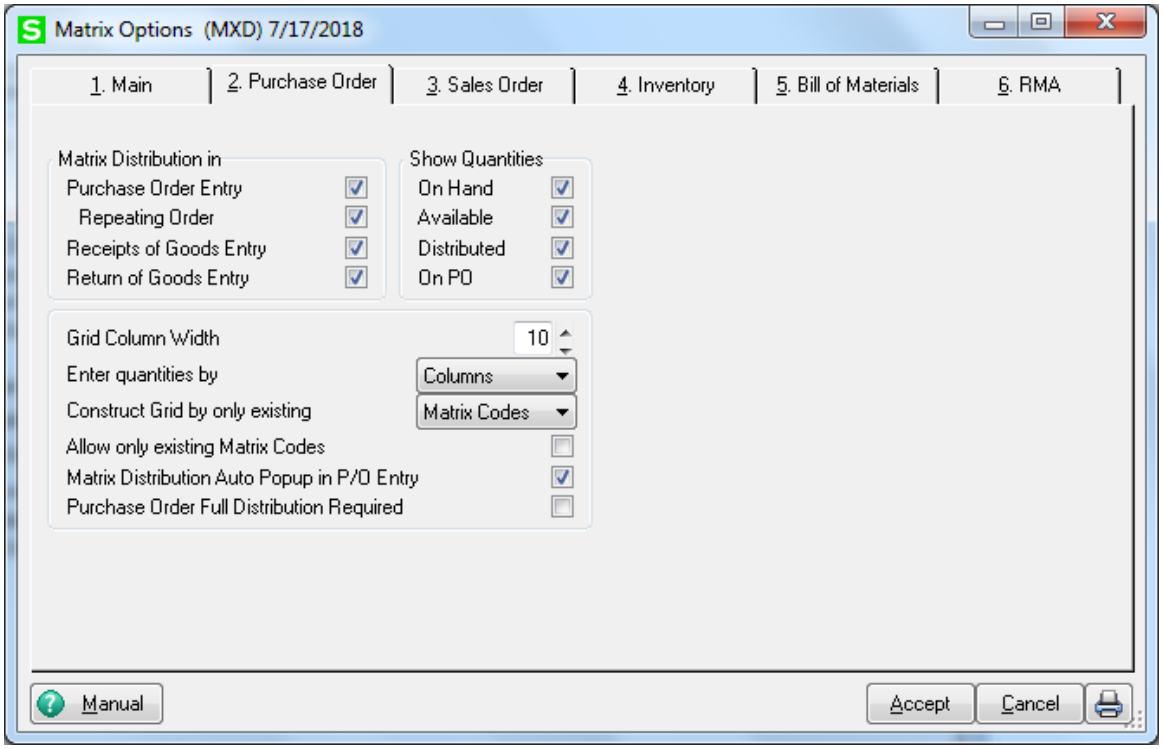
The **UPC Next Auto Item Reference** is for adding to the **UCC Code** when assigning UPC Codes automatically in the **UPC Code Maintenance** program. The **Item Reference** cannot be shorter than 2 digits.

The sum of the **UCC Code** and **Item Reference** lengths is equal to the length of the **UPC Code Type** selected (12, 13, or 14).

Click the **Print** button to print the MXP Options Listing:



On the other tabs of the **Matrix Options** screen, select module specific options. On the **Purchase Order** tab, select options for **Matrix Distribution** in the programs of the **Purchase Order** module.



In the **Matrix Distribution in** section, check the boxes to display the **Matrix Distribution** screen instead of the standard **Lot/Serial Distribution** screen for Matrix Items in the corresponding programs.

In the **Show Quantities** section, check the boxes to display corresponding quantities in the matrix distribution grid. Quantities **On Hand**, **Available**, **Distributed and On PO** can be selected. Each cell of the grid will display the selected quantities, separated by slashes.

Note that at least one of these boxes should be checked.

Enter **Grid column Width**. Each column in the matrix distribution grid will have the entered width.

From the **Enter quantities by** drop-down list, select **Rows** or **Columns**. This option specifies the direction of moving the selection in the Grid when entering quantities. You can choose to enter all the quantities in the first row, and then move to the second, and so on (by **Rows**). The selection moves to the left, when accepting the quantity. If you want to enter all the quantities in the first column, then in the second, and so on, select the **Columns** option. In this case, the selection moves down, when accepting the quantity.

From the **Construct Grid by only existing** drop-down list, select the **Lot Numbers** to display already existing Lot Numbers for item Matrix Code in the matrix distribution

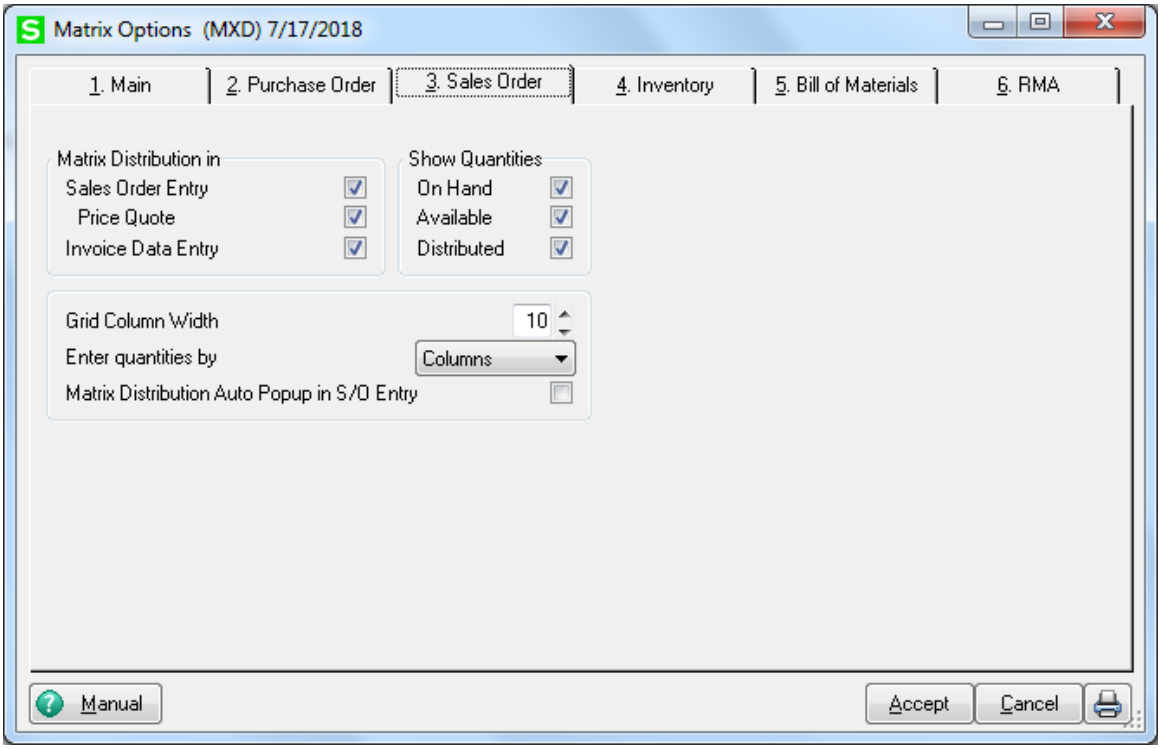
grid. Select **Matrix Codes** to display item Matrix Codes from the **Matrix Code Maintenance**.

Check the **Allow only existing Matrix Codes** box to allow entering only the Lot Numbers containing existing Matrix Codes in the Matrix Distribution screen. Clear the check box to be able to enter Lot Numbers with new Matrix Codes. If the Grid is constructed only by existing Matrix Codes, the new Codes will not be displayed.

Check the **Matrix Distribution Auto Popup in P/O Entry** box to auto display the **Matrix Distribution** screen when focus is in the **Ordered** field. In this case, the **Ordered** quantity is set equal to the **Quantity Distributed** on the **Matrix Distribution** screen.

Check the **Purchase Order Full Distribution Required** box to require full distribution for all lines of the purchase order when accepting the order. If this check box is cleared, orders can be accepted without distributing all the lines completely.

On the **Sales Order** tab, select options for **Matrix Distribution** in the programs of the **Sales Order** module.



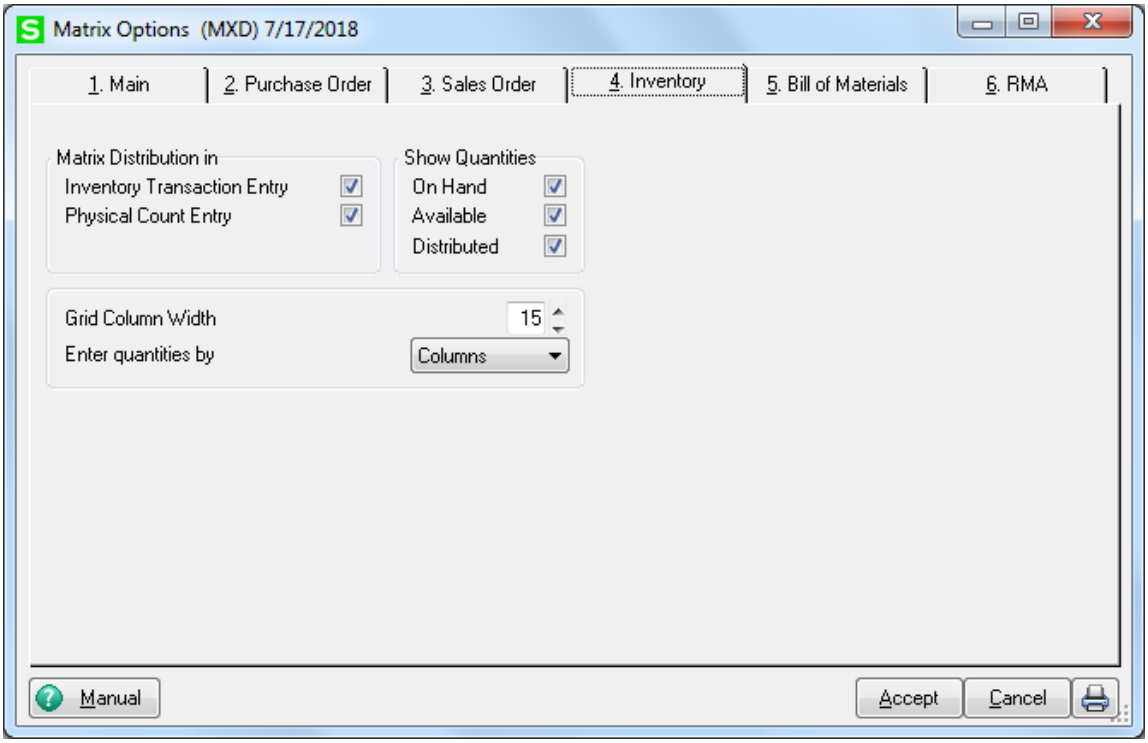
In the **Matrix Distribution in** section, check the boxes corresponding to the programs, where, for the Matrix Items, the Matrix Distribution screen will be displayed instead of the standard **Lot/Serial Distribution** screen.

If the **Matrix Distribution in Sales Order Entry** is enabled, the Distribution for Matrix items can be also allowed for **Price Quotes**. When the **Price Quote** box is checked, the Matrix Distribution of the Price Quote is preserved when converting it to Standard Order.

The **Show Quantities** section, **Grid column Width** field, and the **Enter quantities by** drop-down list are the same as on the **Purchase Order** tab. The settings apply to the programs of the **Sales Order** module.

Check the **Matrix Distribution Auto Popup in S/O Entry** box to auto display the **Matrix Distribution** screen when focus is in the **Ordered** field. In this case, the **Ordered** quantity is set equal to the **Quantity Distributed** on the **Matrix Distribution** screen.
For Back Orders, the **Back Ordered** field is used instead of the **Ordered**.

On the **Inventory** tab, select options for **Matrix Distribution** in the programs of the **Inventory Management** module.

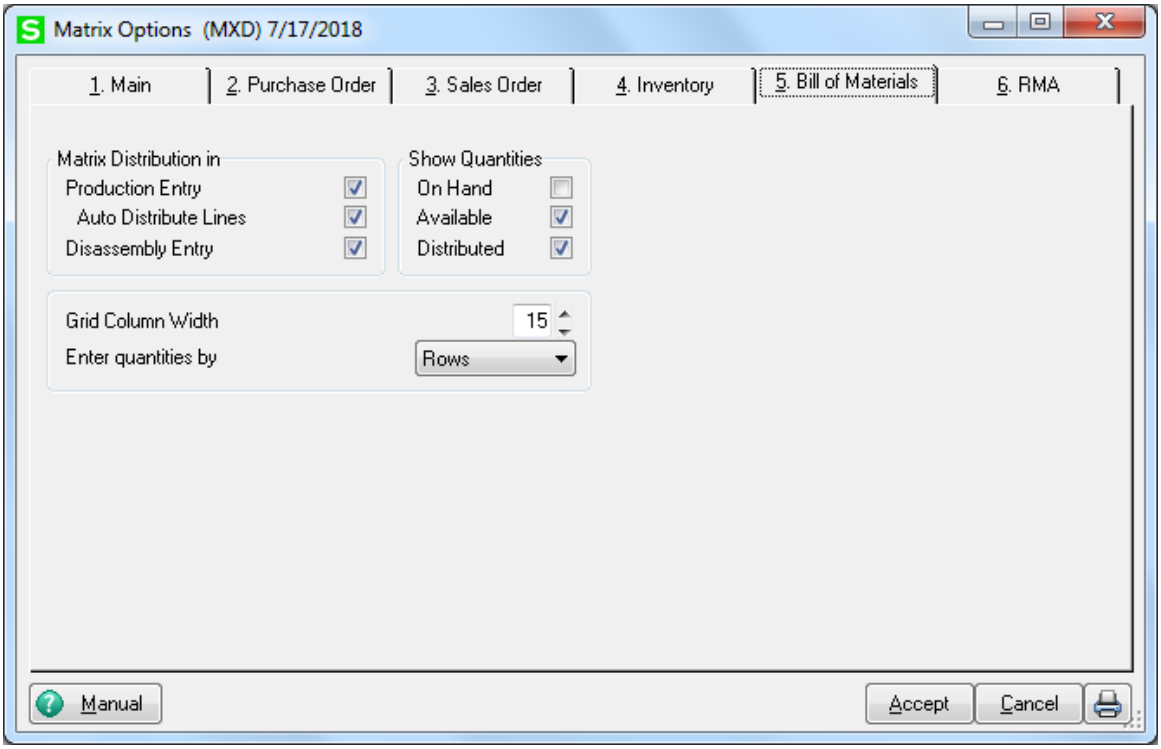


In the **Matrix Distribution in** section, check the boxes for the entries where the Matrix Distribution screen should popup for Matrix Items instead of the standard **Lot/Serial Distribution** screen.

The **Show Quantities** section, **Grid column Width** field, and the **Enter quantities by** drop-down list are the same as on the **Purchase Order** tab. These settings are applied to the programs of the **Inventory** module.

On the **Bill of Materials** tab, select options for **Matrix Distribution** in the programs of the **Bill of Materials** module.

If the module has not been activated and setup in the system, the options will not be available.

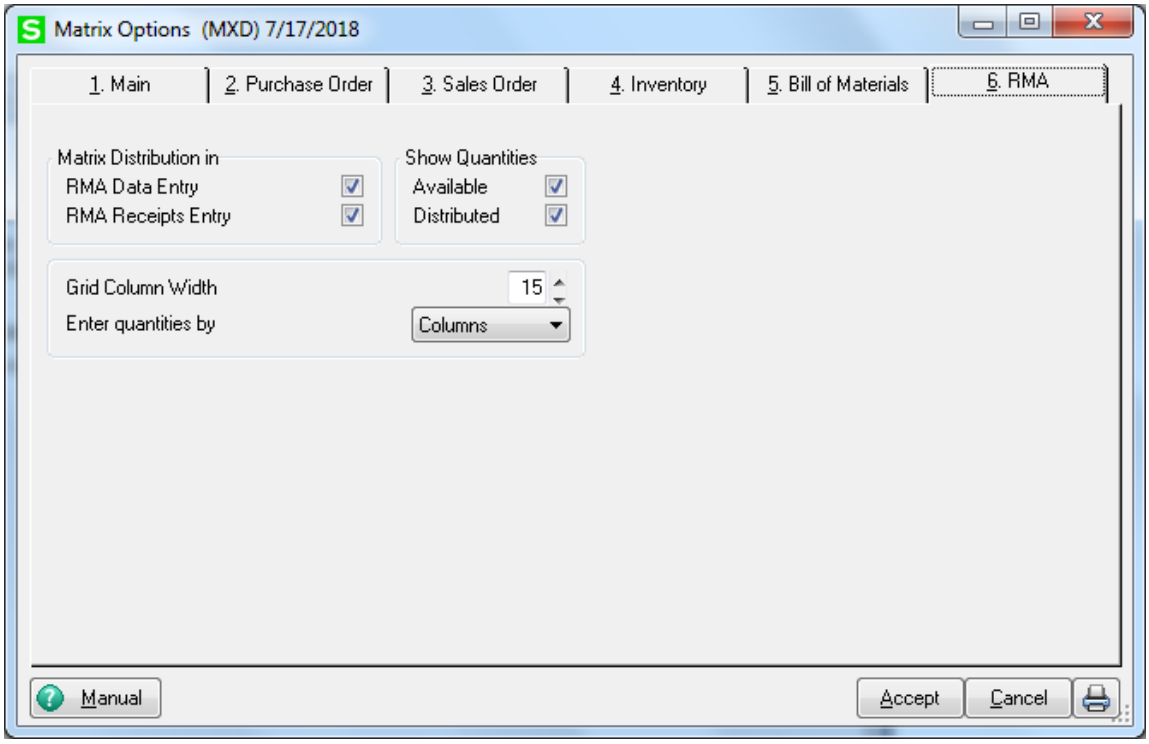


In the **Matrix Distribution in** section, check the boxes for the entries where the Matrix Distribution screen should popup for Matrix Items instead of the standard **Lot/Serial Distribution** screen.

If the **Production Entry** box is checked, you can select the **Auto Distribute Lines** option to use the Header Bill Matrix distribution for the distribution of the Lines Matrix items. The Auto Distribution will be done only when entering new **Production Entry**.

The **Show Quantities** section, **Grid column Width** field, and the **Enter quantities by** drop-down list are the same as on the **Purchase Order** tab. The settings apply to the programs of the **Bill of Materials** module.

On the **RMA** tab, select options for **Matrix Distribution** in the programs of the **Return Merchandise Authorization (RMA)** module.
If the module has not been activated and setup in the system, the options are unavailable.

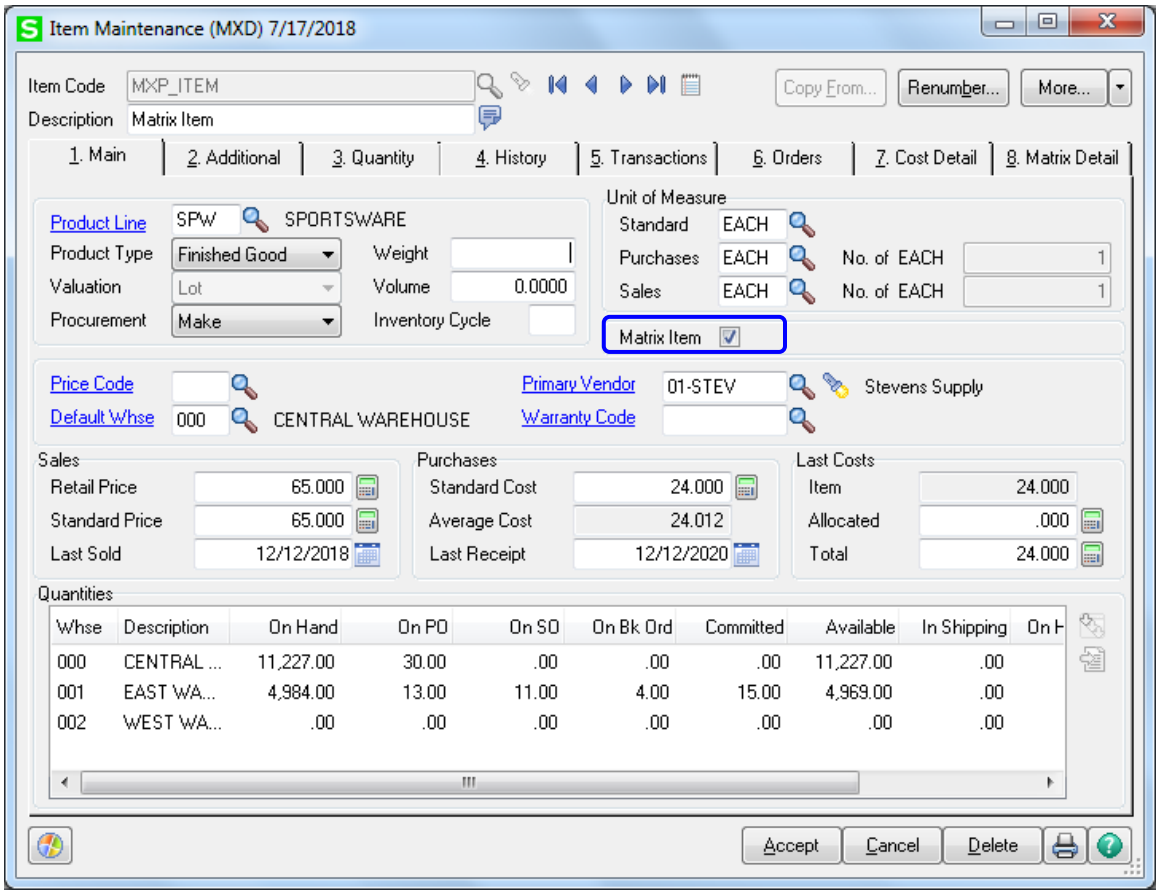


In the **Matrix Distribution in** section, check the boxes corresponding to the programs, where, for the Matrix Items, the Matrix Distribution screen should be displayed instead of the standard **Lot/Serial Distribution** screen.

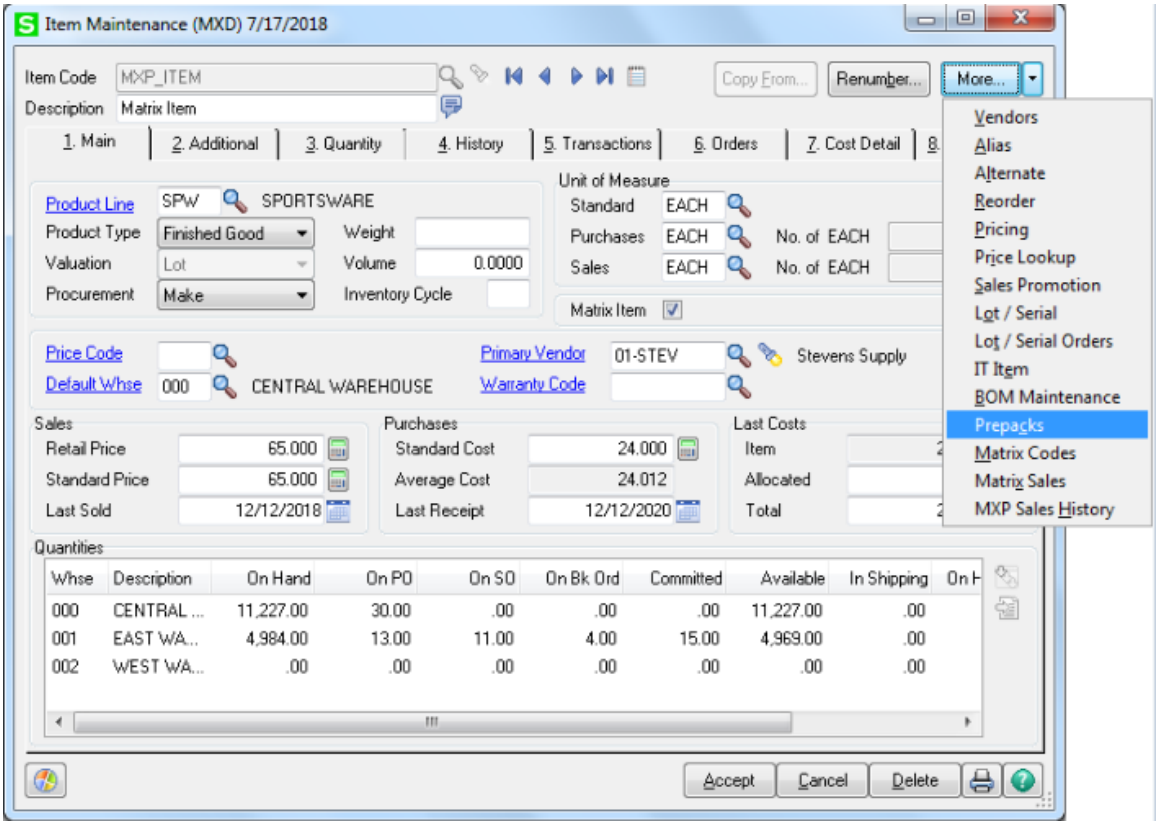
The **Show Quantities** section, **Grid column Width** field, and the **Enter quantities by** drop-down list are the same as on the **Purchase Order** tab. The settings apply to the programs of the **RMA** module.

Matrix Items

Select the **Item Maintenance** program under the Inventory Management Main menu.

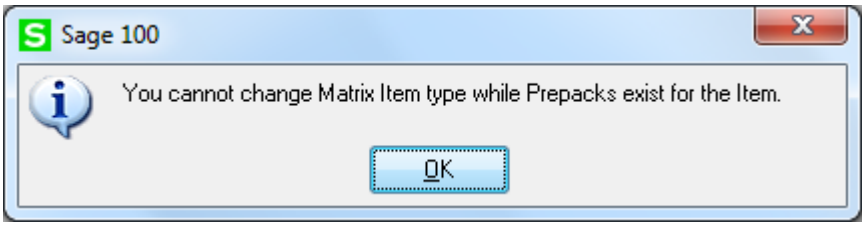


Select the **Matrix Item** checkbox to indicate matrix items.
The **Matrix Item** box can be checked only for **Lot** items. The **Valuation** of an item specified as **Matrix Item** cannot be changed to any type other than **Lot**.

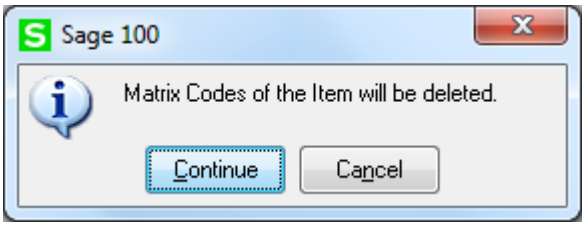


The **Prepacks, Matrix Codes**, **Matrix Sales** and **MXP Sales History** buttons are enabled only for Matrix Items.

Prepacks are discussed later in this manual.
Matrix Item cannot be changed to non-Matrix if it has Prepacks.

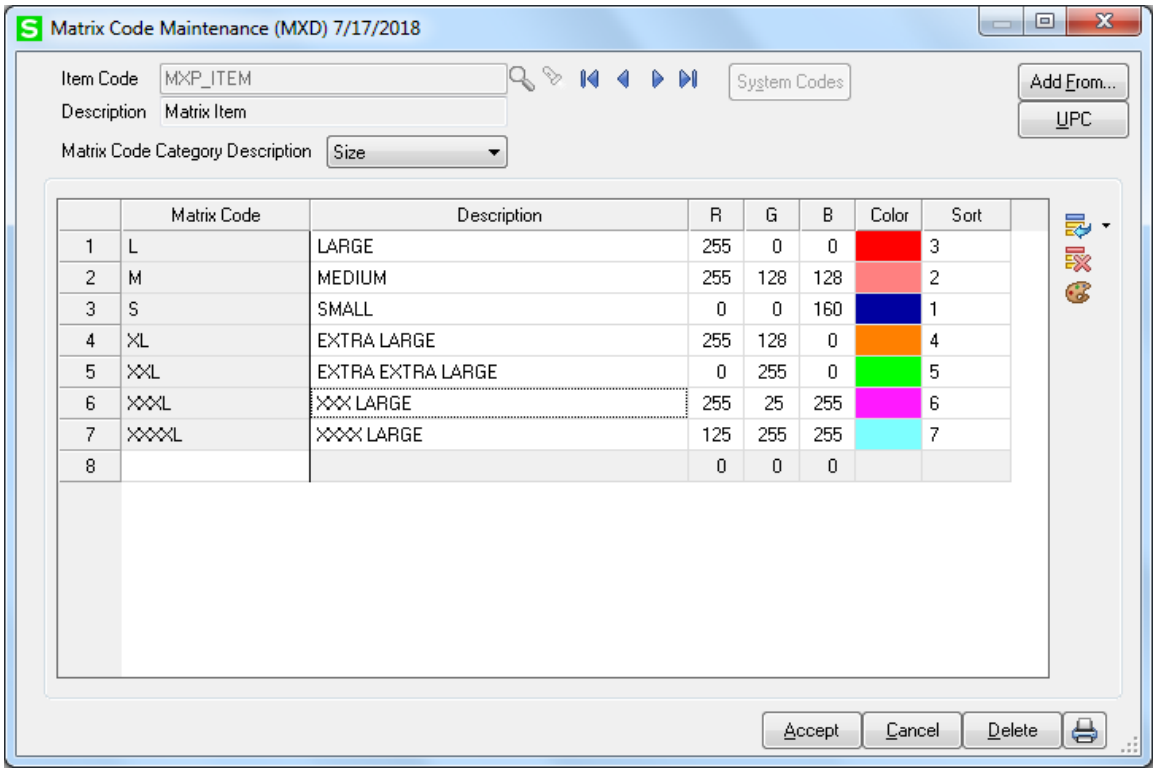


If the **Matrix Item** check box is cleared for an item that has Matrix Codes, a prompt appears about deleting Matrix Codes:



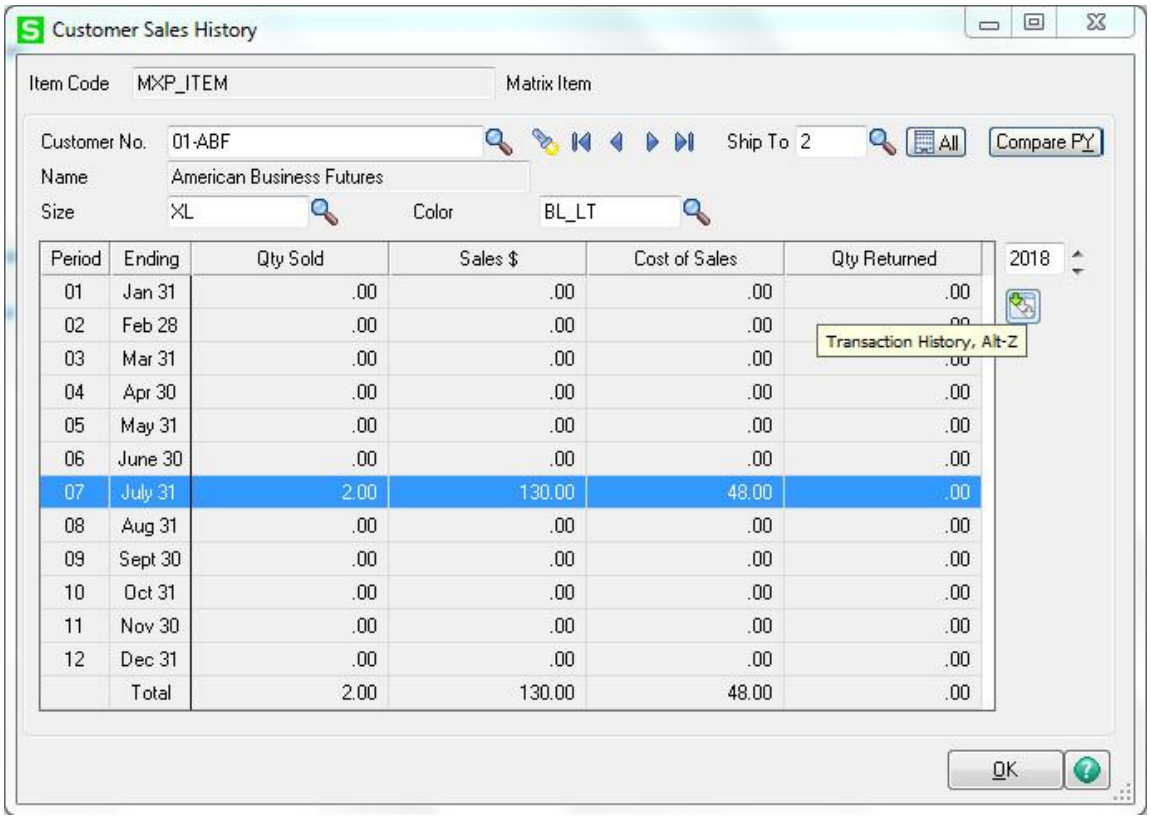
Matrix Codes of the item will be deleted, if the user chooses **Continue**.

For Matrix Items, the **Matrix Codes** button is available. Click the button to open the **Matrix Code Maintenance** screen.



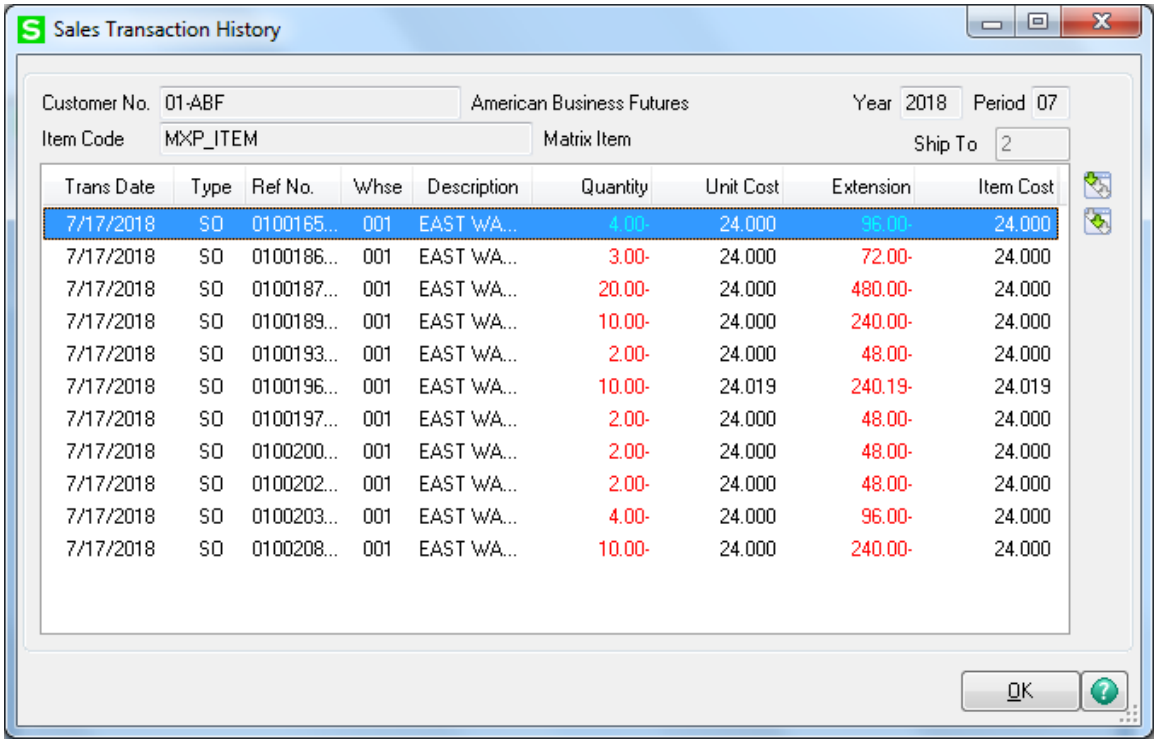
Here the user can add new matrix codes for current item if necessary or modify the existing ones (Refer to Matrix Codes for details).
The **Matrix Code** button is available on the **Item Inquiry** program, too. Clicking the **Matrix Code** button displays the **Matrix Code Inquiry** screen. **Matrix Codes** can be only viewed but not modified or added, from the **Item Inquiry** program.

Use the **Matrix Sales** button on the **Item Maintenance** screen to view Matrix Item Sales history information by customer and by the Item Matrix codes.
Click **ALL** to view the combined total of all ship-to locations for the customer and the selected Matrix Code combination.

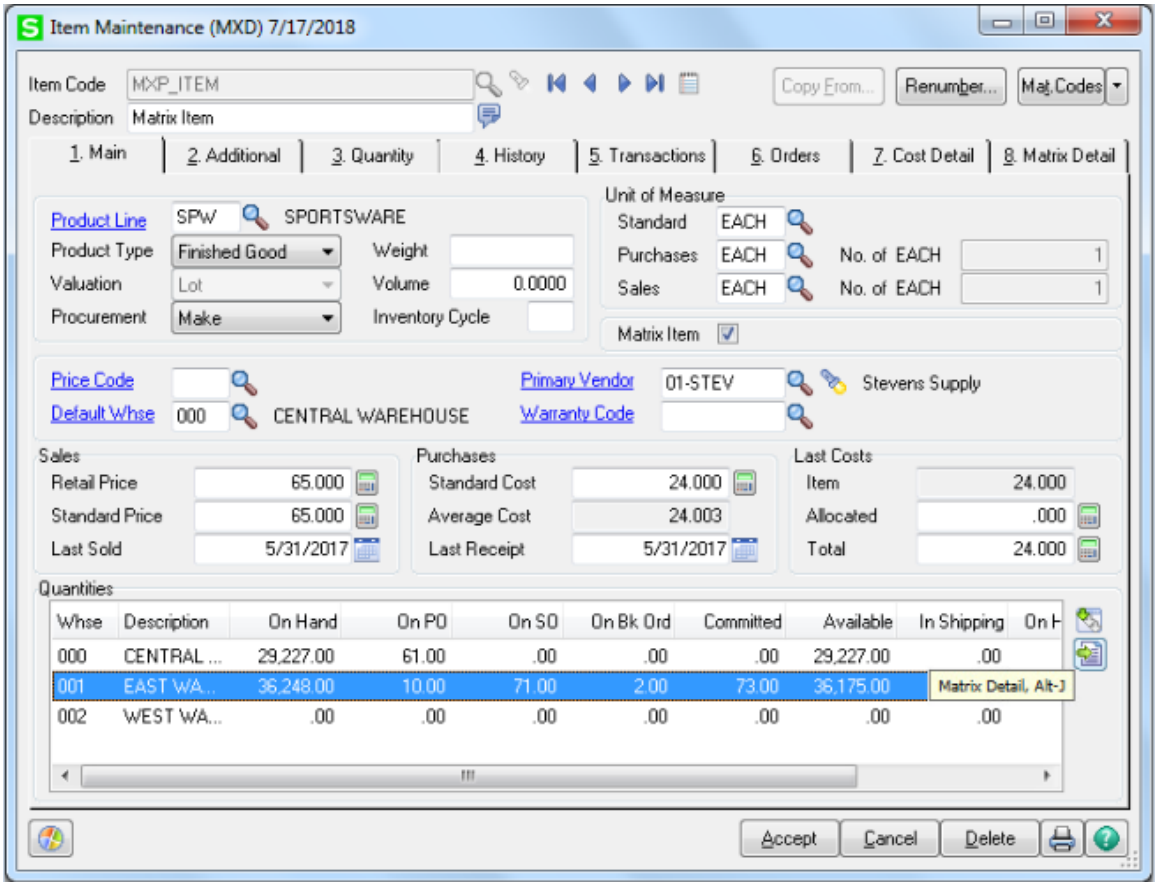


Period	Ending	Qty Sold	Sales $	Cost of Sales	Qty Returned
01	Jan 31	.00	.00	.00	.00
02	Feb 28	.00	.00	.00	.00
03	Mar 31	.00	.00	.00	.00
04	Apr 30	.00	.00	.00	.00
05	May 31	.00	.00	.00	.00
06	June 30	.00	.00	.00	.00
07	July 31	2.00	130.00	48.00	.00
08	Aug 31	.00	.00	.00	.00
09	Sept 30	.00	.00	.00	.00
10	Oct 31	.00	.00	.00	.00
11	Nov 30	.00	.00	.00	.00
12	Dec 31	.00	.00	.00	.00
	Total	2.00	130.00	48.00	.00

You may drill down also to the Sales Transaction History information:

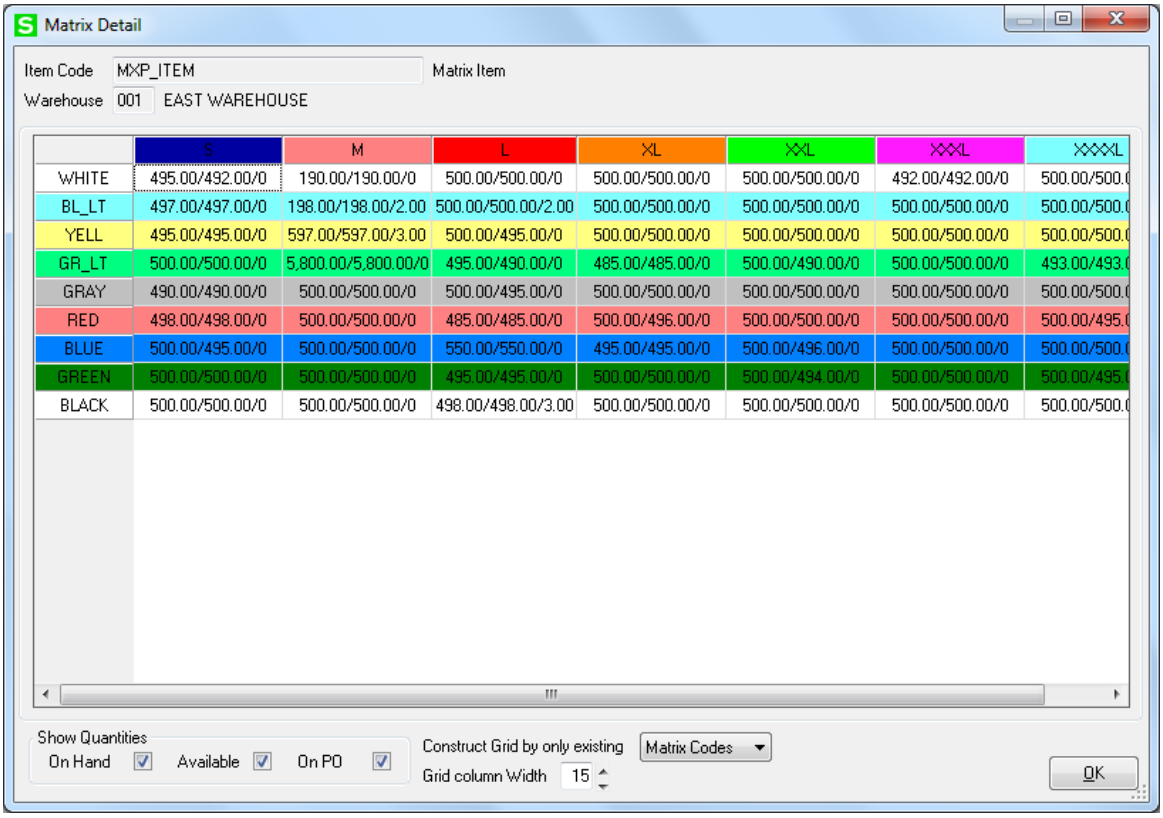


The **Matrix Detail** information is available from the Quantity grid on the Main tab and from the **Quantity** tab of the **Item Maintenance**.
Select a line in the grid and click the **Matrix Detail** button on the right hand.



The value of **On PO** field is calculated run-time.

The **Matrix Detail** screen displays the **Quantities Available** and **On Hand** (optional) in the Grid constructed by Matrix Codes.

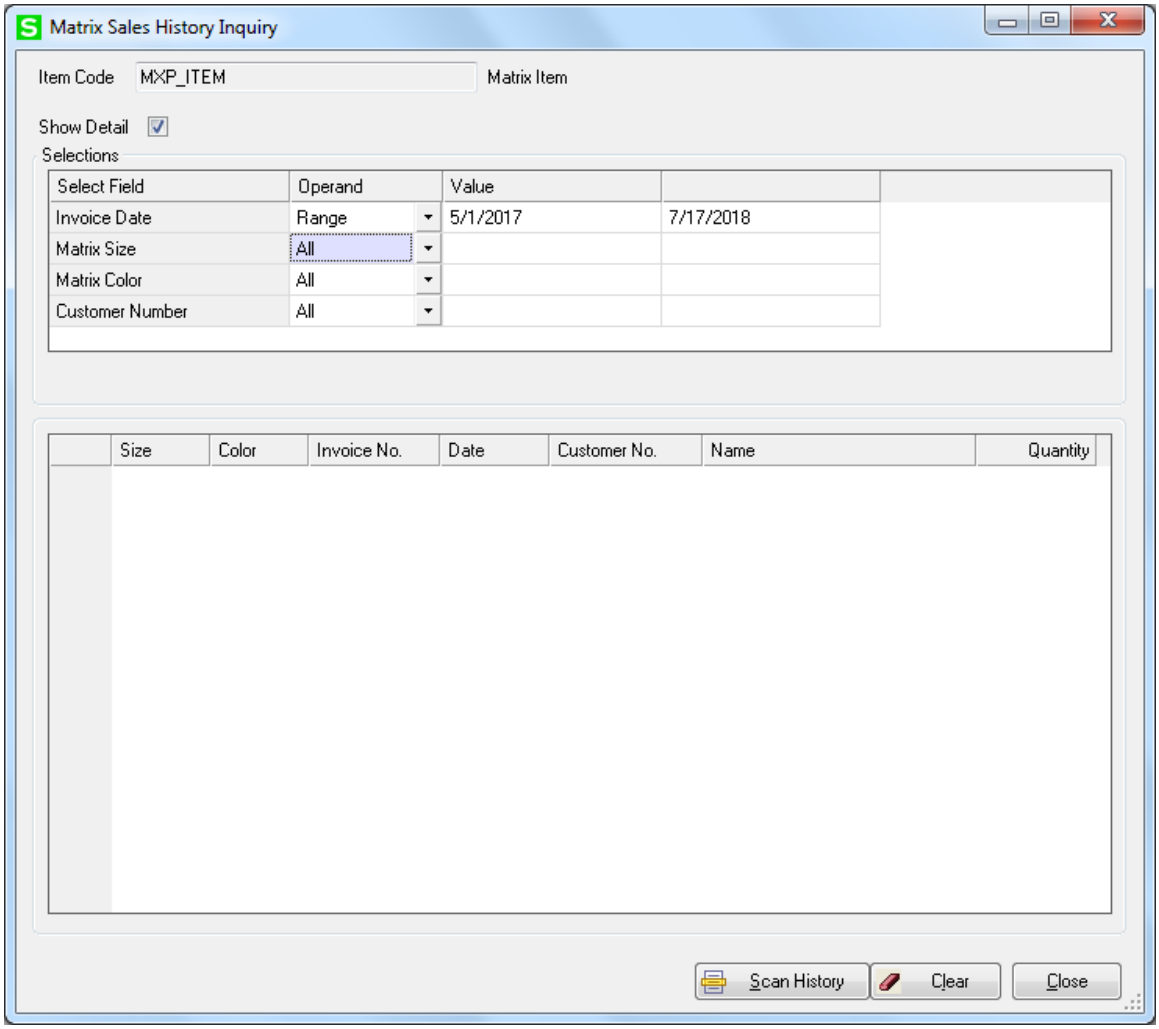


The same screen is available also from the **Inventory Inquiry** program.

If the **Include in Quantity Available** option is set to “Purchase Order” or “PO s and WO s” in the **Inventory Management Options** the quantity On PO for Matrix Lot will be included in the quantity available calculation and reflected in the quantity available displayed on the Matrix Grid wherever it’s accessible.
“On PO” quantity will be included in the availability calculation after the Purchase Order is accepted.

*Note: For Matrix lots the **Include in Quantity Available** option to include **On WO** quantity is not supported.*

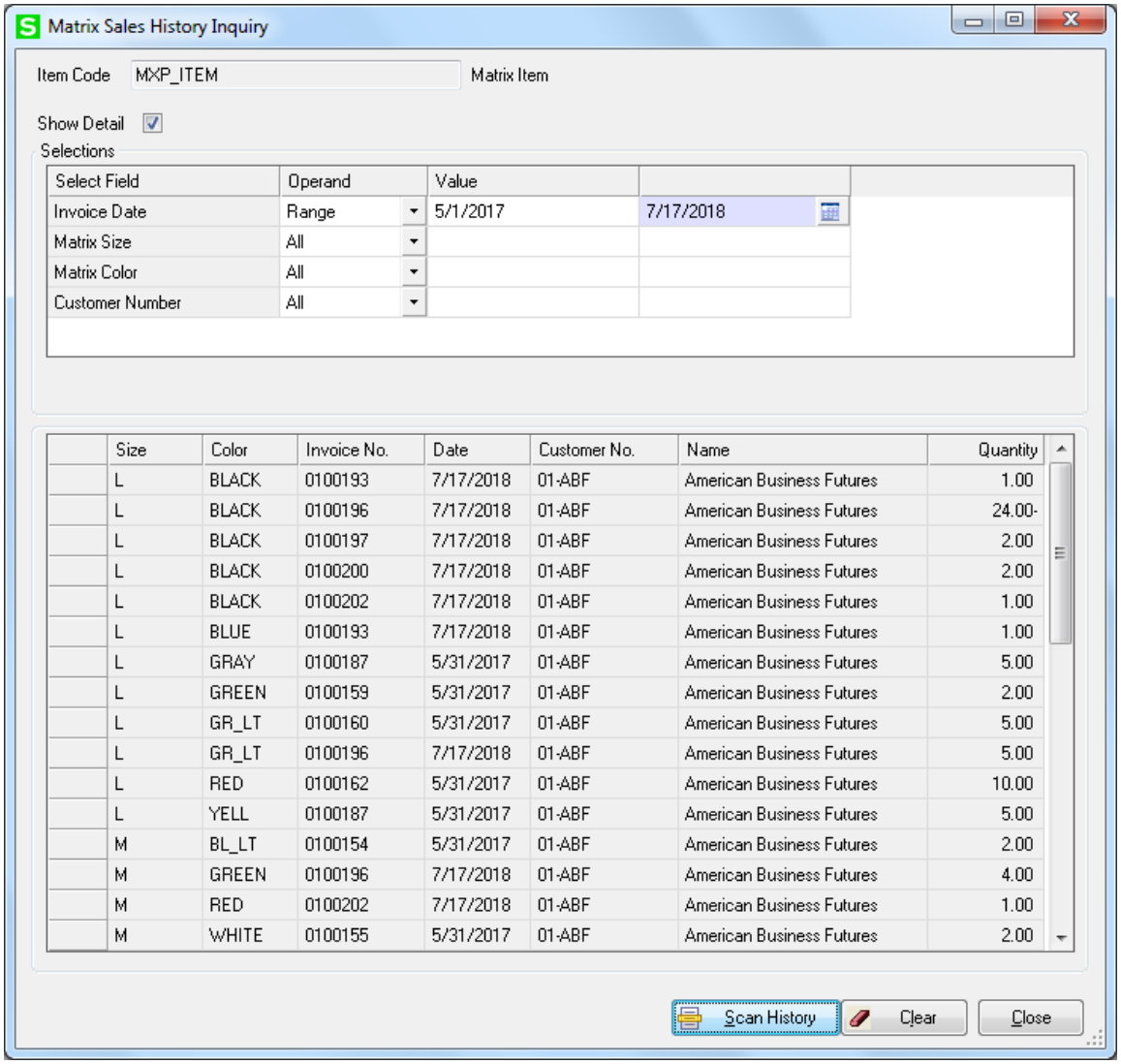
Use the **MXP Sales History** popup menu button to view Matrix Item Sales history information by customer and by the Item Matrix codes.
It is necessary to have the **Retain Lot/Serial Item Sales History** option set for Lot Items in the Sales Order Options in order to be able to view **Matrix Sales History,** otherwise the following message appears:



Matrix Sales History Inquiry window is opened with Item Code defaulted to the one selected in the Item Maintenance.
Show Detail flag is set by default to allow viewing detail sales history information by customer, Invoice number, Invoice date.
If this flag is turned off the user may view matrix item sales history only by the Item Matrix Codes and the total quantities sold to customers for the selected period.

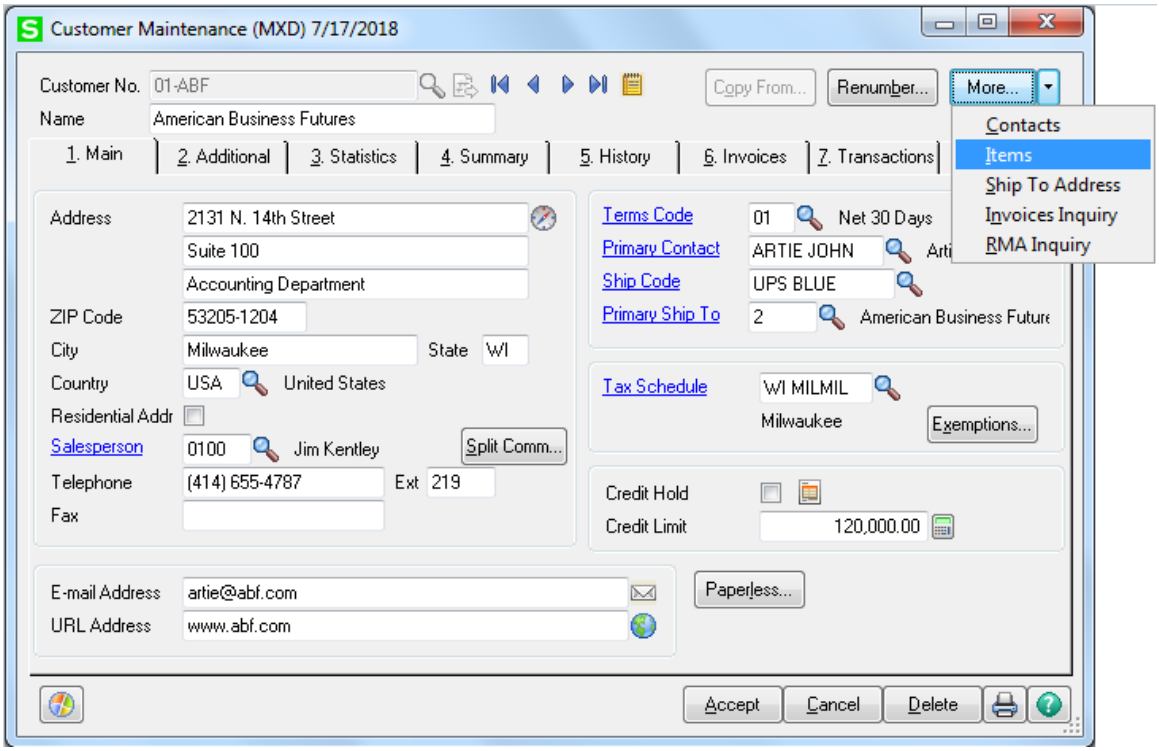
The **Invoice Date** is defaulted respectively to starting and ending dates of current inventory period setup in the Inventory Management options.

After making the necessary selections press the **Scan History** button to have the information loaded into the grid:

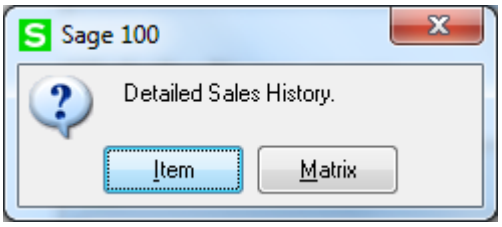


Customer Matrix Sales History

Select the **Customer Maintenance** program under the **Accounts Receivable Main** menu.

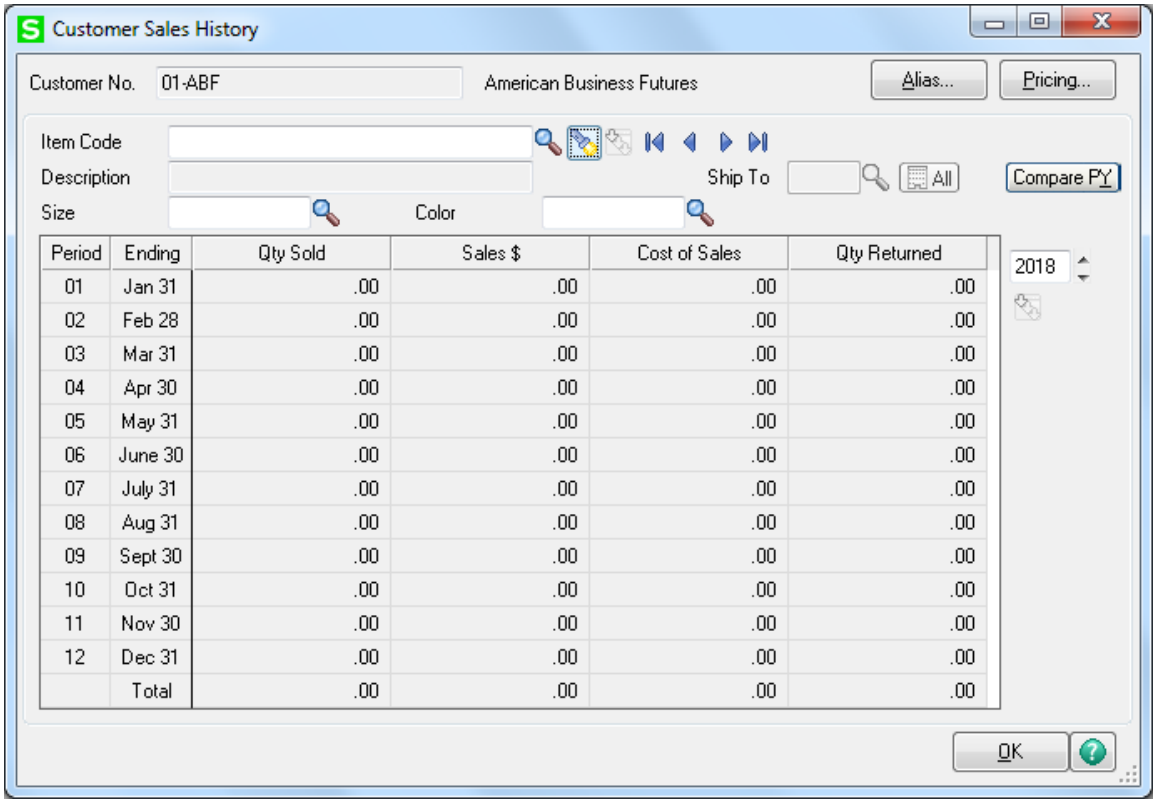


Click the **Items** menu.



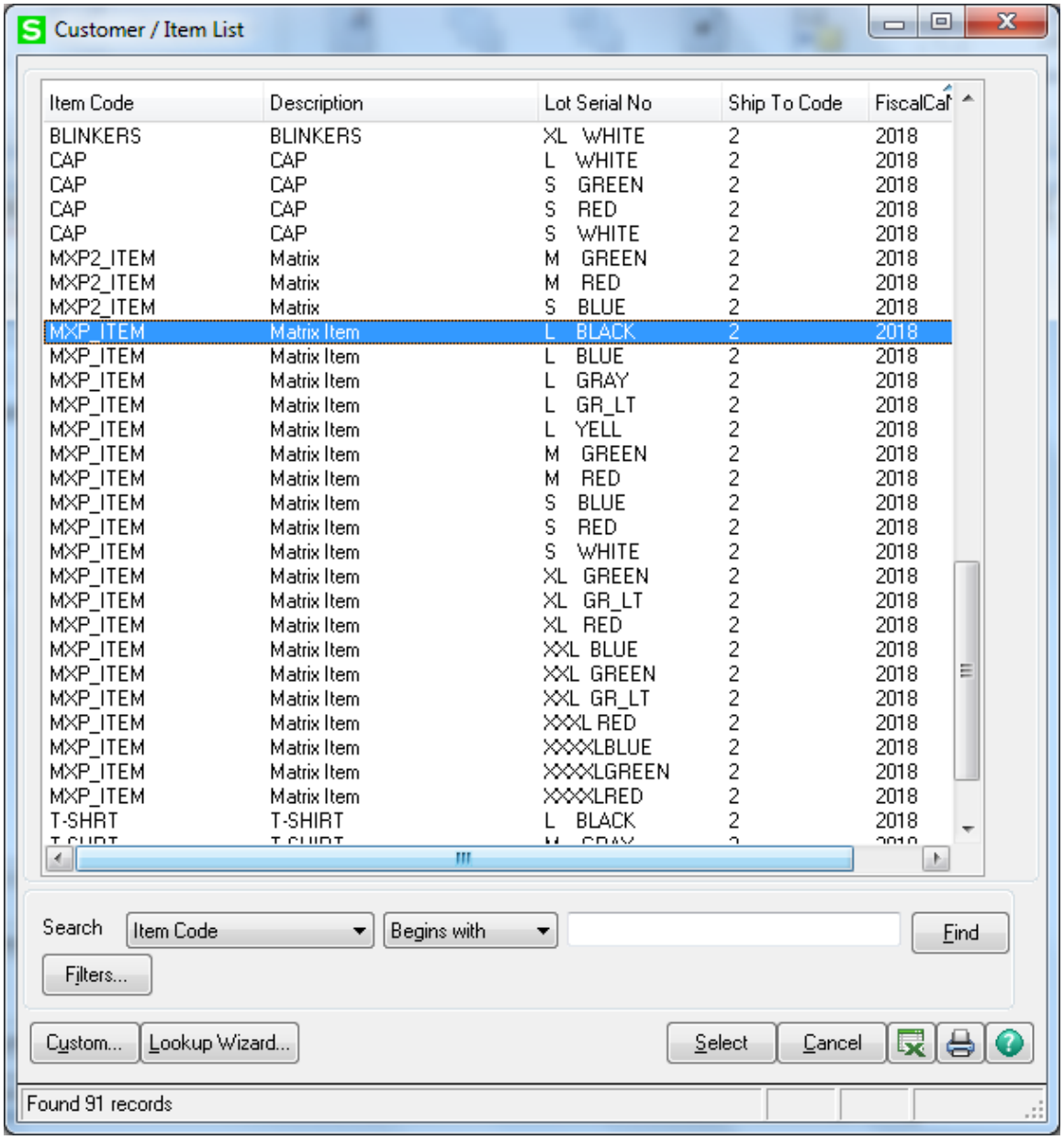
In the opened dialog box click the Matrix button to open the **Detailed Matrix Sales History** screen.

Enter the **Item No.** or select it using the **Lookup** button. The Lookup list displays only Matrix items.

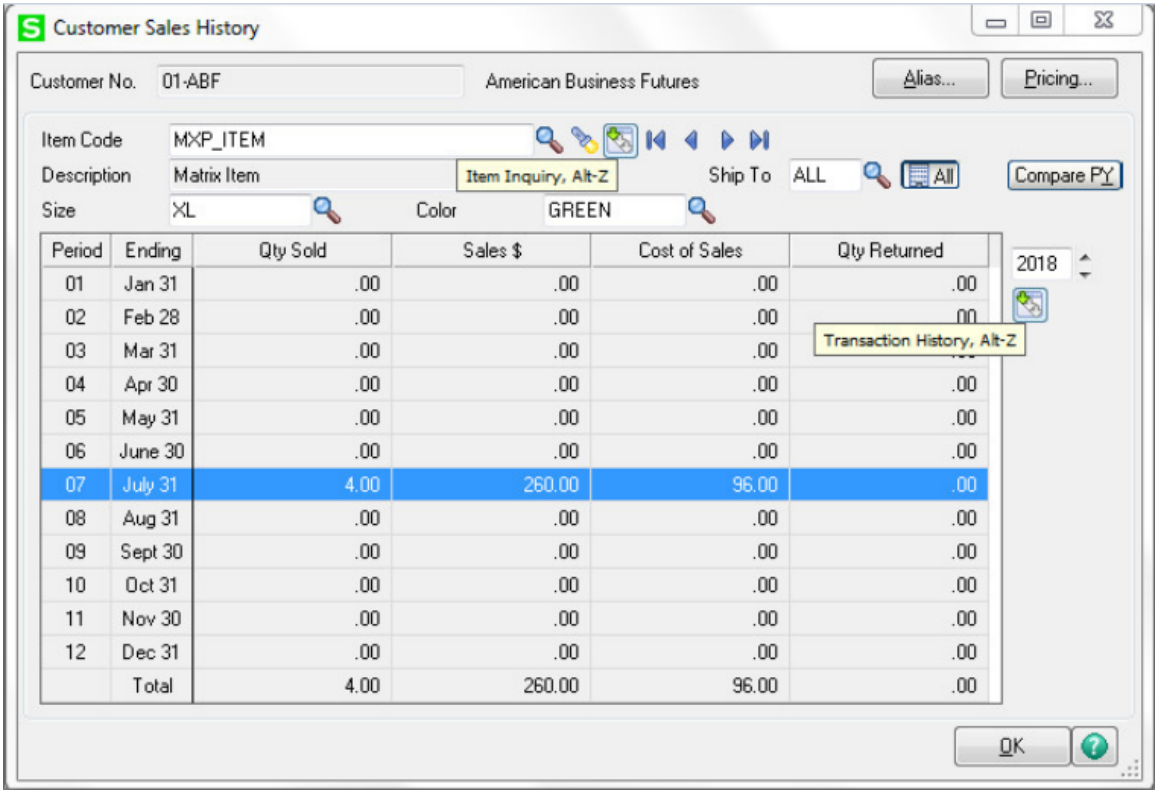


Period	Ending	Qty Sold	Sales $	Cost of Sales	Qty Returned
01	Jan 31	.00	.00	.00	.00
02	Feb 28	.00	.00	.00	.00
03	Mar 31	.00	.00	.00	.00
04	Apr 30	.00	.00	.00	.00
05	May 31	.00	.00	.00	.00
06	June 30	.00	.00	.00	.00
07	July 31	.00	.00	.00	.00
08	Aug 31	.00	.00	.00	.00
09	Sept 30	.00	.00	.00	.00
10	Oct 31	.00	.00	.00	.00
11	Nov 30	.00	.00	.00	.00
12	Dec 31	.00	.00	.00	.00
	Total	.00	.00	.00	.00

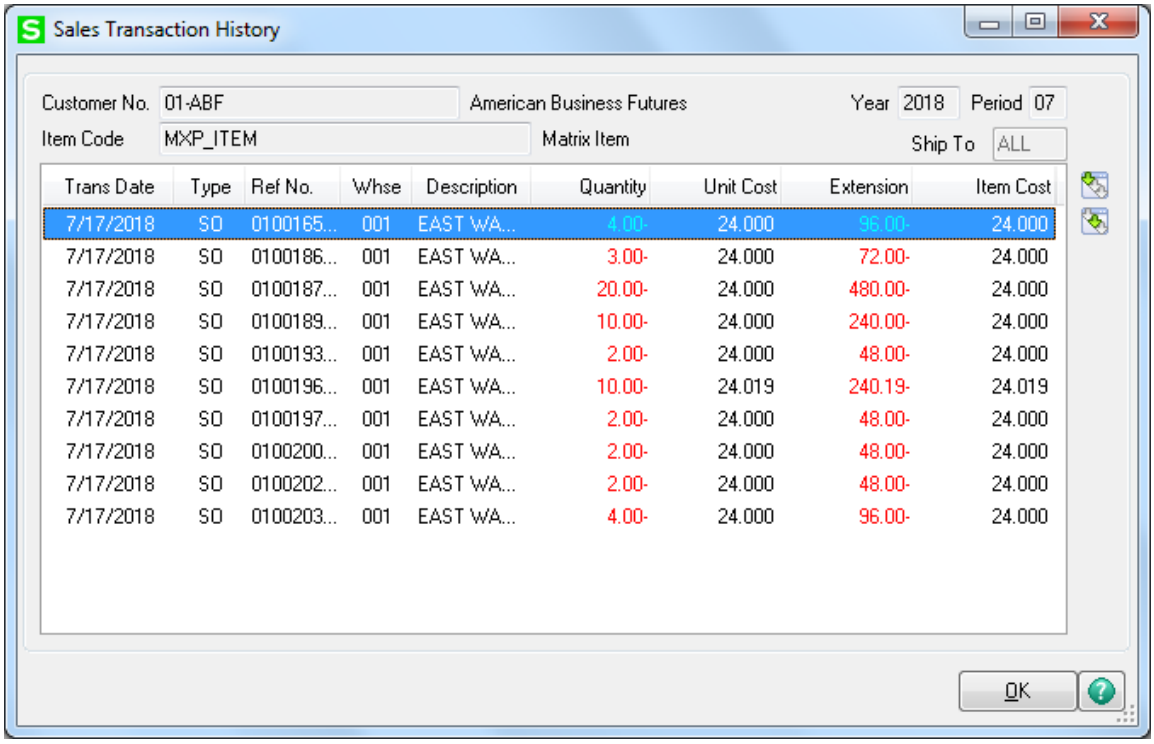
Click the **Item Customer Lookup** button to view the list of all the Lot Numbers for all matrix items sold to the selected customer.



The **Item Inquiry** button displays the **Item Inquiry** screen for the selected item.



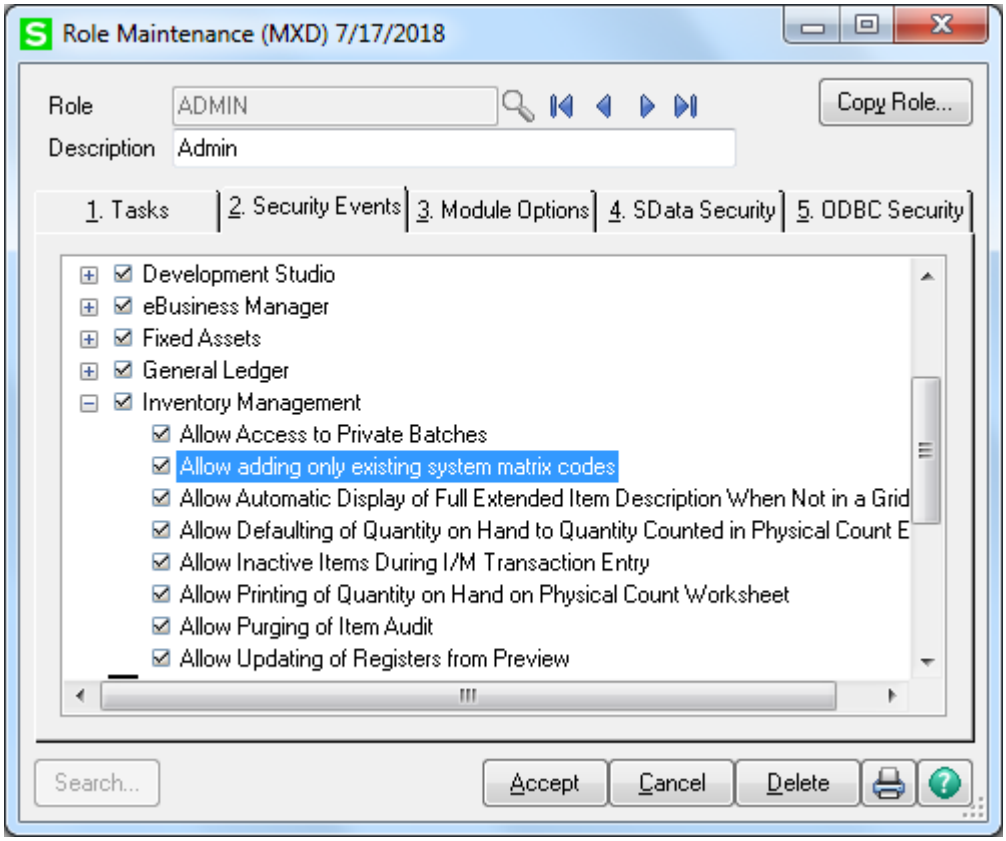
Select a period and click the **Transaction History** button to view the **Sales Transaction History**.


Sales Transaction History
Customer No. 01-ABF
American Business Futures
Year 2018
Period 07
Item Code MXP_ITEM
Matrix Item
Ship To ALL
Trans Date | Type | Ref No. | Whse | Description | Quantity | Unit Cost | Extension | Item Cost
7/17/2018 | SO | 0100165... | 001 | EAST WA... | 4.00- | 24.000 | 96.00- | 24.000
7/17/2018 | SO | 0100186... | 001 | EAST WA... | 3.00- | 24.000 | 72.00- | 24.000
7/17/2018 | SO | 0100187... | 001 | EAST WA... | 20.00- | 24.000 | 480.00- | 24.000
7/17/2018 | SO | 0100189... | 001 | EAST WA... | 10.00- | 24.000 | 240.00- | 24.000
7/17/2018 | SO | 0100193... | 001 | EAST WA... | 2.00- | 24.000 | 48.00- | 24.000
7/17/2018 | SO | 0100196... | 001 | EAST WA... | 10.00- | 24.019 | 240.19- | 24.019
7/17/2018 | SO | 0100197... | 001 | EAST WA... | 2.00- | 24.000 | 48.00- | 24.000
7/17/2018 | SO | 0100200... | 001 | EAST WA... | 2.00- | 24.000 | 48.00- | 24.000
7/17/2018 | SO | 0100202... | 001 | EAST WA... | 2.00- | 24.000 | 48.00- | 24.000
7/17/2018 | SO | 0100203... | 001 | EAST WA... | 4.00- | 24.000 | 96.00- | 24.000
OK

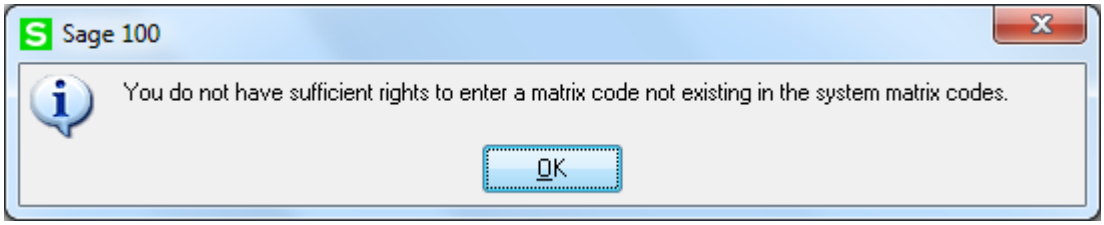
Matrix Codes Setup

Role Maintenance

The **Allow adding only existing system matrix codes** security event allows only authorized users to add matrix codes for an Item other than the ones already setup in the system.

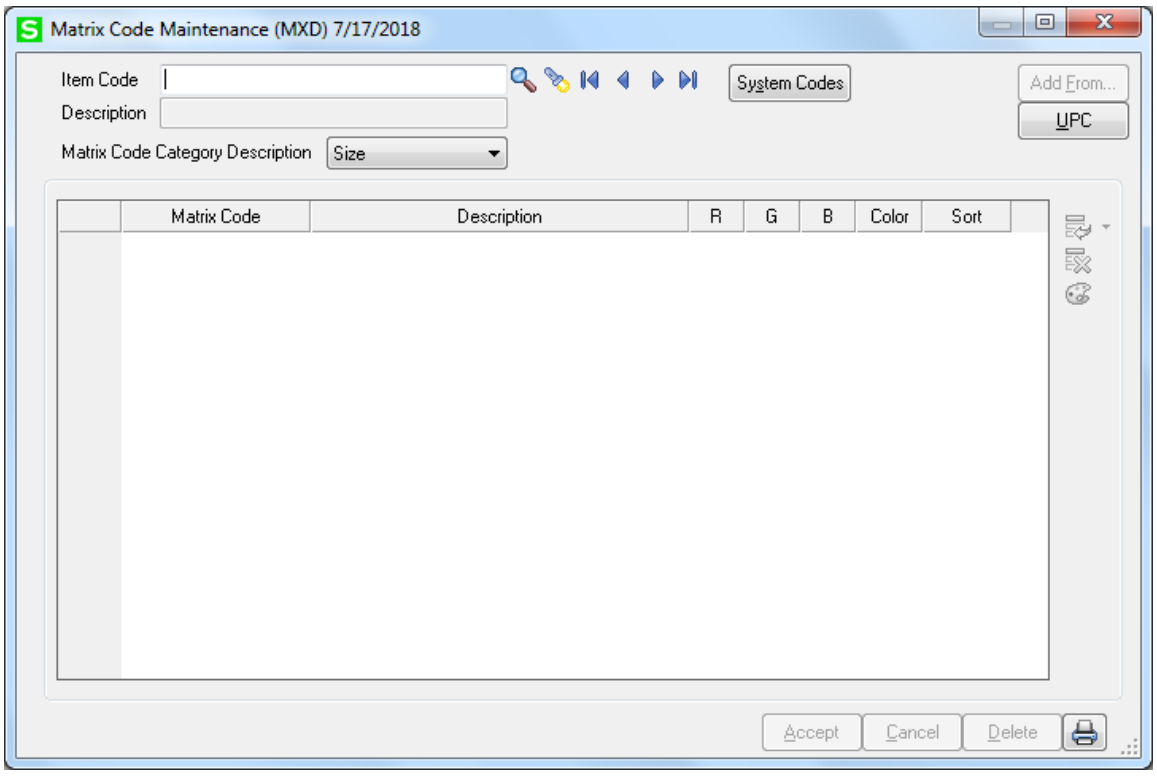


If this security event is enabled for a user's role, the user can add a Matrix code for an Item only from System Matrix codes. The following message will appear when trying to add a Matrix Code not existing in the System Matrix Codes.

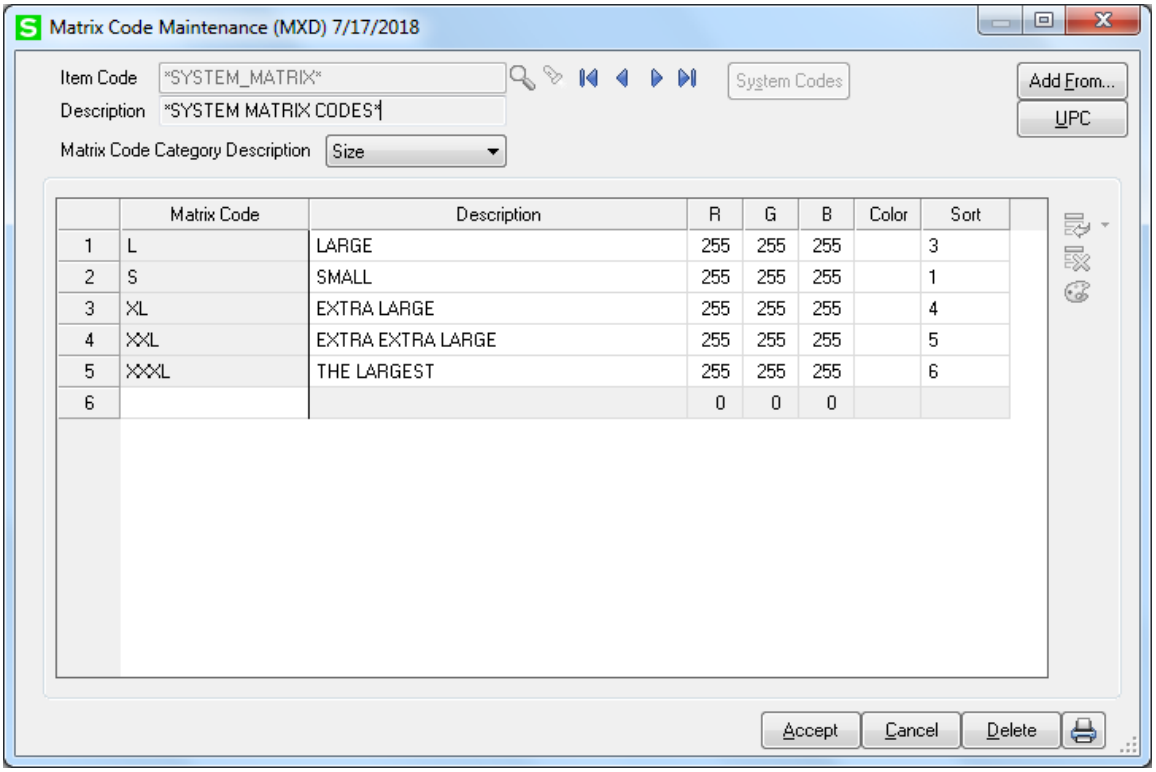


Matrix Code Maintenance

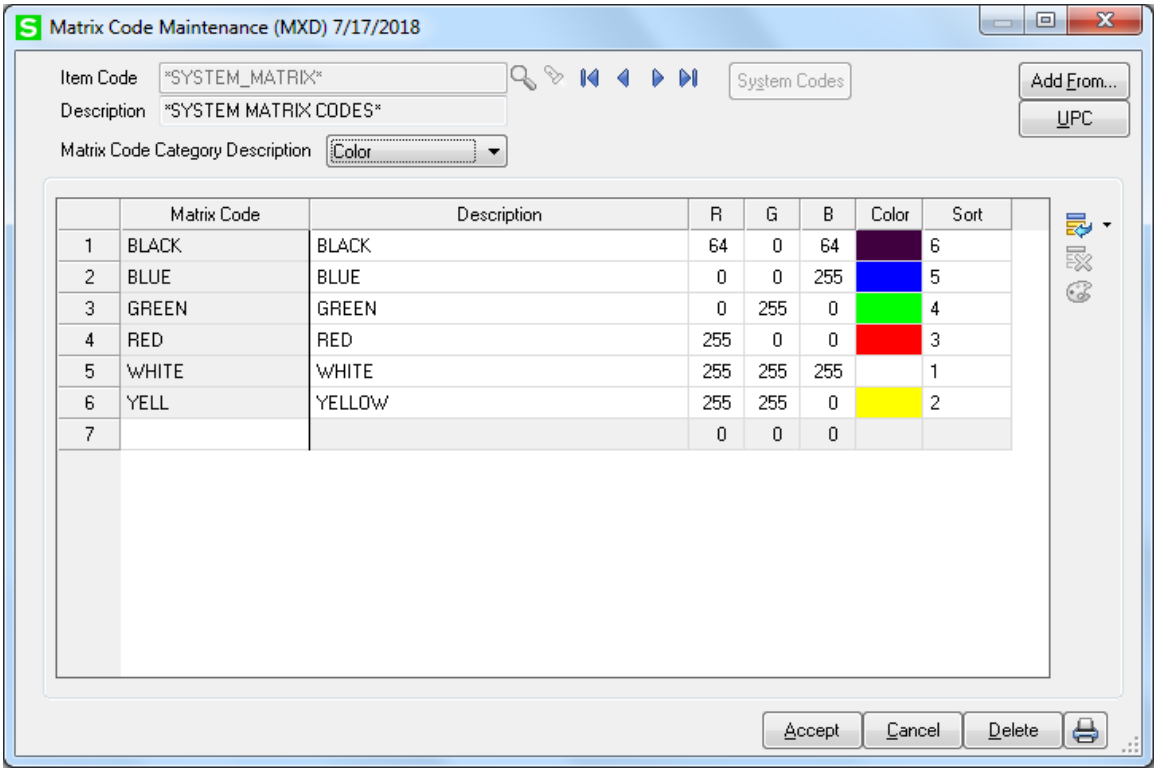
Select the **Matrix Code Maintenance** program under the **Inventory Management Setup** menu. The **System Codes** button allows for adding system level matrix codes, which may be added to any Item as needed.



Upon pressing the **System Codes** button the **Matrix Code Maintenance** is opened with the Item Code defaulted to ***SYSTEM_MATRIX*** with respective Description.
Select the **Matrix Code Category Description** (Size/Color) and enter the Matrix Codes corresponding to that category.



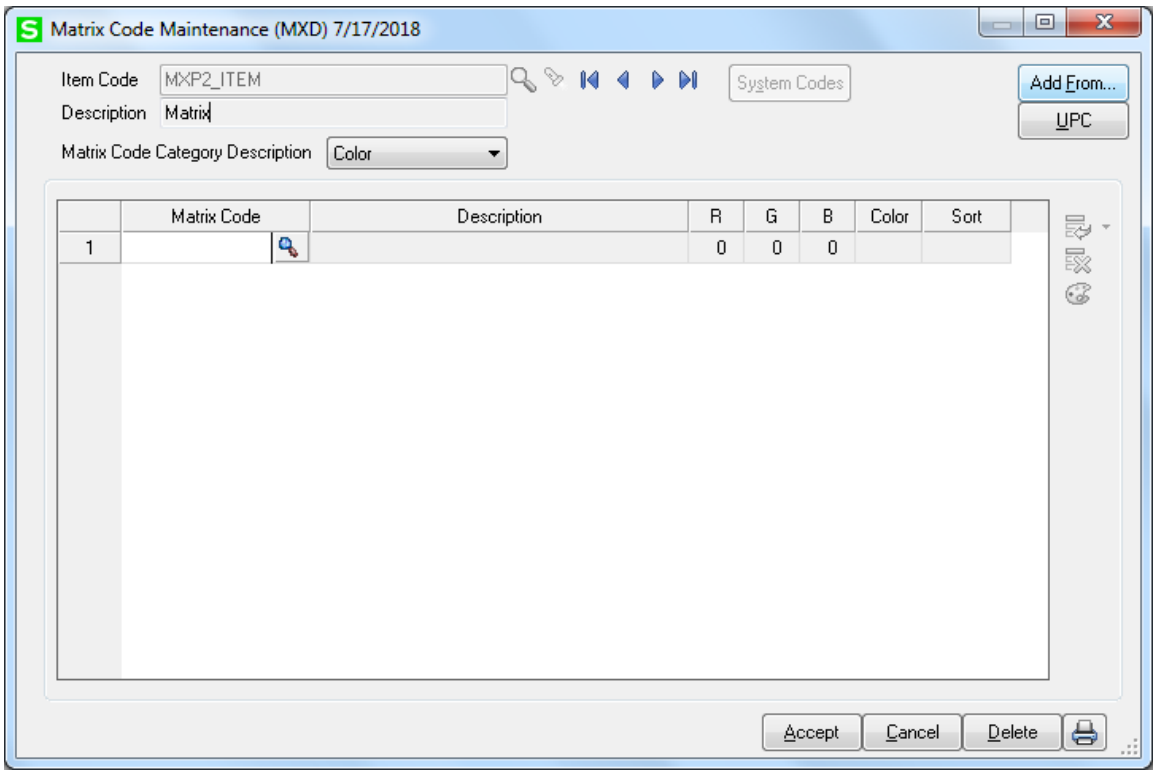
	Matrix Code	Description	R	G	B	Color	Sort
1	L	LARGE	255	255	255		3
2	S	SMALL	255	255	255		1
3	XL	EXTRA LARGE	255	255	255		4
4	XXL	EXTRA EXTRA LARGE	255	255	255		5
5	XXXL	THE LARGEST	255	255	255		6
6			0	0	0		



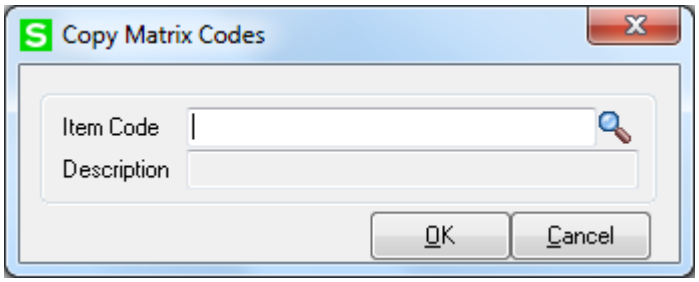
	Matrix Code	Description	R	G	B	Color	Sort
1	BLACK	BLACK	64	0	64		6
2	BLUE	BLUE	0	0	255		5
3	GREEN	GREEN	0	255	0		4
4	RED	RED	255	0	0		3
5	WHITE	WHITE	255	255	255		1
6	YELL	YELLOW	255	255	0		2
7			0	0	0		

You may enter also Description; specify the color either by entering respective R, G, and B codes or by selecting from color palette. The **Sort** field allows for setting the order of Matrix Codes displayed in the Matrix Distribution Grids.

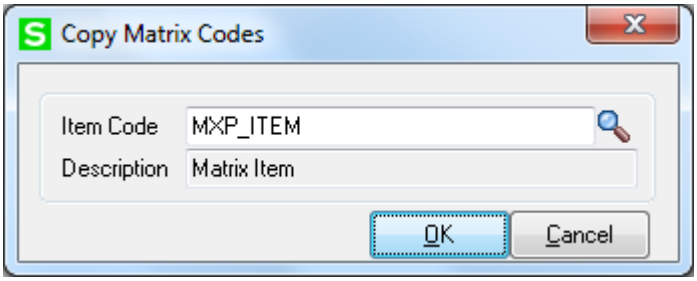
The **Add From** button allows for copying Matrix Codes from any item to the selected item's Matrix Codes.



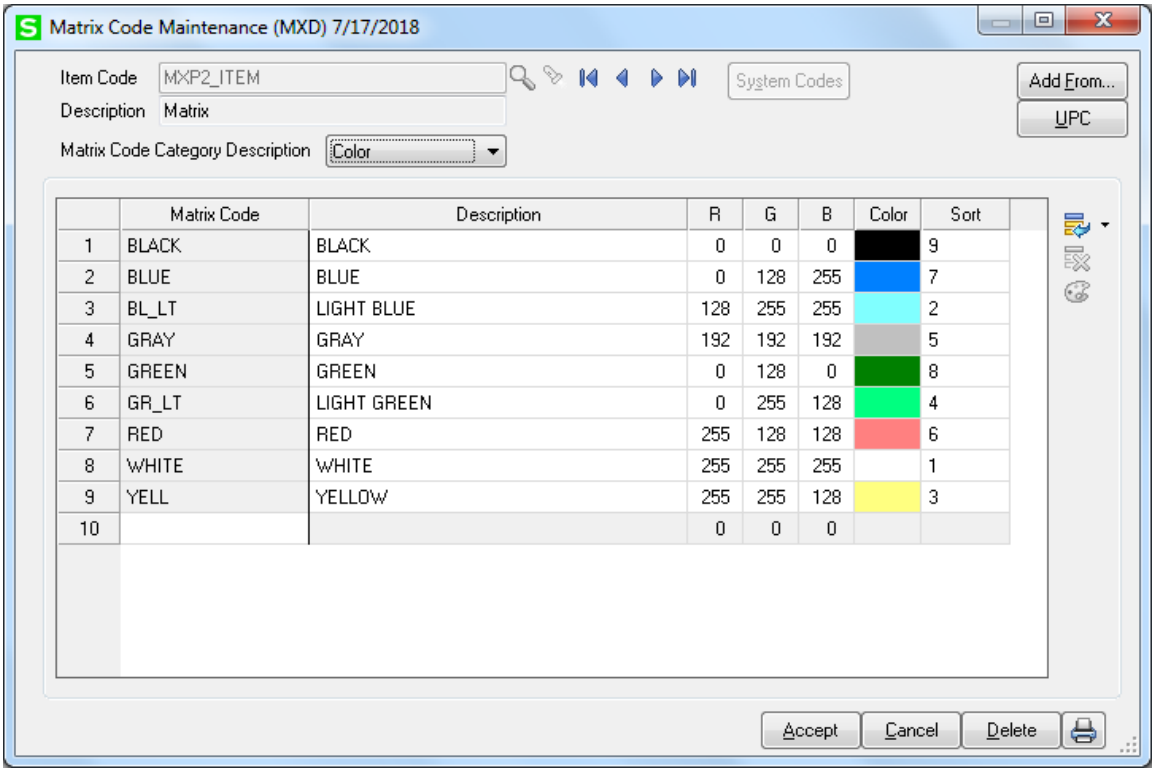
The **Copy Matrix Codes** window is opened upon pressing the **Add From**... button



Select an Item you want the Matrix Codes to be copied from and press OK.

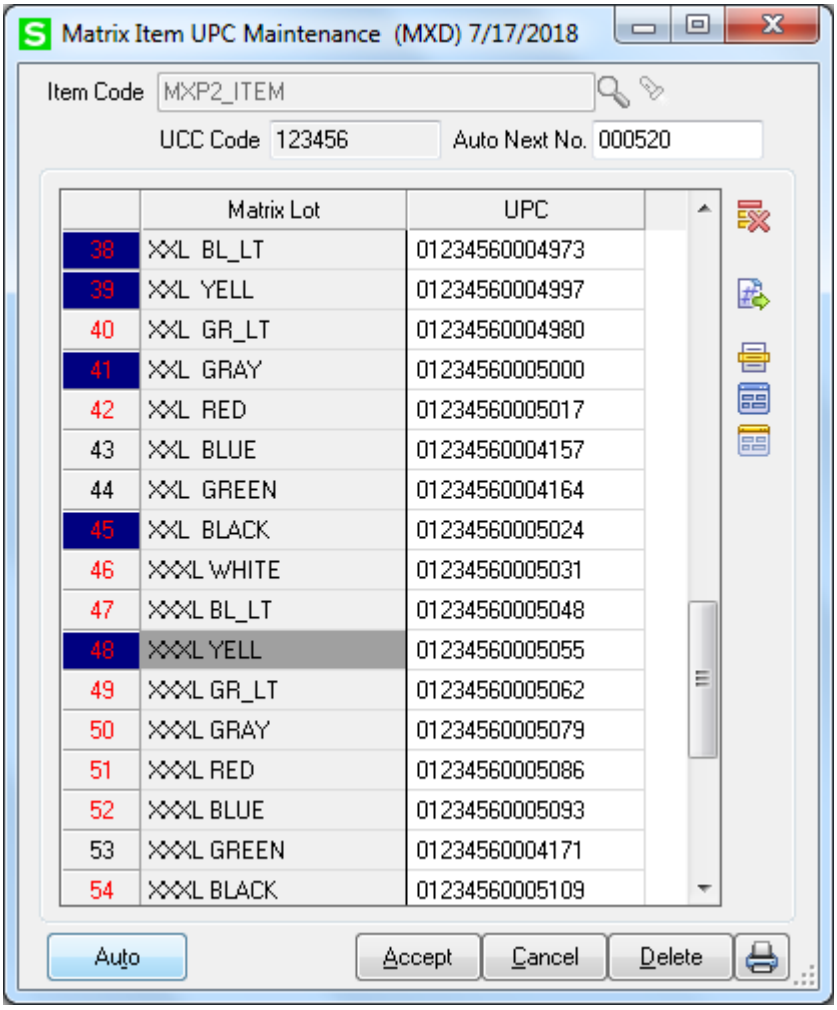


The Matrix Codes already entered for the destination Item will be retained, and the copied Codes will be added. If the Code being copied already exists, it is retained with all options and not overwritten by the added Code.

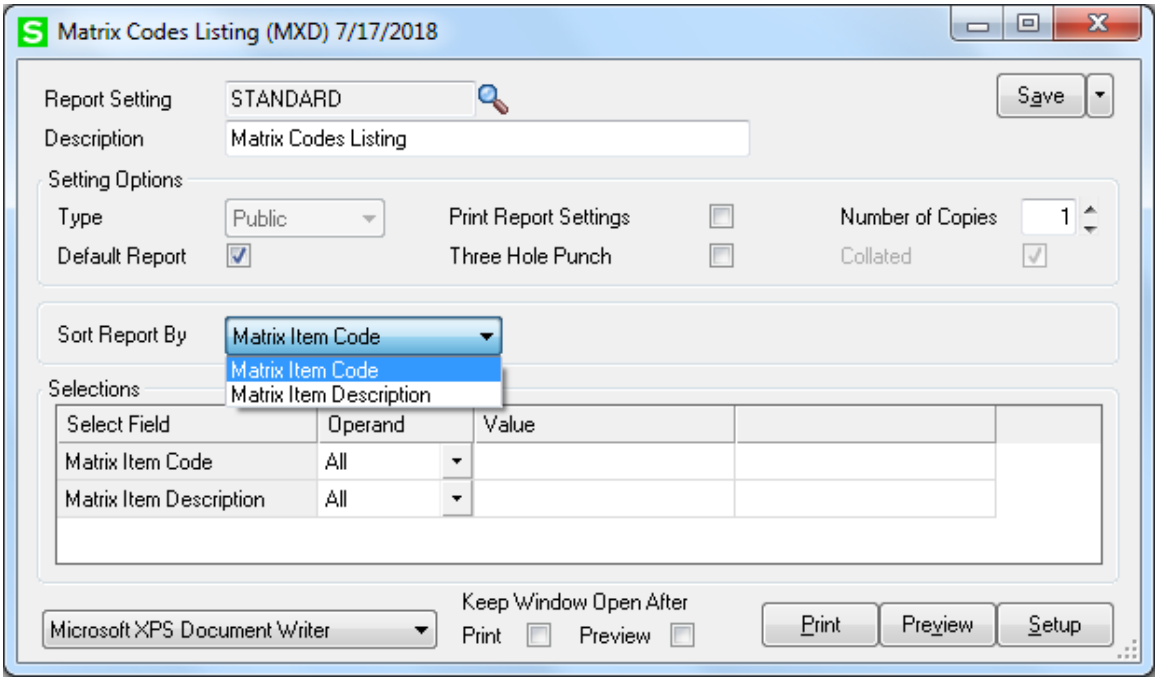


	Matrix Code	Description	R	G	B	Color	Sort
1	BLACK	BLACK	0	0	0		9
2	BLUE	BLUE	0	128	255		7
3	BL_LT	LIGHT BLUE	128	255	255		2
4	GRAY	GRAY	192	192	192		5
5	GREEN	GREEN	0	128	0		8
6	GR_LT	LIGHT GREEN	0	255	128		4
7	RED	RED	255	128	128		6
8	WHITE	WHITE	255	255	255		1
9	YELL	YELLOW	255	255	128		3
10			0	0	0		

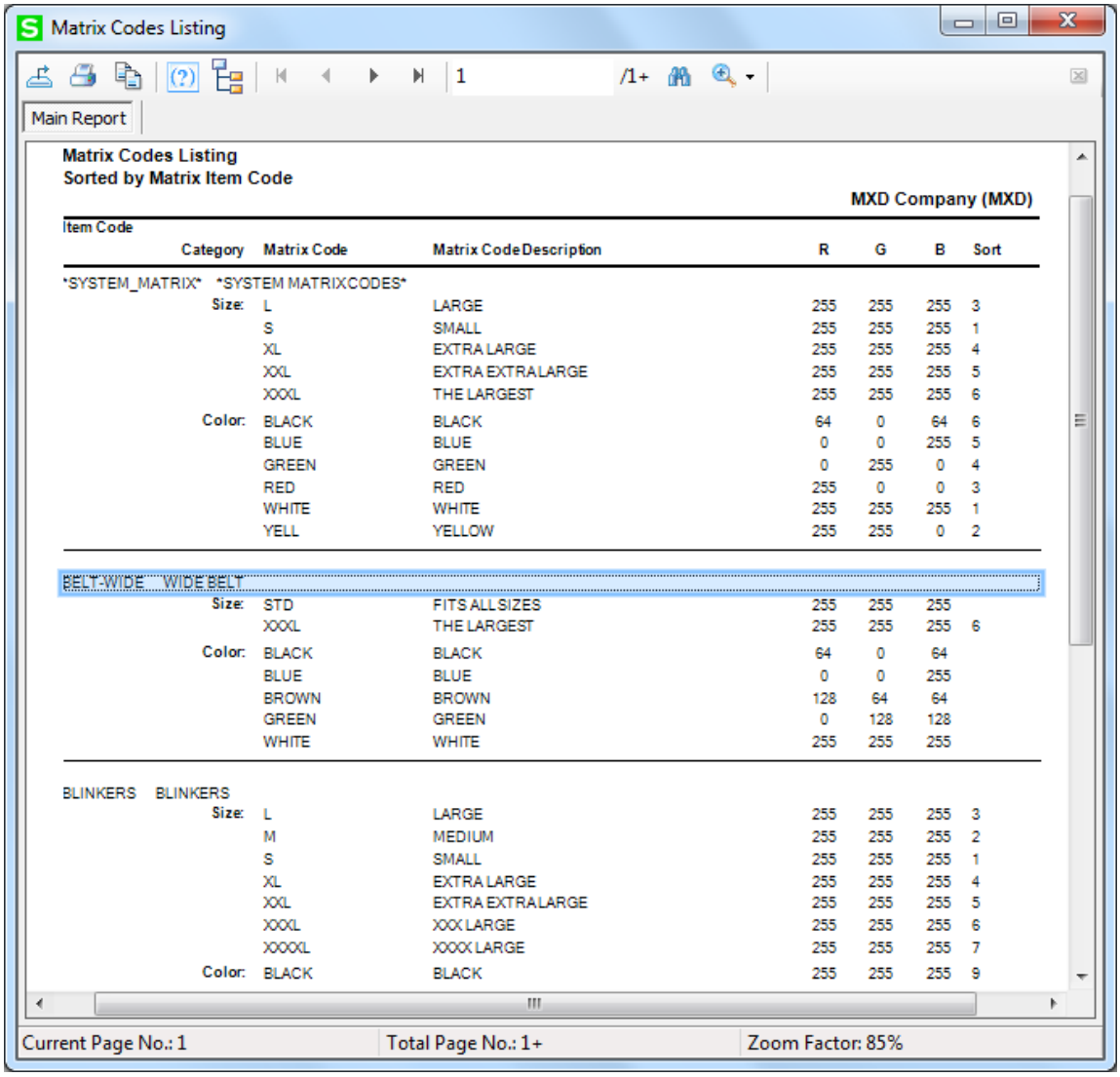
The **UPC** button links to **Matrix Item UPC Code Maintenance** for the selected Item. If there are UPC codes already generated for current Item Matrix Lots, they will be loaded.



Pint button allows printing the Matrix Codes listing:



The report can be printed sorted by **Matrix Item Code** or **Matrix Item Description**. Default setting is Matrix Item Code.
Here is an example of printout for the report sorted by Matrix Item Code:

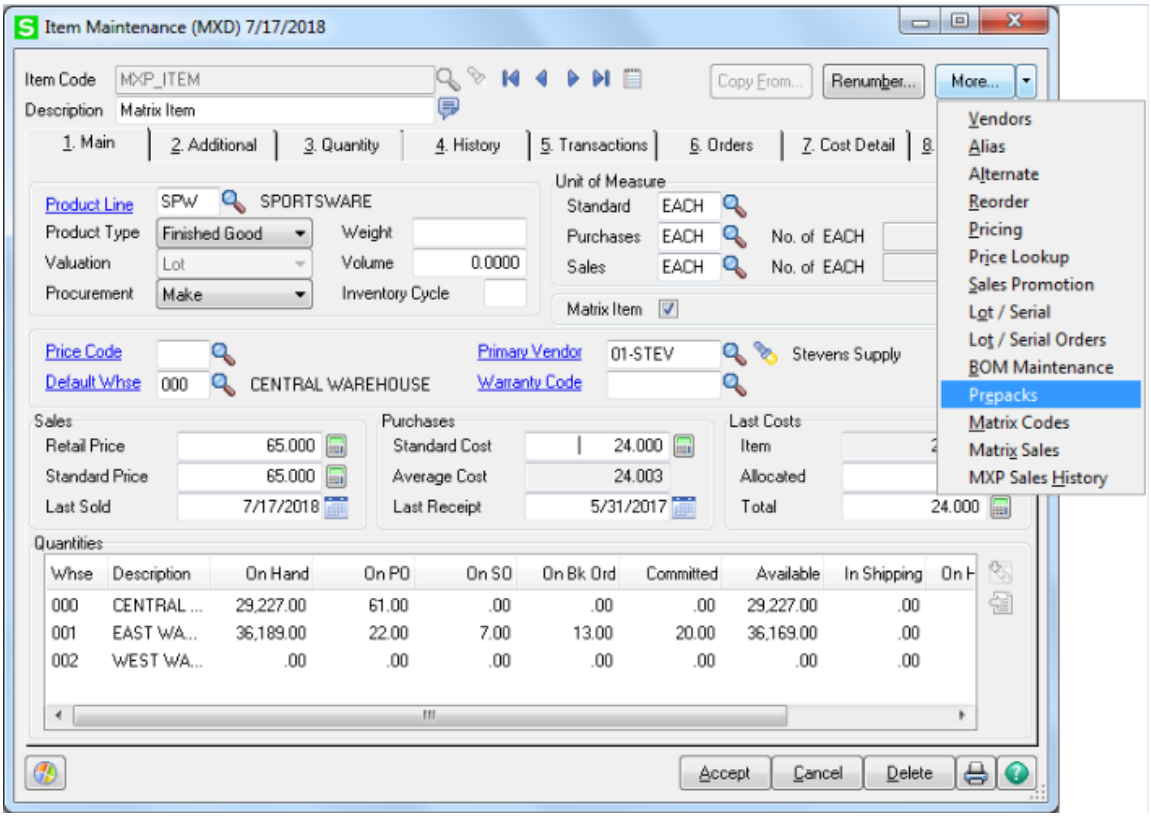


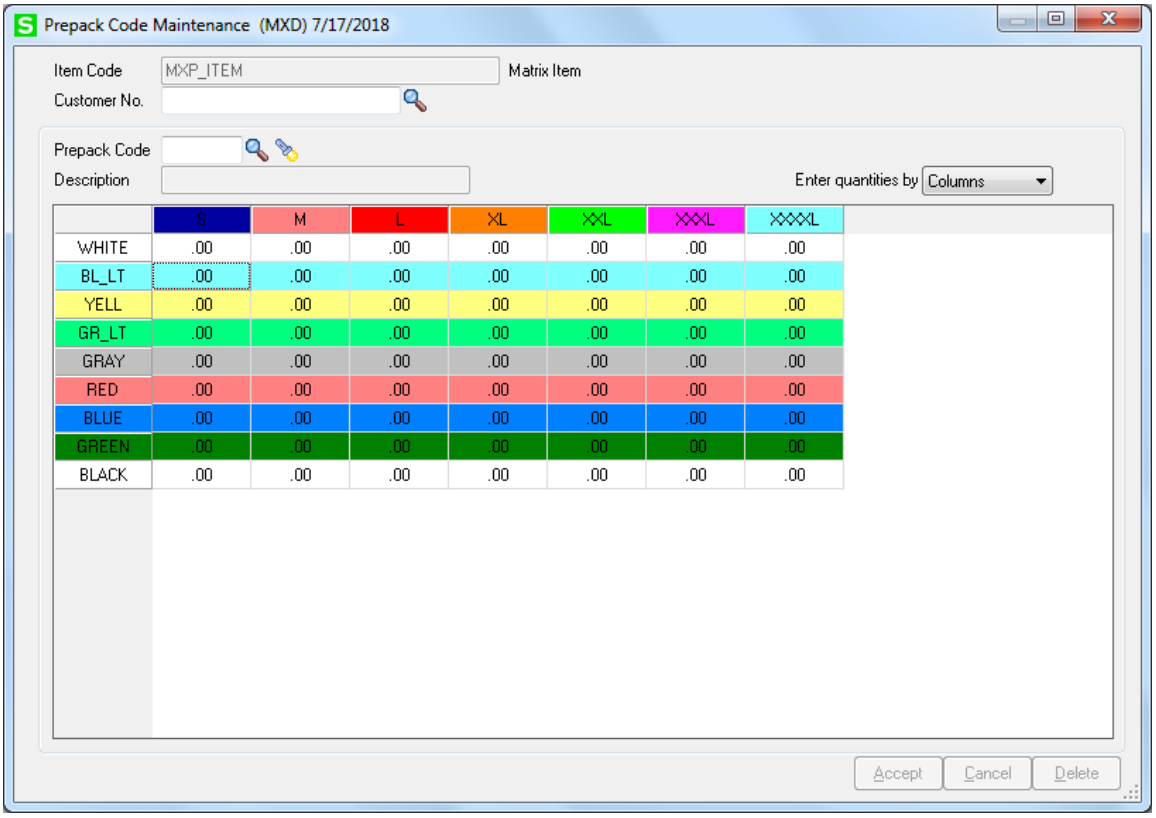
This report is accessible also from Inventory Management Reports menu.
The initial grid is constructed from the Matrix Codes of the selected Item, if it has at least one Code of each Category. Otherwise system's Matrix Codes are used.

Prepacks

In the **Item Maintenance** program, select a Matrix Item.

Click the **Prepacks** button from the **More…** menu button.

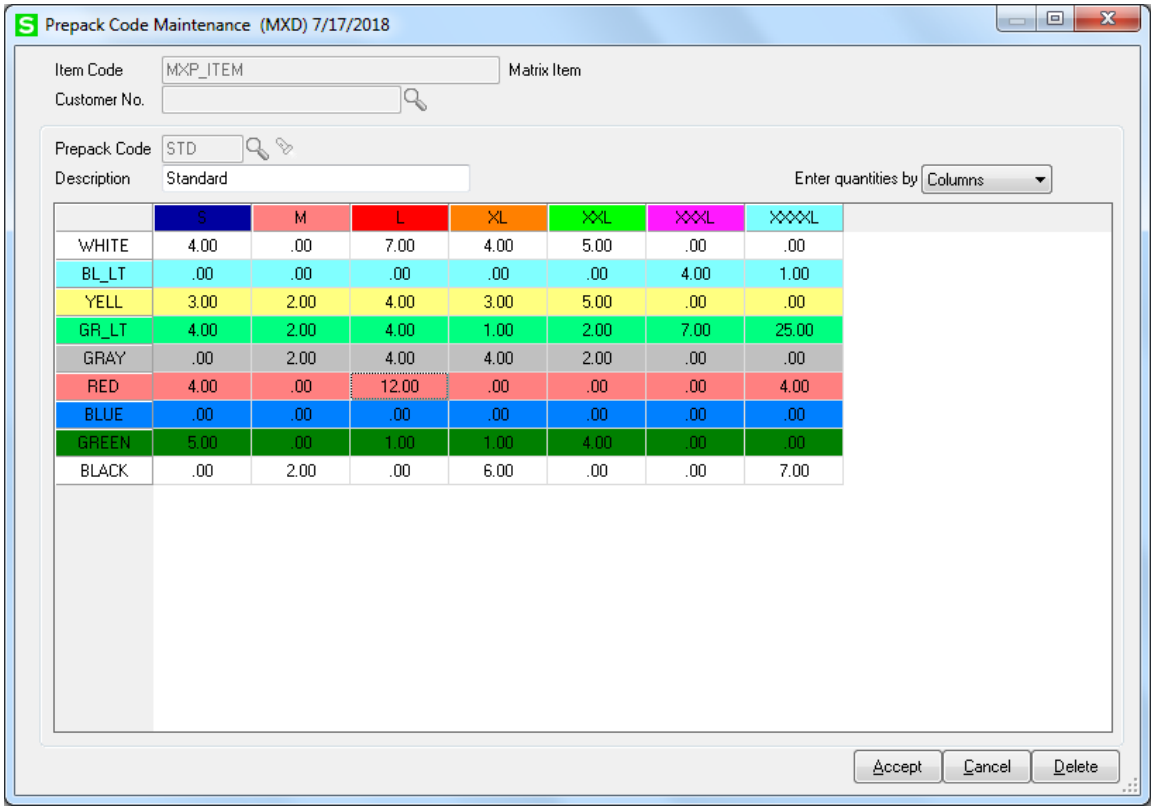

Item Maintenance (MXD) 7/17/2018
Item Code MXP_ITEM
Description Matrix Item
Copy From...
Renumber...
More...
Vendors
Alias
Alternate
Reorder
Pricing
Price Lookup
Sales Promotion
Lot / Serial
Lot / Serial Orders
BOM Maintenance
Prepacks
Matrix Codes
Matrix Sales
MXP Sales History
1. Main
2. Additional
3. Quantity
4. History
5. Transactions
6. Orders
7. Cost Detail
Product Line SPW SPORTSWARE
Product Type Finished Good
Valuation Lot
Procurement Make
Weight
Volume 0.0000
Inventory Cycle
Unit of Measure
Standard EACH
Purchases EACH
Sales EACH
No. of EACH
No. of EACH
Matrix Item
Price Code
Default Whse 000 CENTRAL WAREHOUSE
Primary Vendor 01-STEV Stevens Supply
Warranty Code
Sales
Retail Price 65.000
Standard Price 65.000
Last Sold 7/17/2018
Purchases
Standard Cost 24.000
Average Cost 24.003
Last Receipt 5/31/2017
Last Costs
Item
Allocated
Total 24.000
Quantities
Whse Description On Hand On PO On SO On Bk Ord Committed Available In Shipping
000 CENTRAL... 29,227.00 61.00 .00 .00 .00 29,227.00 .00
001 EAST WA... 36,189.00 22.00 7.00 13.00 20.00 36,169.00 .00
002 WEST WA... .00 .00 .00 .00 .00 .00 .00
Accept
Cancel
Delete



Select a **Customer No.** to view the Prepacks of the selected customer. If no Customer is selected, the Prepacks of the Item can be viewed.

To create a new Prepack, enter the **Prepack Code** and **Description**.

Select a cell, and enter the quantity:

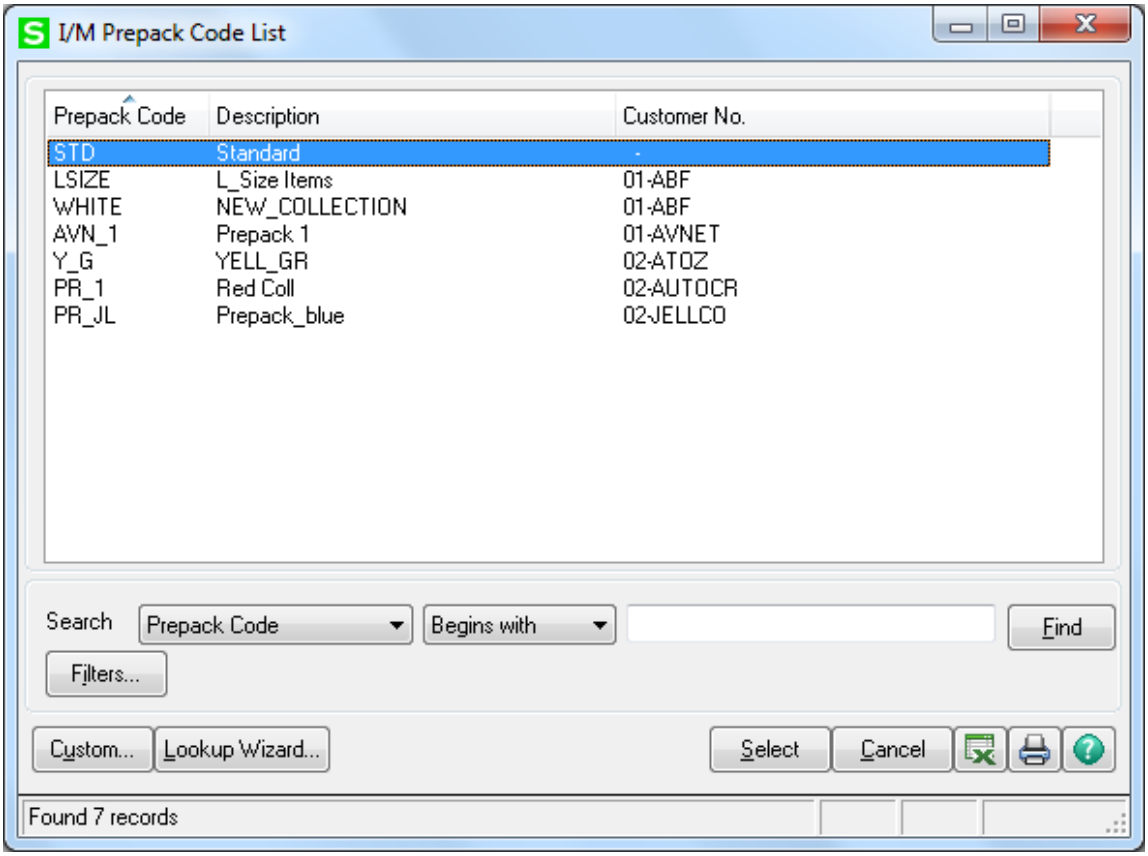


After pressing Enter, the focus moves to the next cell, which is activated by pressing Enter, double-clicking, or by directly entering the new quantity. The direction of moving the selection in the Grid when entering quantities is defined by the **Enter quantities by** drop-down list. It is defaulted to the setting on the **Inventory** tab of the **Matrix Options** program, but you can change it and select **Rows** or **Columns** for current use. You can choose to enter all the quantities in the first row, and then move to the second, and so on (by **Rows**). If you want to enter all the quantities in the first column, then in the second, and so on, select the **Columns** option. In this case, the selection moves down, when accepting the quantity.

After filling all the needed quantities, click **Accept**. Click **Cancel** to clear all the changes for the selected/entered **Prepack Code**. Click **Delete** to delete the selected **Prepack Code**.

The **Lookup** button displays the list of existing Prepacks for the selected Item – Customer pair. If no Customer is selected, the list displays the Prepacks of the Item.

The **Alternate Lookup** button displays the list of all the Prepacks of the Item (for all the Customers, and the Item's own).

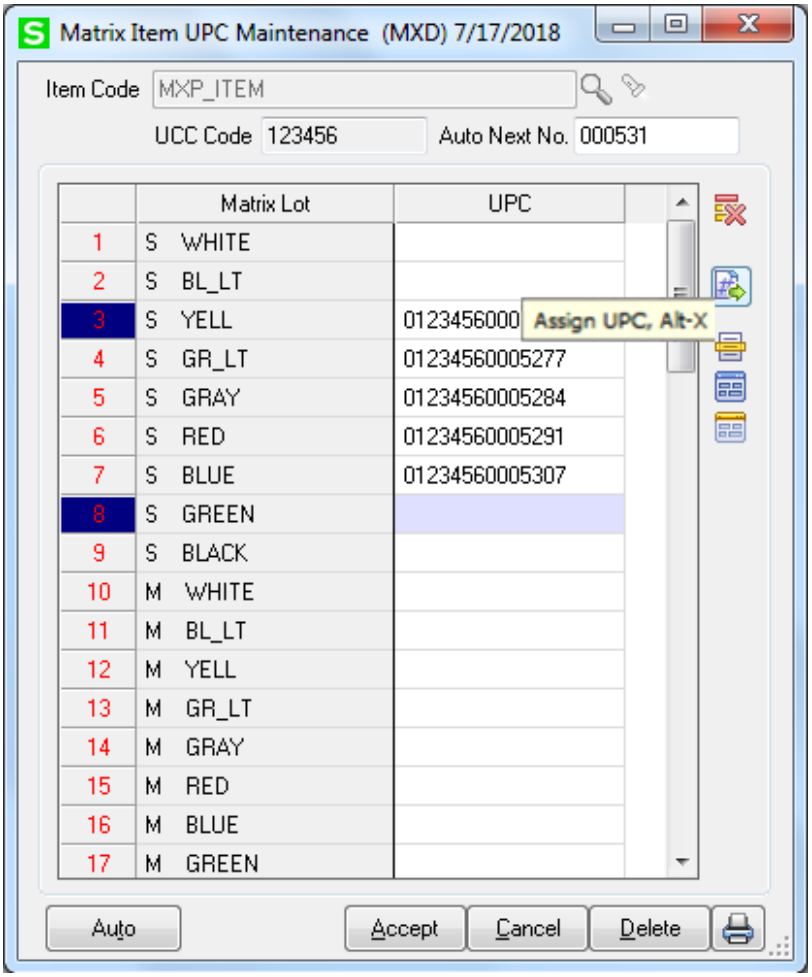


The initial grid is constructed from the Matrix Codes of the selected Item, if it has at least one Code of each Category. Otherwise system's Matrix Codes are used.

The **Prepacks** of the Item can be viewed from the **Inventory Inquiry** program, too. Clicking the **Prepacks** button opens the **Prepack Code Inquiry** screen where Prepacks can be only viewed but not modified or added

Matrix Item UPC Maintenance

The **Matrix Item UPC Maintenance** program under the **Inventory Management Setup** menu allows for assigning UPC Codes to the Matrix Lot.



Enter the **Item Number**, or select it using the **Lookup** button. Only Matrix Items are listed in the Item List.

UCC Code and **Auto Next Number** are defaulted to the **UPC** settings configured in the **Matrix Options**.

The **Assign UPC** button allows for assigning a UPC code to the selected line.

Load All Existing Lots, Alt-S - this button allows loading all existing lots for the selected Item from IM_ItemCost table.

Load Existing Matrix Codes, Alt-L -this button allows loading all Matrix Codes setup for current Item in the Matrix Code Maintenance.

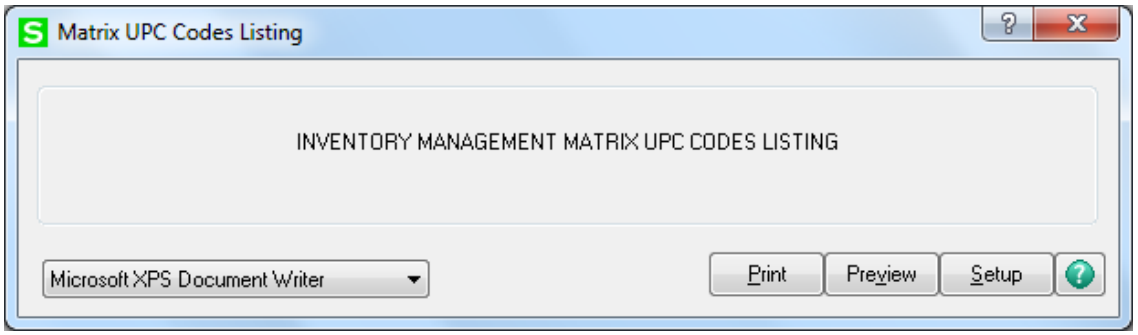
Load System Matrix Codes, Alt-M - this button allows loading the System Matrix Codes setup in the system.

The **Auto** button allows for assigning codes automatically to all the listed Lot Numbers not having UPC Codes yet.

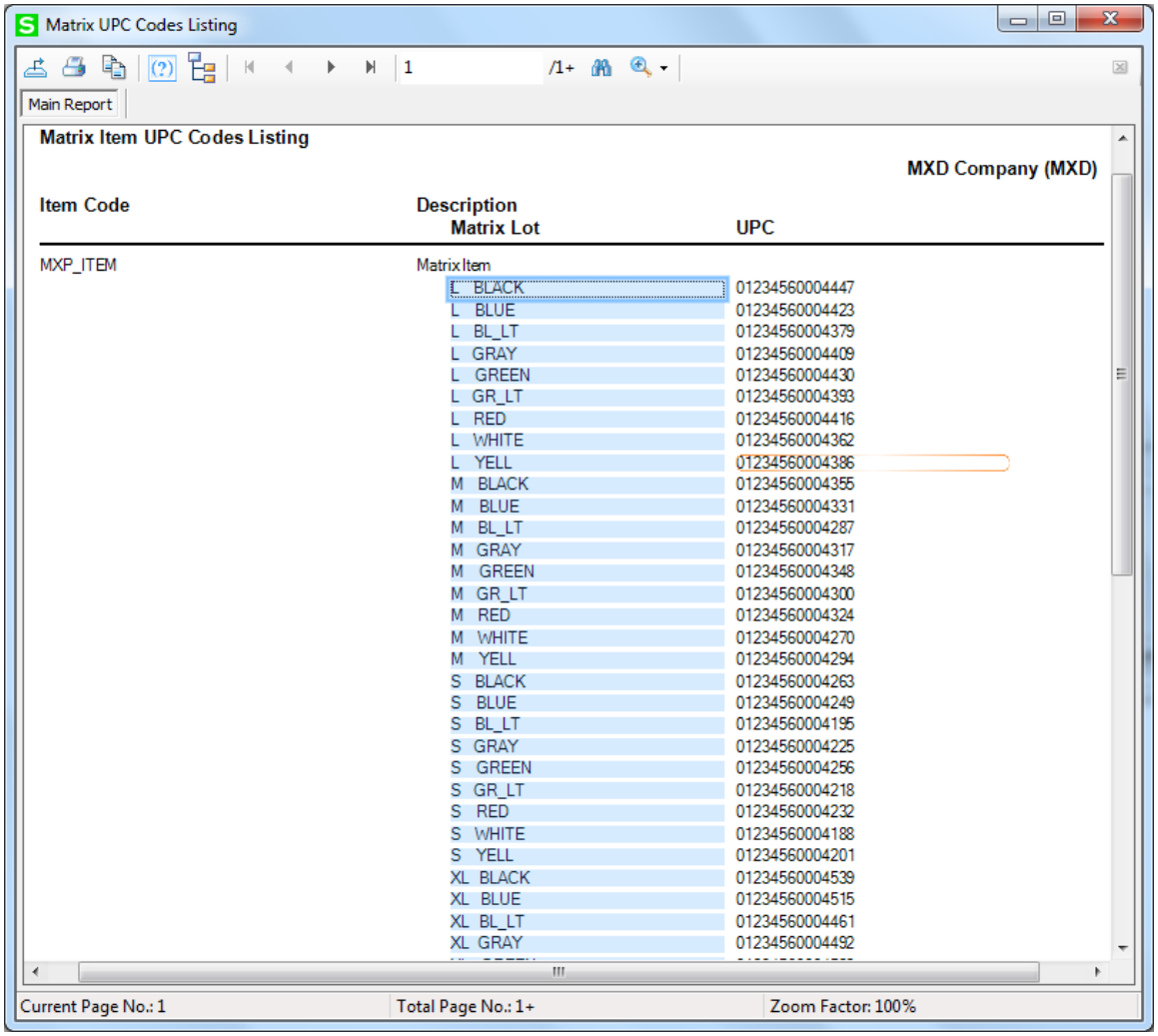
Any valid UPC Code may be entered. If the **Allow Only Selected type** box is not checked in the UPC options, the length can be 12, 13 or 14 digits. If the entered UPC Code is 13 or 12 digits long, the program adds one or two zeroes correspondingly to the beginning of the Code. The Checking Digit is checked to be valid. If the **Allow Only Selected type** box is checked, the length must match the selected type. If the **Use UCC** option is set in the UPC options, you can enter only Item Reference (the length must correspond to the Options). In this case the program will use the UCC Code and calculate the Checking Digit.

All the codes entered will be saved when clicking the **Accept** button.

Print button allows for printing the Matrix UPC Codes Listing:



Here is an example of printout:



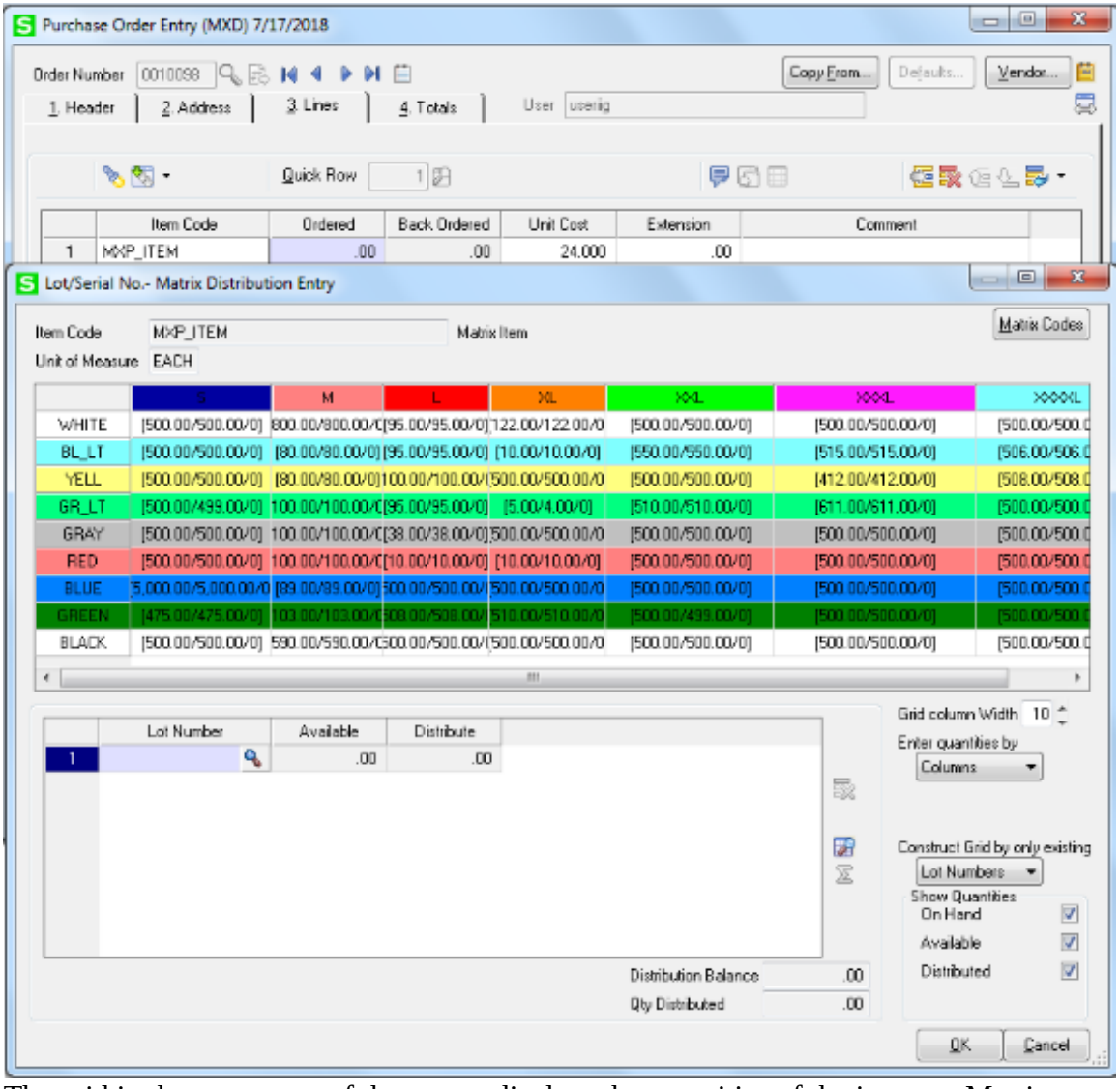
Matrix Distribution

Purchase Order Entry

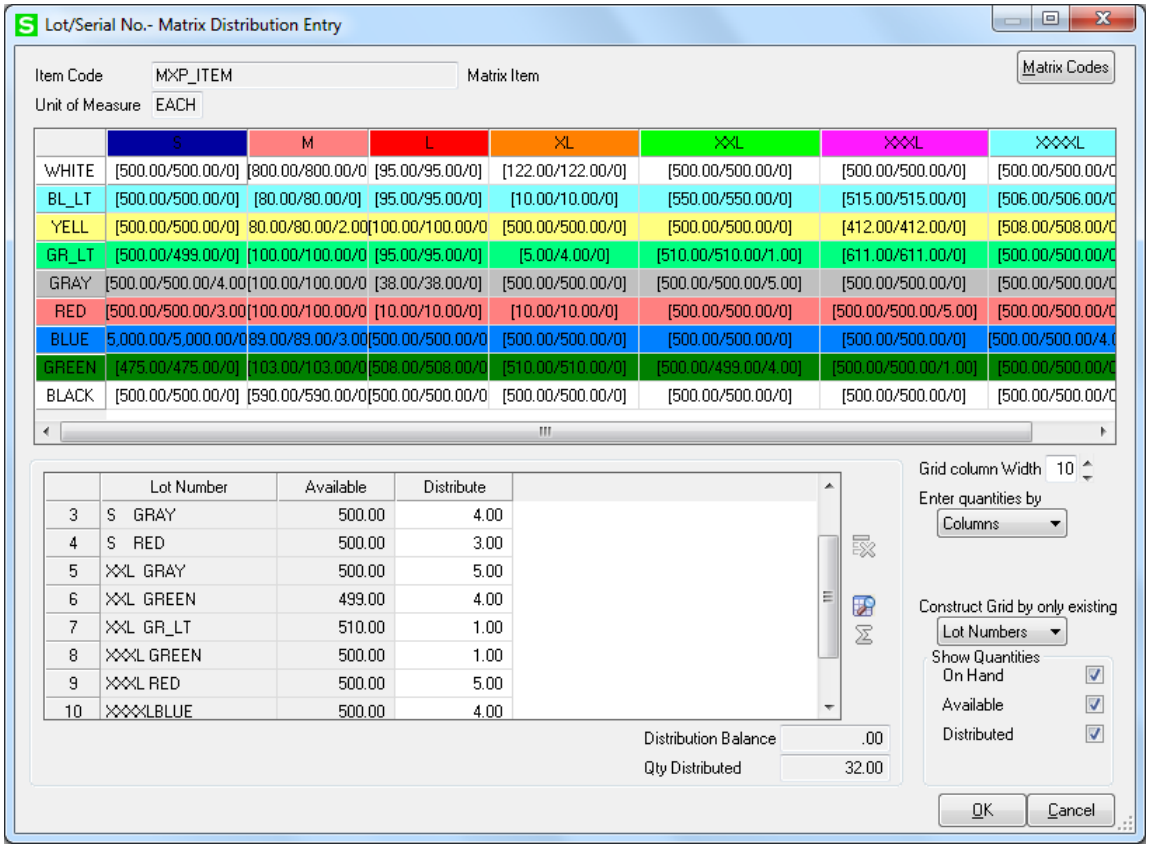
Select the **Purchase Order Entry** program under the Purchase Order Main menu.

The Matrix Distribution is allowed for Standard Order Type and Repeating Orders (if corresponding checkbox is selected on the Purchase Order tab of the Matrix Options). For

Repeating Orders the distributed quantities are not committed to the corresponding warehouse.
In the Lines tab, select a Matrix Item. If the Matrix Distribution in **Purchase Order Entry** is enabled in the **Matrix Options,** the following **Lot/Serial No.-Matrix Distribution Entry** screen is popup:



The grid in the upper part of the screen displays the quantities of the item per Matrix Codes pair, with the **Category 1 Matrix Codes** placed horizontally across the top of the grid and the **Category 2 Matrix Codes** placed vertically. The Codes are highlighted with corresponding colors. Note that text and background colors of the cells can be set to either of corresponding Category's code colors, in the **Matrix Options** program.



Clicking in a cell in the grid selects the Lot Number corresponding to the selected Matrix Codes pair, both in the **Lot Number** field and the Lot Numbers list.

You can navigate between cells in the grid using the Arrow keys. PageUp selects the first, and PageDown the last cell in the current column; Home selects the first, and End the last cell in the current row.

In addition to the fields of the standard screen (in the lower part), there are options for the grid. The values are defaulted to the settings on the Purchase Order tab of the Matrix Options program, but can be changed for the current order.

Enter Grid column Width. Each column in the matrix distribution grid will have the entered width.

From the **Enter quantities by** drop-down list, select Rows or Columns. This option specifies the direction of moving the cursor in the Grid when entering quantities. You can choose to enter all the quantities in the first row, and then move to the second, and so on (by Rows). The cursor moves to the next cell when accepting the quantity entered in the cell of current row. If you want to enter all the quantities in the first column, then in the second, and so on, select the Columns option. In this case, the cursor moves down, when accepting the quantity.

From the Construct Grid by only existing drop-down list, select Lot Numbers to display only the selected item's Matrix Codes for which Lot Numbers (they are listed on the Lot Numbers List) already exist. Select Matrix Codes to display all Matrix Codes for the selected item from the Matrix Code Maintenance.

In the Show Quantities section, check the boxes corresponding to the quantities to be displayed in the matrix distribution grid. **Quantities On Hand**, **Available**, and **Distributed** can be selected. Each cell of the grid will display the selected quantities, separated by slashes.

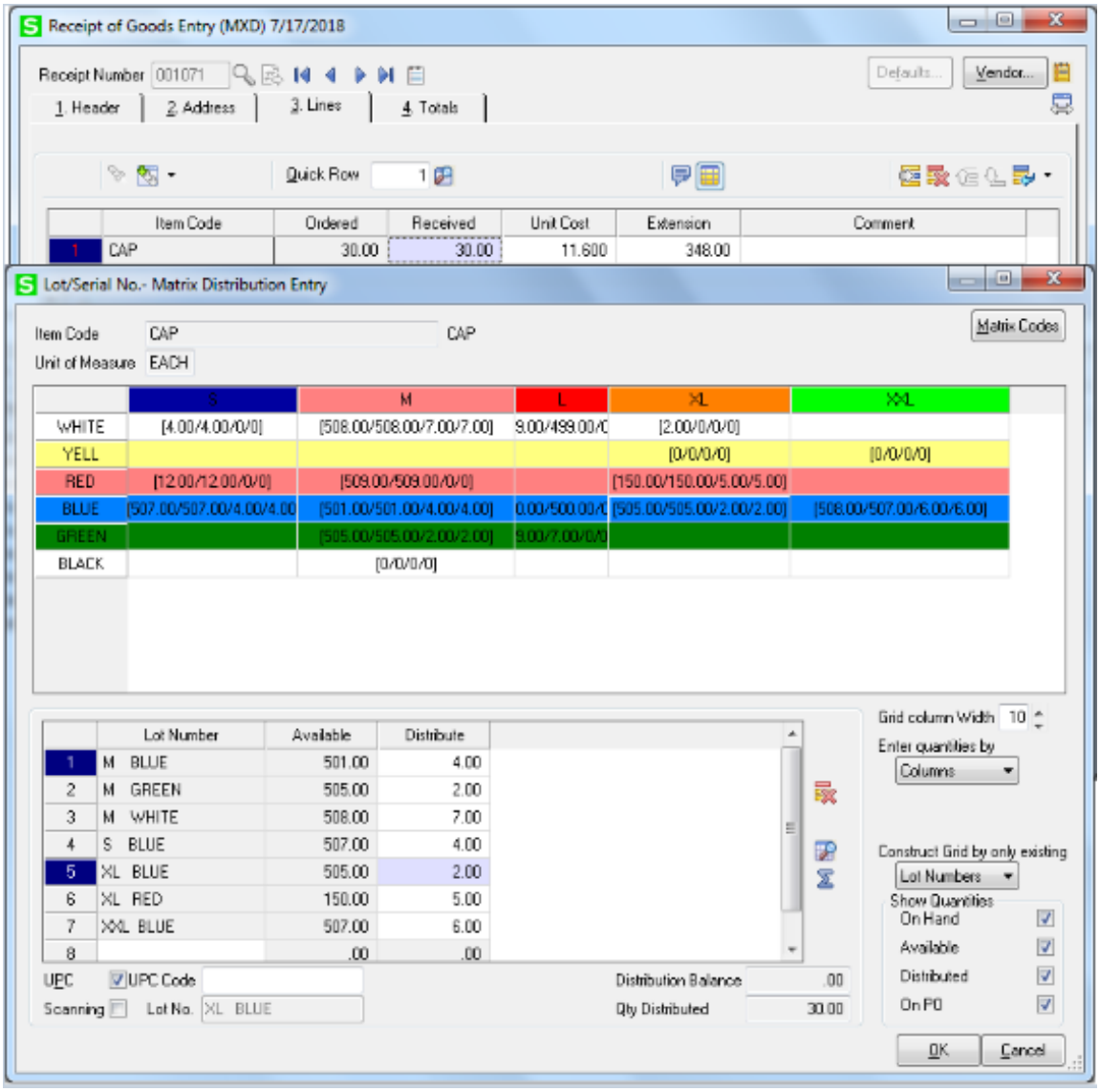
If the Allow only existing Matrix Codes box is checked in the Matrix Options program, then only Lot Numbers containing existing Matrix Codes are allowed to be entered. If the check box is cleared, you can enter Lot Numbers with new Matrix Codes (not entered in the Matrix Code Maintenance). If the Grid is constructed by Matrix Codes, the new Codes will not be displayed.

The **Distribution Balance** field displays the difference of Quantity Ordered and Quantity Distributed in the Matrix Distribution.

Receipt of Goods

Select the Receipt of Goods program under the Purchase Order Main menu.

In the Lines tab, select a Matrix Item. If the Receipt of Goods box is checked in the Matrix Distribution in section of the Purchase Order tab on the Matrix Options screen, the following Matrix Distribution Entry screen is displayed instead of the standard Lot/Serial No. Distribution screen.



The **Matrix Distribution** screen is similar to the screen in the **Purchase Order Entry** program.

The grid in the upper part of the screen displays the quantities of the item per Matrix Codes pair, with the **Category 1 Matrix Codes** placed horizontally across the top of the grid and the **Category 2 Matrix Codes** placed vertically. The Codes are highlighted with the corresponding colors. Note that text and background colors of the cells can be set to correspond to either of Category's code colors, in the **Matrix Options** program.

Clicking in a cell in the grid selects the Lot Number corresponding to the selected Matrix Codes pair, both in the **Lot Number** field and the Lot Numbers list.

If the Receipt of Goods is one-step (not based on a Purchase Order), or the line is newly added, the **Quantities Ordered** and **Received** are set equal to the **Quantity Distributed** in the **Matrix Distribution** screen.

The **Quantity Distributed** field is displayed only when **Quantity Received** is zero.

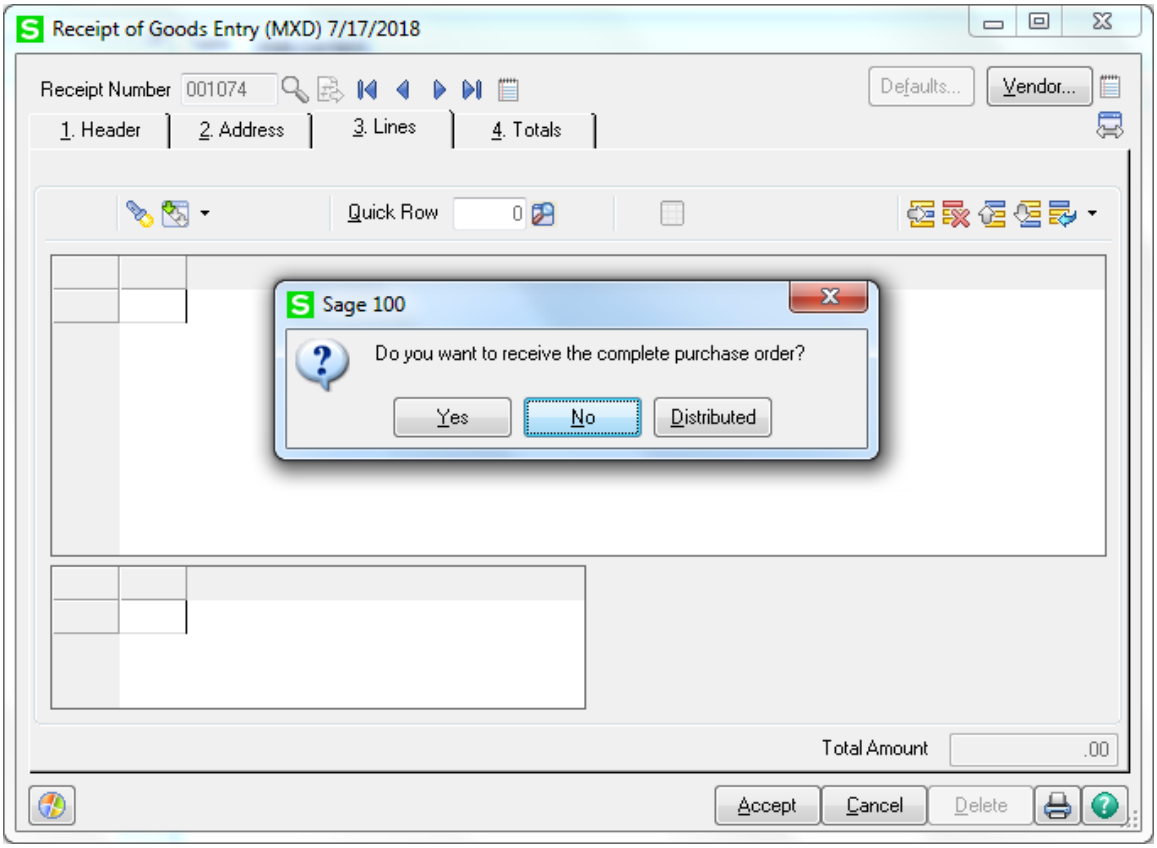
The **Quantity On PO** field displays the distributed quantities on Purchase Order.

The **Scanning** check box determines that the Lot Number field is being used for scanning UPC Codes. The corresponding Lot Number will be selected in the list and in the Grid. If the check box is cleared, the entered number is treated as regular Lot Number.

The **Scanning** sequence (++UPC++ by default) specified in the **UPC** section of **Matrix Options** program can be typed in the **Lot Number** field, or scanned with bar code scanner to switch the UPC Code Scanning mode.

The **UPC** box is checked by default with the **UPC Code** field enabled to allow for entry of a UPC Code for the selected/entered Lot Number, which don't have UPC Code specified in the UPC Code Maintenance.

If the **Receipt of Goods** is based on a Purchase Order a message is popup on the Lines tab of the Receipt of Goods Entry allowing the user to receive the quantities distributed in the PO, all the quantities regardless distribution or don't receive any:
Here is an example of **Purchase Order-> Receipt** processing:

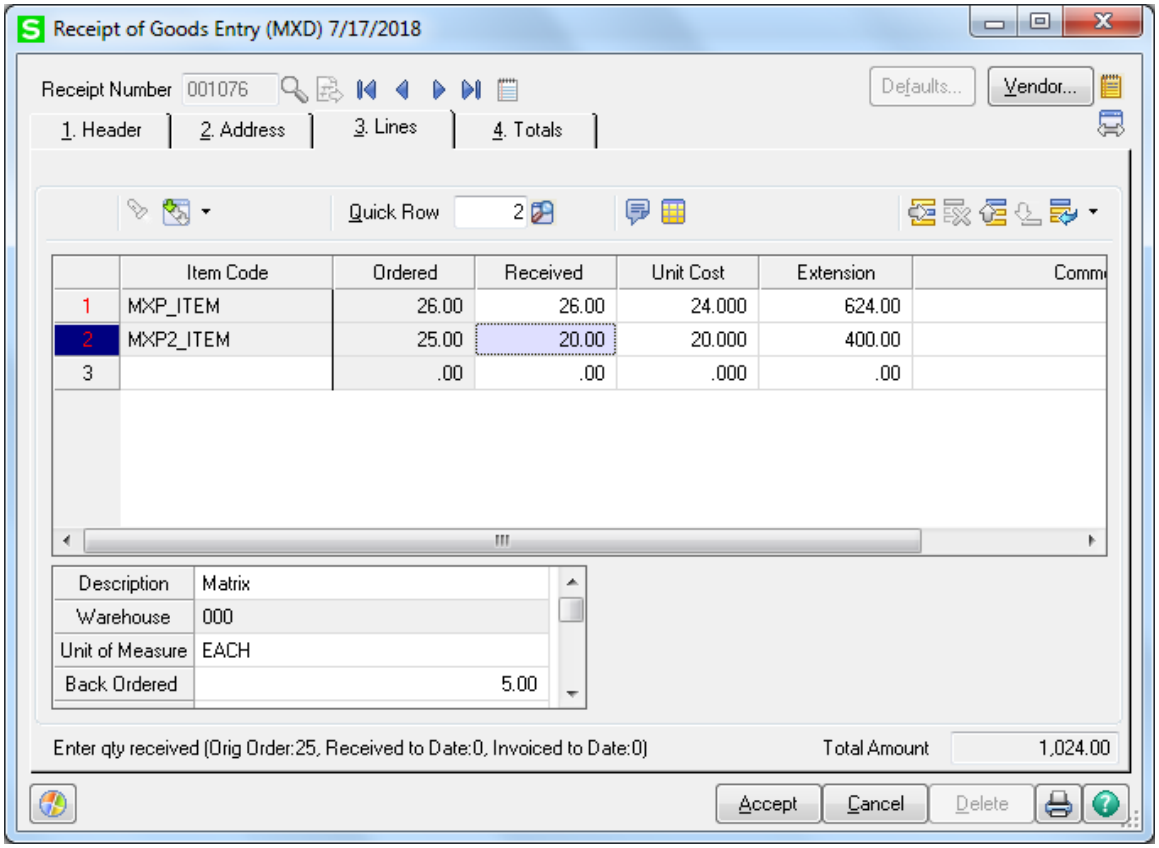


If **Yes** is selected all the quantities ordered will be received entirely, with the quantity received equal to the quantity **Ordered.**
In this case the matrix item distribution is carried over from the Purchase Order to the Receipt. If the entire quantity distributed in the Purchase Order is not received, and the distribution of the Order is changed in the Receipt entry so that to back order the quantities from the same Matrix/Lots; the Purchase Order distribution is retained in the back order generated during the Daily Receipt/Registers update.

Note: The Purchase Order distribution is not retained in the Back Order, generated during Daily Receipt/Registers update, in the following cases:

- *If the quantity to be placed on back order is not equal to the "Qty Ordered - Qty Received".*
- *If there is even a quantity back ordered from a Matrix/Lot other than the ones distributed in the Purchase Order.*

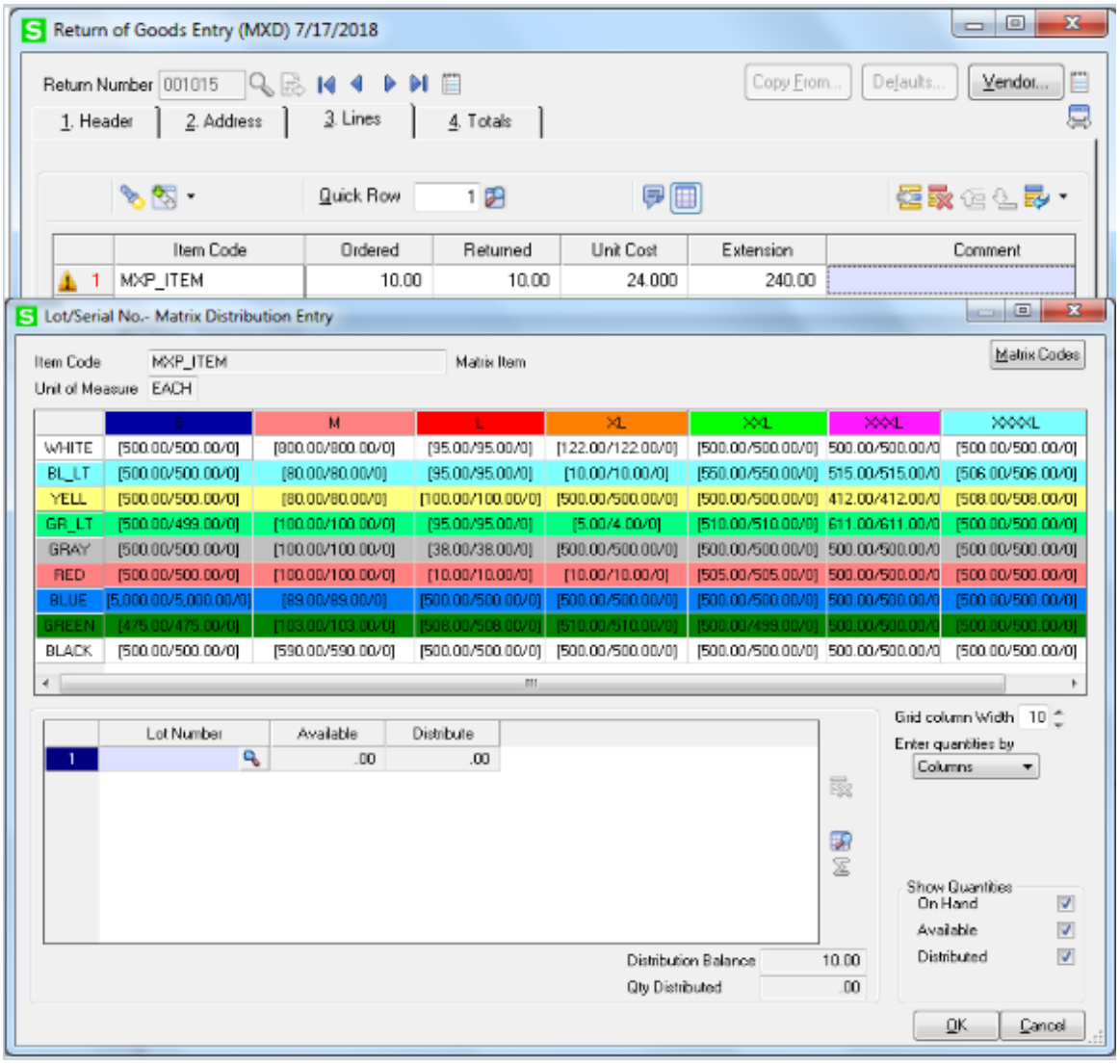
When **No** is selected the Purchase Order lines are loaded in the grid with 0 quantity received.
Selecting **Distributed** will load the lines of PO with the **Quantity Received** set equal to the quantities distributed in the Purchase Order and the quantities not distributed in the PO will be set as Backordered Quantity.



Return of Goods Entry

Select the **Return of Goods Entry** program under the **Mat. Req/Return** menu.

In the Lines tab, select a Matrix Item. If the Return of Goods box is checked in the Matrix Distribution in section of the Purchase Order tab on the Matrix Options screen, the following Matrix Distribution Entry screen is displayed instead of the standard Lot/Serial No. Distribution screen.



The **Matrix Distribution** screen is similar to the screen in the **Purchase Order Entry** program.

If the **Return Of Goods** is generated through the **RMA Generate Transactions** program the distribution is transferred from the RMA Receipt Entry with the **Quantity Returned** set equal to the **Quantity Distributed**.

*Note: If the **Summarize Multiple Items** checkbox is selected on the **Generate Transactions** screen the Matrix Item distribution will not be transferred to the generated Return of Goods from the **RMA Receipts Entry**.*

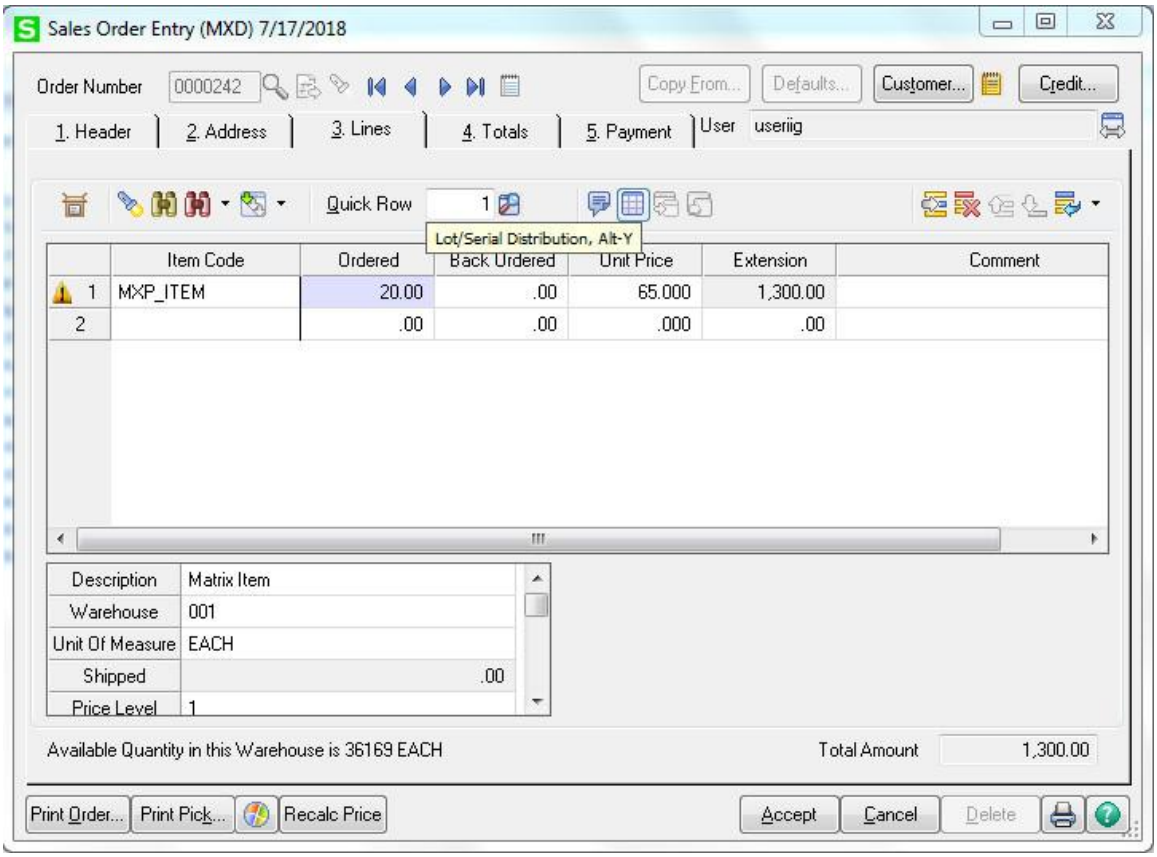
When running the **Return Order Register/Update** program checking is performed by **Qty On Hand** and error log is printed to prevent the user from updating the journal if the total **Qty Returned** for some lot number by Warehouse exceeds the **Qty On Hand** for it.

Sales Order Entry

Select the **Sales Order Entry** program under the **Sales Order Main** menu.

The Matrix Distribution is allowed only for Standard, Back Orders and Quotes if the Price Quote checkbox is selected in the Matrix Options.

On the Lines tab enter a Matrix Item.

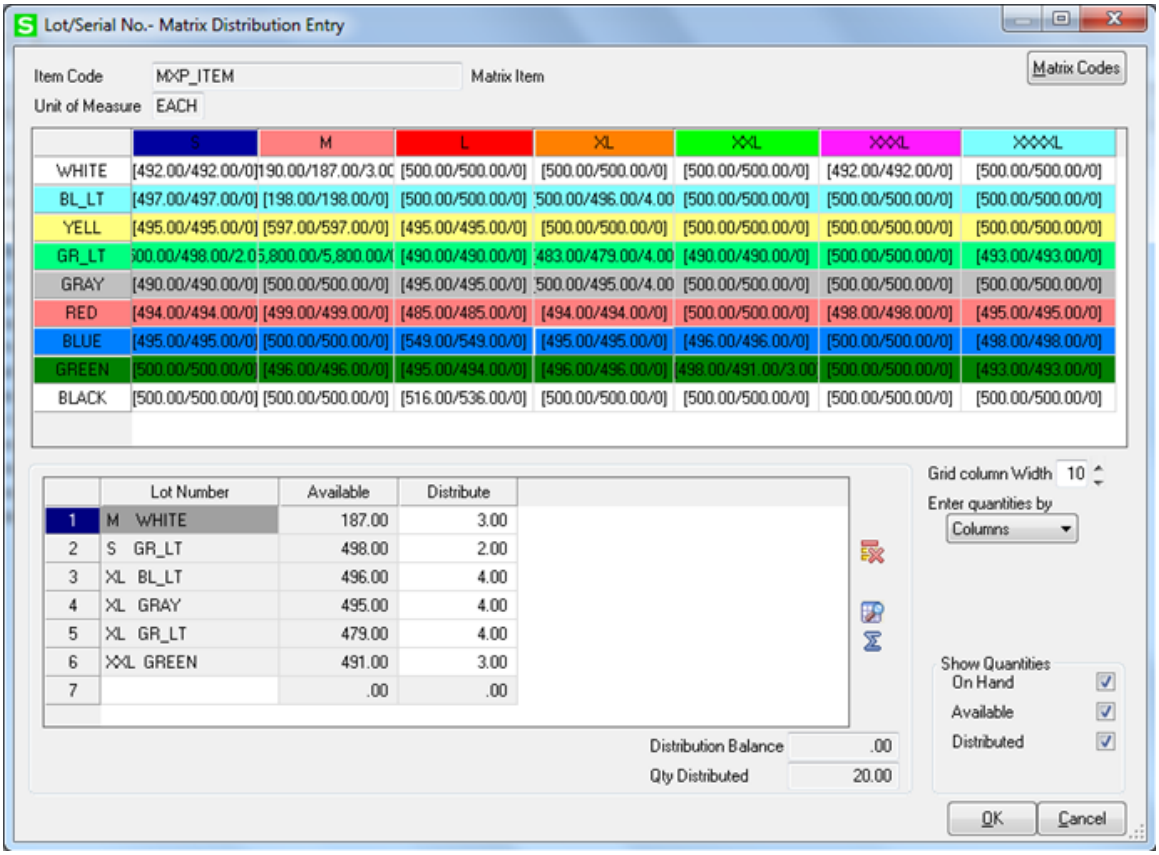


The quantity should be distributed in the **Matrix Distribution** screen, which is similar to the screen in the **Receipt of Goods** program.

Click the **Lot/Serial Distribution** button for the line with matrix item to open the **Matrix Distribution** screen.

If the **Matrix Distribution Auto Popup in S/O Entry** box is checked in the Options, the distribution screen is automatically popup when focus falls into the Ordered field.

If a UPC Code is scanned, when the focus is in the **Item Code** field, the program checks if the scanned UPC code is assigned to any Lot Number of the selected item, and auto distributes by that lot number.



The **Distribution Balance** field displays the difference of **Quantity Ordered** of the Order and **Qty Distributed** in the Matrix Distribution.

If the **Matrix Distribution Auto Popup in S/O Entry** box is checked on the **Sales Order** tab of the **Matrix Options** screen, the **Quantity Distributed** field displays the sum of the quantities of all the distributed Lots. In this case, the **Quantity Ordered** of the Order is set equal to the **Quantity Distributed** when closing the **Matrix Distribution** screen.

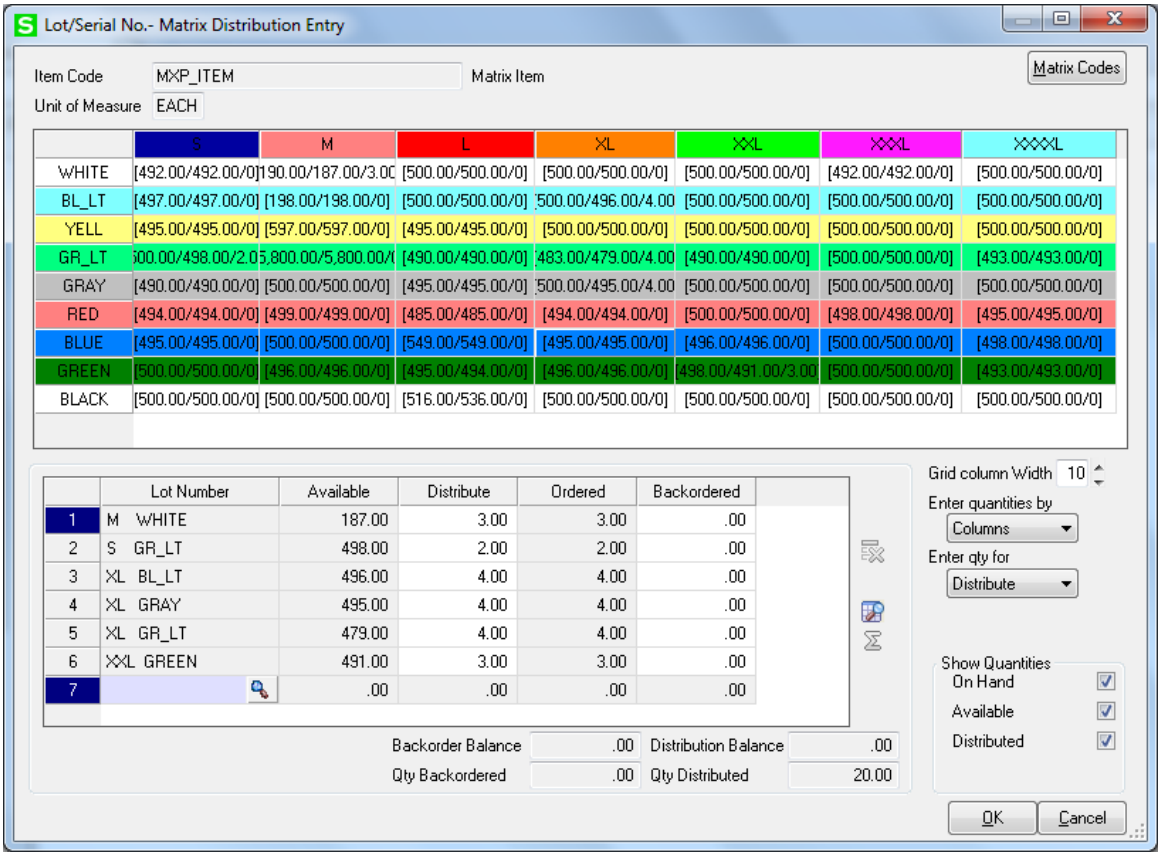
If the Matrix Distribution in Price Quote box is checked in the Matrix Options, the distribution for Matrix items is also available for Price Quote Sales Orders.

Matrix distribution entered for the Price Quote is preserved when converting to Standard Order.

S/O Invoice Data Entry

Select the **Invoice Data Entry** program under the Sales Order Main menu.
In the Lines tab, select a Matrix Item. Enter the Quantities, and click OK. If the Invoice Data Entry box is checked in the Matrix Distribution in section of the Sales Order tab on the Matrix Options screen, the following Matrix Distribution Entry screen is displayed instead of the standard Lot/Serial No. Distribution screen.

The **Matrix Distribution** screen is a little different from the distribution screen opened in the Sales Order Entry program.



The grid in the upper part of the screen displays the quantities of the item per Matrix Codes pair, with the Category 1 Matrix Codes placed horizontally across the top of the grid and the Category 2 Matrix Codes placed vertically. The Codes are highlighted with the corresponding colors. Note that text and background colors of the cells can be set to correspond to either of Category's code colors, in the Matrix Options program.

Clicking in a cell in the grid selects the Lot Number corresponding to the selected Matrix Codes pair, both in the **Lot Number** field and the Lot Numbers list.

The following keyboard shortcuts can be used in the **Matrix Distribution** screen:

Use Alt+G to go to the cell in the grid corresponding to the selected Lot Number. If no Lot Number is selected, focus is set to the first cell of the grid.

You can navigate between cells in the grid using the Arrow keys. PageUp selects the first, and PageDown the last cell in the current column; Home selects the first, and End the last cell in the current row.

In addition to the fields of the standard screen (in the lower part), there are options for the grid. The values are defaulted to the settings on the **Sales Order** tab of the **Matrix Options** program, but can be changed for the current invoice.

From the **Enter quantities by** drop-down list, select **Rows** or **Columns**. This option specifies the direction of moving the selection in the Grid when entering quantities. You can choose to enter all the quantities in the first row, and then move to the second, and so on (by **Rows**). The selection moves to the left, when accepting the quantity. If you want to enter all the quantities in the first column, then in the second, and so on, select the **Columns** option. In this case, the selection moves down, when accepting the quantity.

From the **Enter Qty for** drop-down list select **Distribute** or **Backordered**. This option indicates the entry parameter for the distribution grid. If **Distribute** is selected the number entered in the grid is treated as the Qty Distributed. If Backordered is selected it will be treated as the Qty Backordered.

There is also an option provided in the grid for easily entering the Distribute and Backorder quantities for a matrix lot at once. It is necessary to enter corresponding numbers separated by slash (e.g. 2/3) in the distribution grid and the Lot Number line with respective Distributed/Backordered quantities will be added in the below list.

Enter **Grid column Width**. Each column in the matrix distribution grid will have the entered width.

The Matrix Grid is automatically resized upon changing the size of Matrix Distribution screen.

In the **Show Quantities** section, check the boxes corresponding to the quantities to be displayed in the matrix distribution grid. Quantities **On Hand**, **Available**, and **Distributed** can be selected. Each cell of the grid will display the selected quantities, separated by slashes.

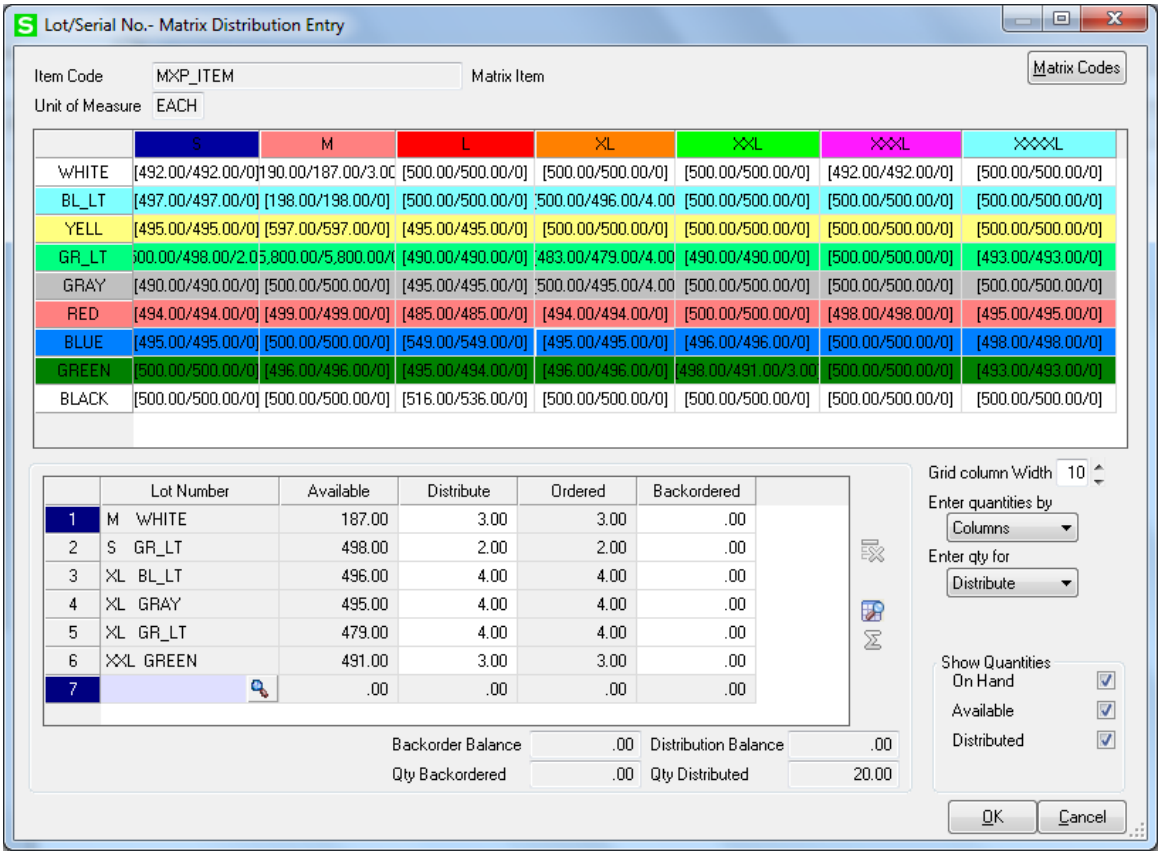
If a UPC Code is scanned (entered) while the focus is in the **Item Code** field, the program checks if the scanned UPC code is assigned to any Lot Number of the selected item, and distributes automatically by that Lot number.

If Invoice is created for a Sales Order with **Auto Generate Invoice Selection** program, the distribution of the order is transferred to the invoice.

Backorder Processing for Matrix Lots

The Backorder functionality for Matrix Lots has been provided in the **Invoice Data Entry**. In case the Sales Order is partially shipped the backorder quantities for the Matrix Lots being backordered should be entered in the corresponding **Backordered** field on the Matrix distribution screen.

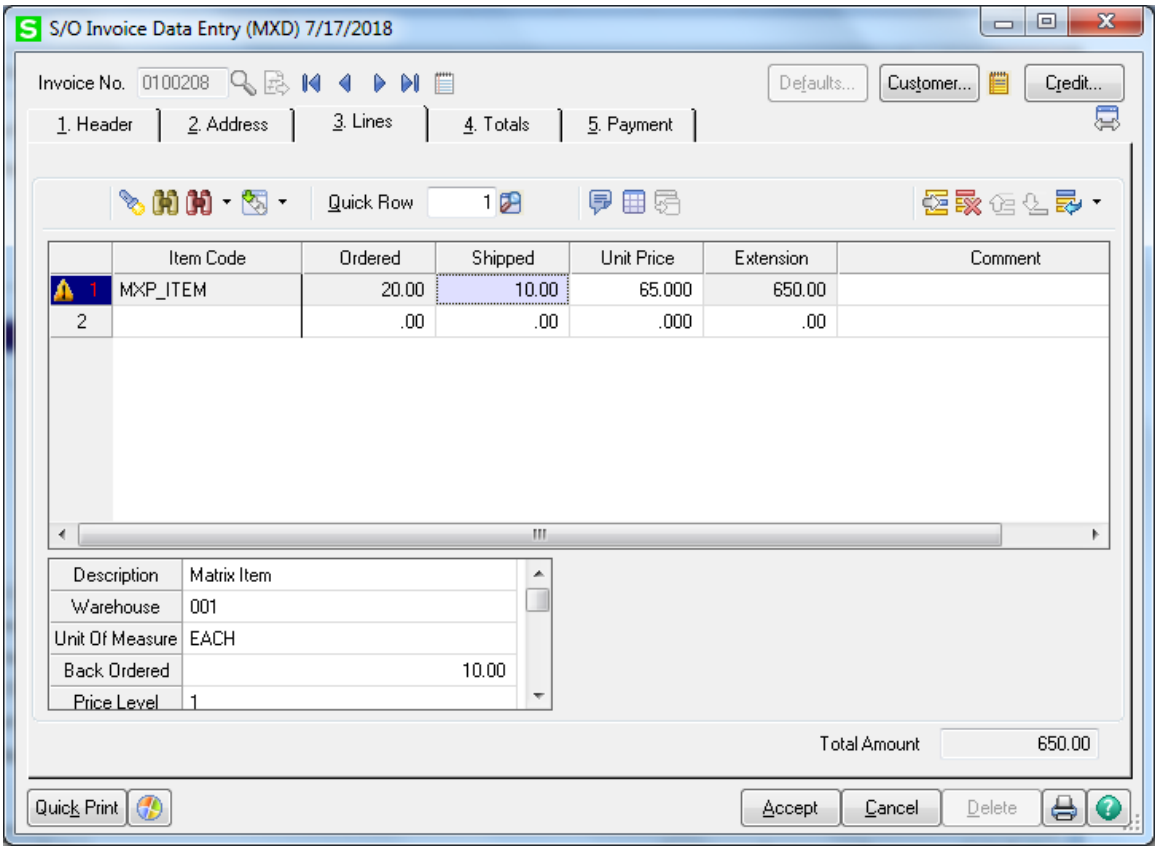
Here is the distribution in Sales Order Entry:

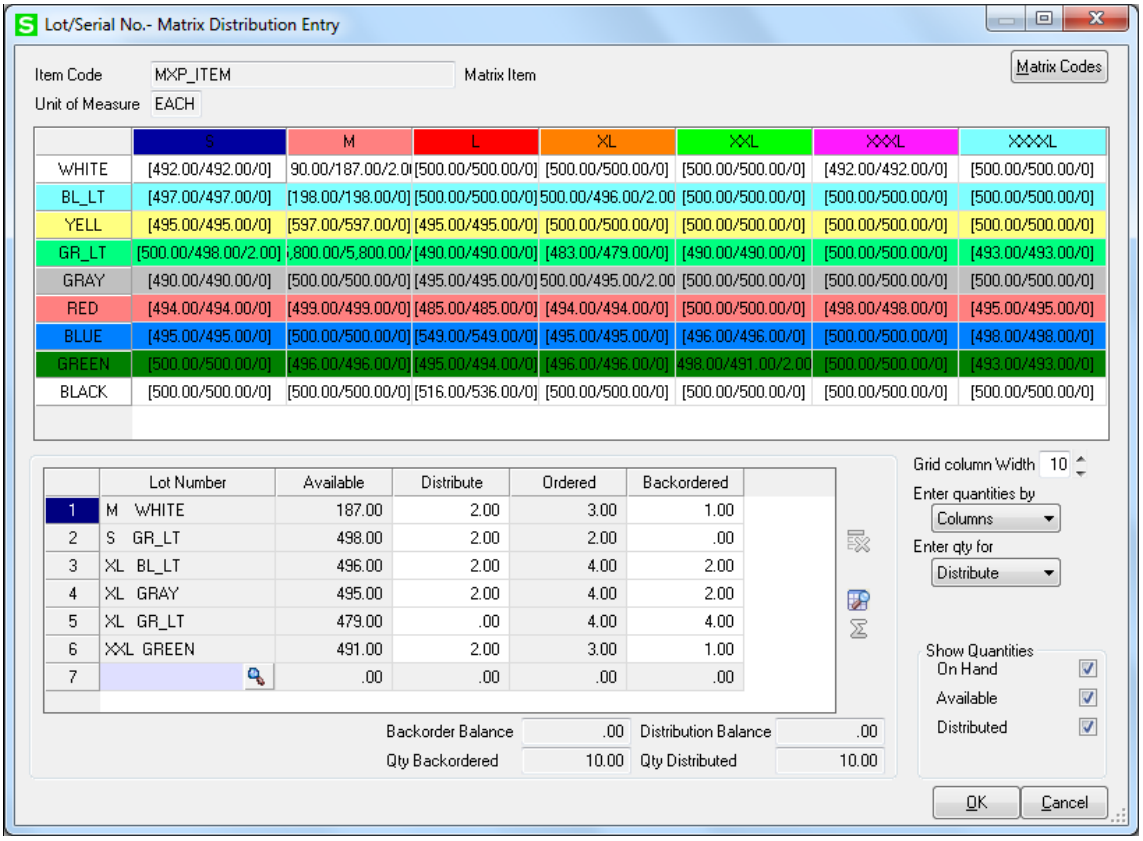


	S	M	L	XL	XXL	XXXL	XXXXL
WHITE	[492.00/492.00/0]	190.00/187.00/3.0(	[500.00/500.00/0]	[500.00/500.00/0]	[500.00/500.00/0]	[492.00/492.00/0]	[500.00/500.00/0]
BL_LT	[497.00/497.00/0]	[198.00/198.00/0]	[500.00/500.00/0]	500.00/496.00/4.00	[500.00/500.00/0]	[500.00/500.00/0]	[500.00/500.00/0]
YELL	[495.00/495.00/0]	[597.00/597.00/0]	[495.00/495.00/0]	[500.00/500.00/0]	[500.00/500.00/0]	[500.00/500.00/0]	[500.00/500.00/0]
GR_LT	00.00/498.00/2.0	5,800.00/5,800.00/(	[490.00/490.00/0]	483.00/479.00/4.00	[490.00/490.00/0]	[500.00/500.00/0]	[493.00/493.00/0]
GRAY	[490.00/490.00/0]	[500.00/500.00/0]	[495.00/495.00/0]	500.00/495.00/4.00	[500.00/500.00/0]	[500.00/500.00/0]	[500.00/500.00/0]
RED	[494.00/494.00/0]	[499.00/499.00/0]	[485.00/485.00/0]	[494.00/494.00/0]	[500.00/500.00/0]	[498.00/498.00/0]	[495.00/495.00/0]
BLUE	[495.00/495.00/0]	[500.00/500.00/0]	[549.00/549.00/0]	[495.00/495.00/0]	[496.00/496.00/0]	[500.00/500.00/0]	[498.00/498.00/0]
GREEN	[500.00/500.00/0]	[496.00/496.00/0]	[495.00/494.00/0]	[496.00/496.00/0]	498.00/491.00/3.00	[500.00/500.00/0]	[493.00/493.00/0]
BLACK	[500.00/500.00/0]	[500.00/500.00/0]	[516.00/536.00/0]	[500.00/500.00/0]	[500.00/500.00/0]	[500.00/500.00/0]	[500.00/500.00/0]

	Lot Number	Available	Distribute	Ordered	Backordered
1	M WHITE	187.00	3.00	3.00	.00
2	S GR_LT	498.00	2.00	2.00	.00
3	XL BL_LT	496.00	4.00	4.00	.00
4	XL GRAY	495.00	4.00	4.00	.00
5	XL GR_LT	479.00	4.00	4.00	.00
6	XXL GREEN	491.00	3.00	3.00	.00
7		.00	.00	.00	.00

Here is the Order invoiced:

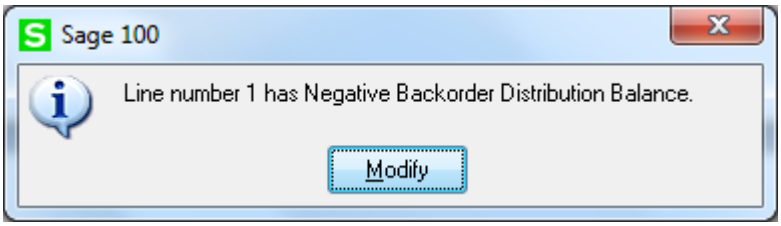




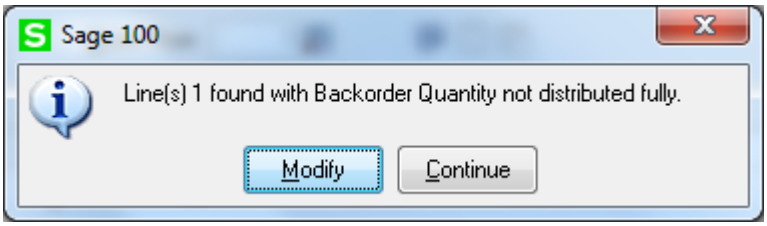
The Backorder quantity may be entered manually as well as calculated automatically upon entering the Distributed quantity. Upon entering the distributed quantity, backordered quantity is automatically calculated as follows: "Qty Ordered – Qty Distributed".

Distribute- quantities distributed for current Lot Number.
Ordered- displays the quantity ordered for current Lot Number and can only be viewed.
Backordered – allows for entry of the Lot Number quantities to be backordered.

Backorder Balance- this field displays a running total of the remaining backorder quantity to distribute, and can only be viewed.
The user will not be able to **Accept** the Invoice and a message will popup in case the Backordered quantity entered in the Distribution grid is greater than the Backorder Qty on the Invoice line resulting in Negative Backorder Distribution Balance.



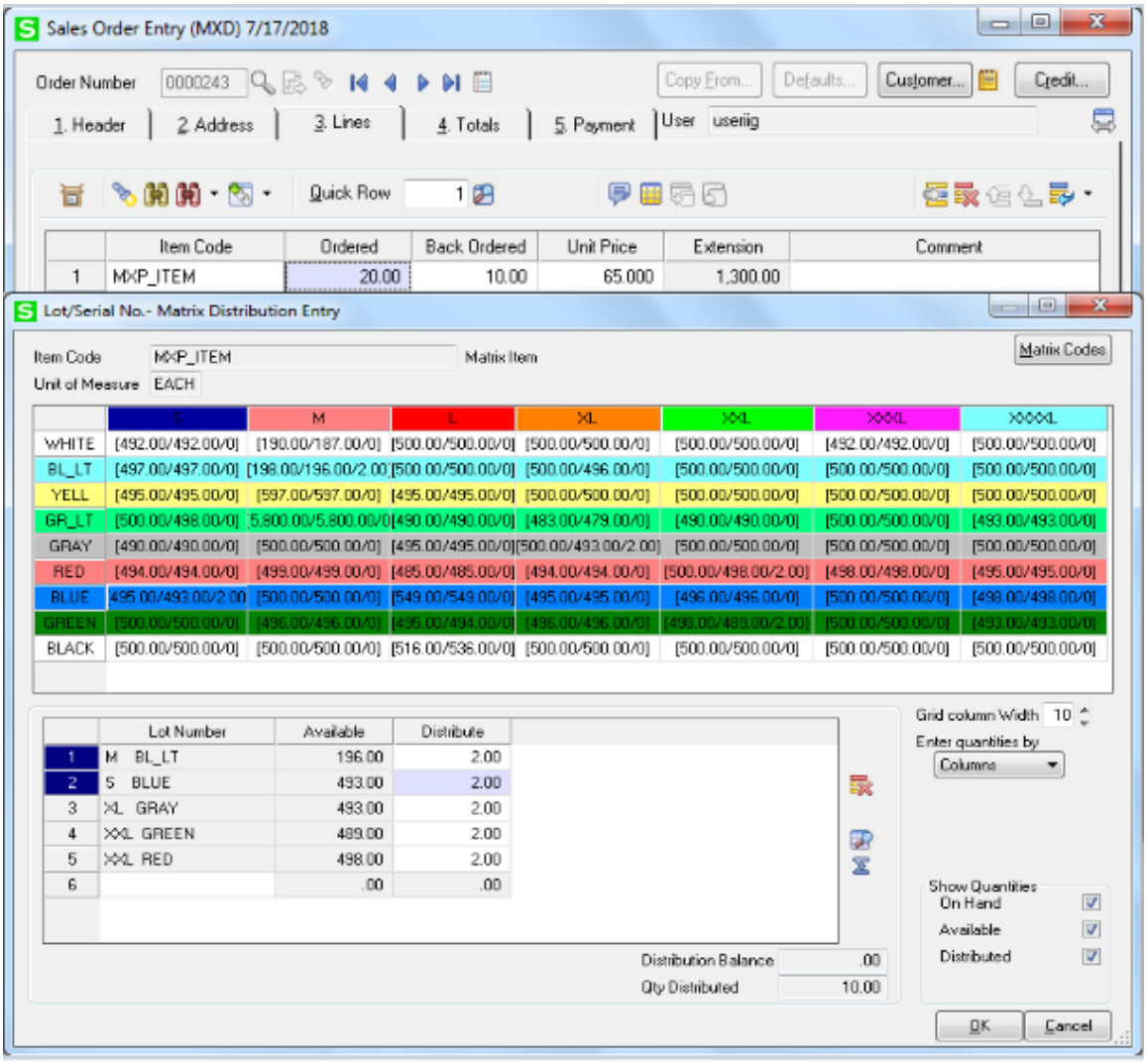
The user is allowed accepting the Invoice in case the Back Order Balance is not 0, that is there are Back Order quantities remaining to distribute.



Selecting **Continue** allows the user to accept the Invoice entry. In this case no distribution is carried over to the backorder generated in a result of Sales journal update. The Distribution should be done in the Sales Order Entry.

Qty Backordered- this field displays the total of backordered quantity distributed by Lot Numbers.

Here is an example of Backorder (with the Sales Order Matrix Lot distribution preserved) created in a result of Sales Journal Update when the Order is partially shipped:



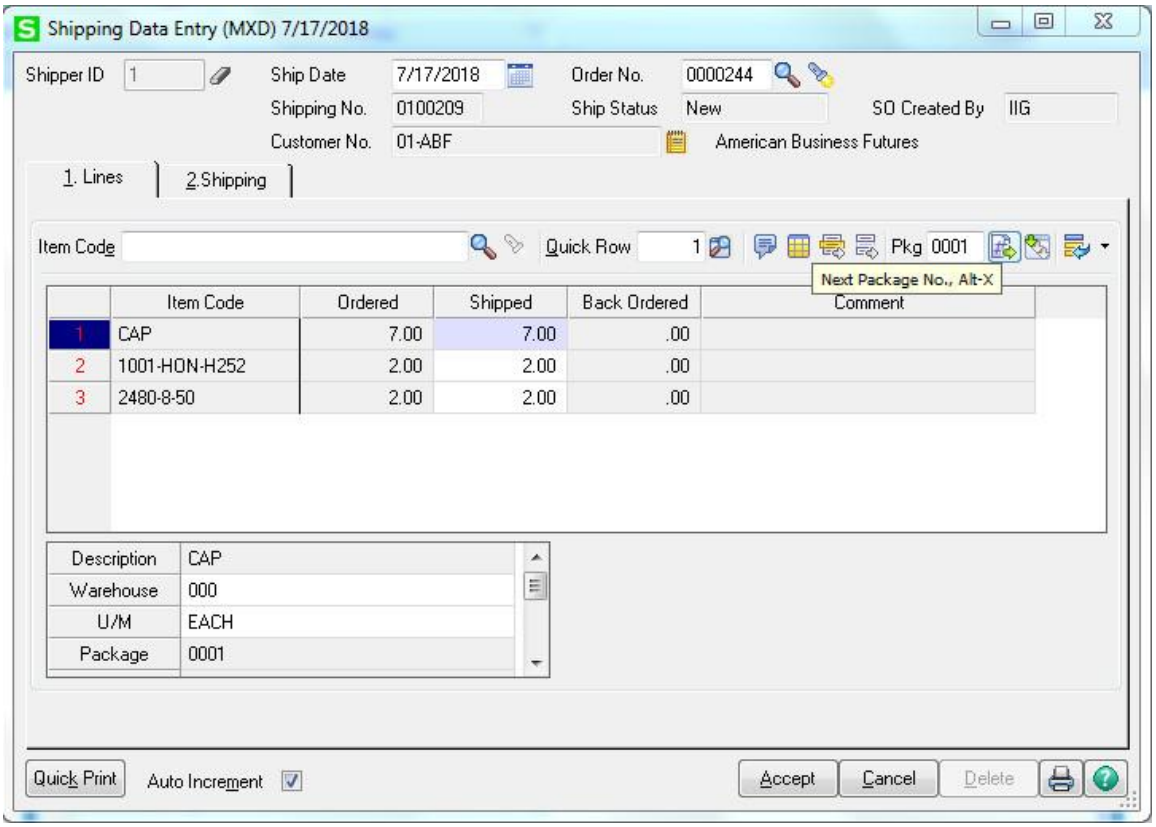
The distribution in the created backorder is done based on the backordered quantities entered in the Invoice Matrix Distribution screen.

Shipping Data Entry

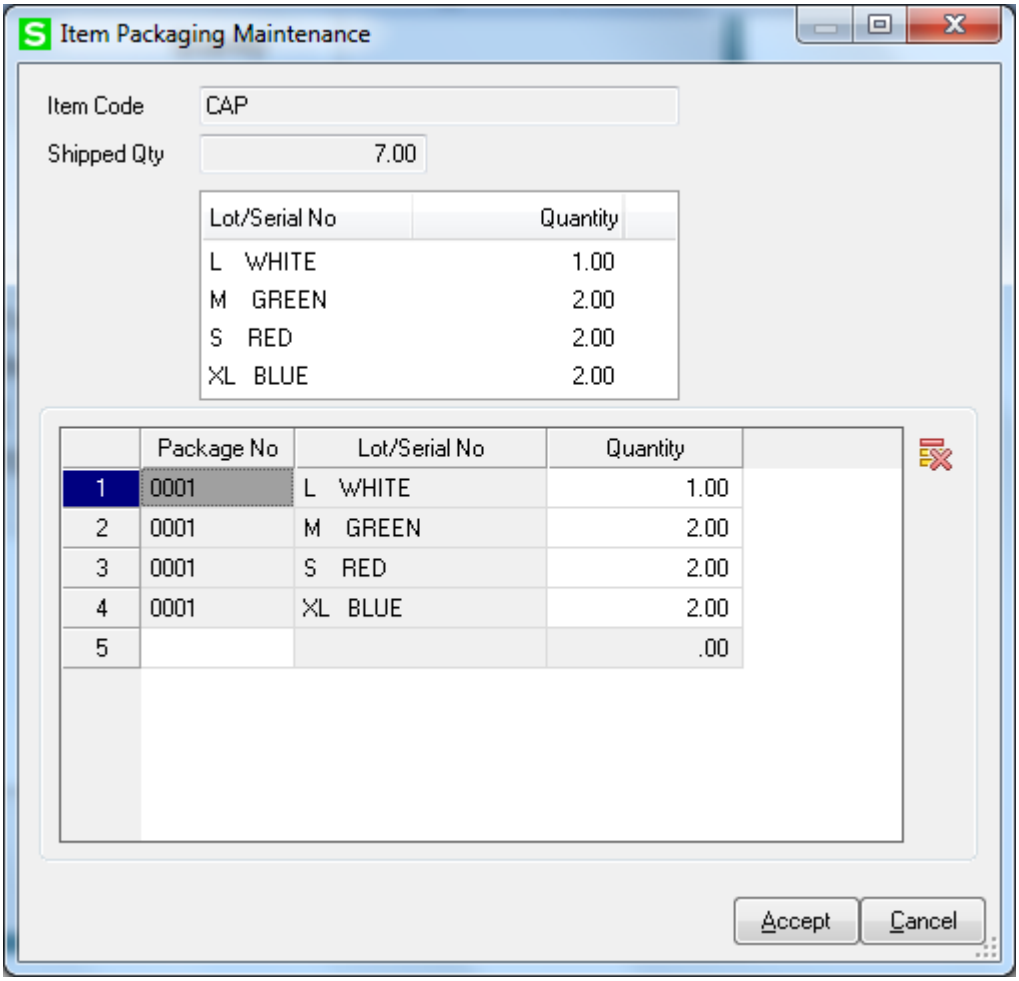
Item Packaging

The Matrix Distribution screen for the **Shipping Data Entry** program under the **Sales Order Shipping** menu is the same as in the **Invoice Data Entry** program.
If a UPC Code is scanned (entered) while the focus is in the **Lot Number** field, the program checks if the code is assigned to any Lot Number of the selected item, and substitutes with corresponding Lot Number.

If the UPC Code of Matrix Lot is scanned in the Item Code field the Lot quantity in current package is incremented upon each scan. If the shipped quantity is lessen and the Lots are redistributed, the packaging information for Lot/Serial numbers is updated accordingly.
In the Shipped column, enter the quantity that will go into package 1 for each line.
In the **Item Packaging Maintenance** the Matrix Items are added to the package(s) by the distributed Lot/Serial No quantities.

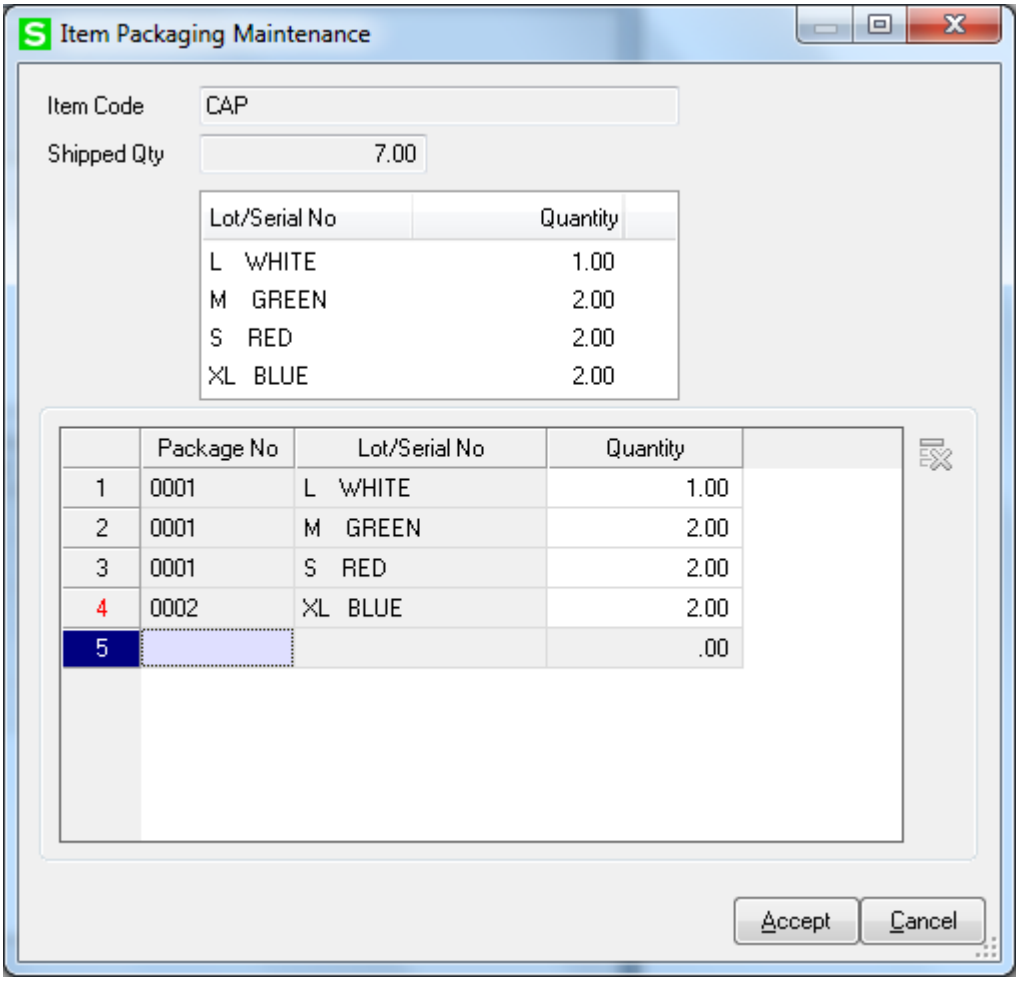


The Lot/Serial Distribution is displayed above the packaging grid:

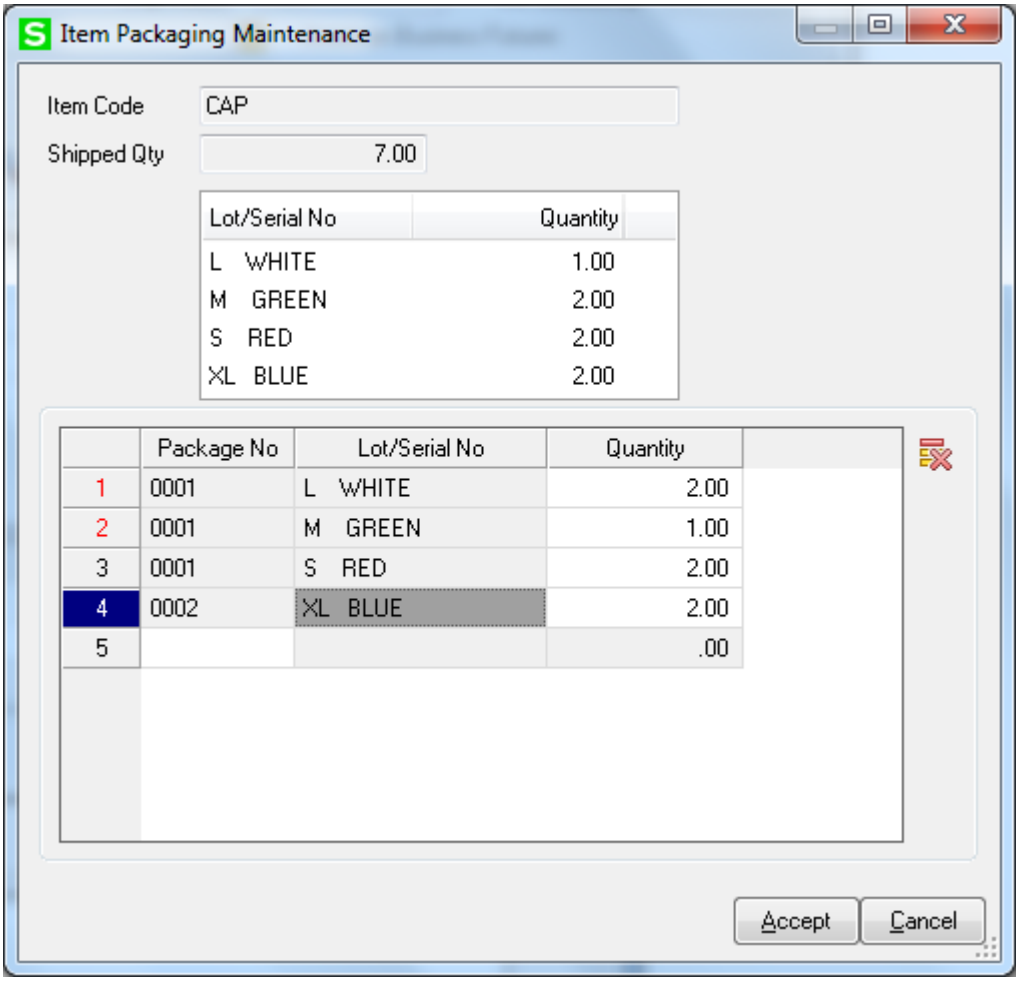


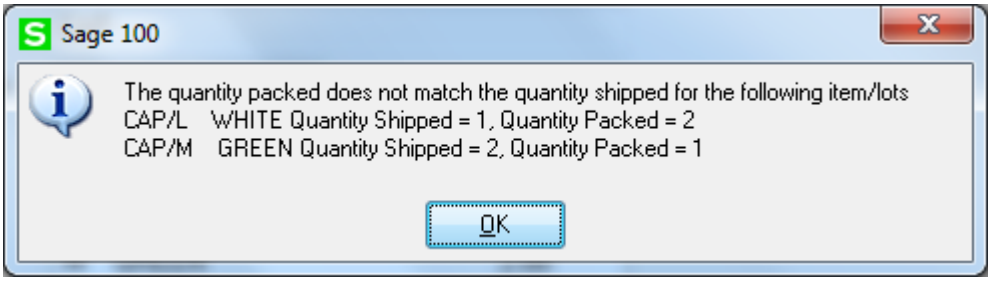
In parallel with standard Item Packaging table the packaging information for Lot/Serial is stored in the "SO068_MXPPackageTrackByItemLot.M4T" table.

The Lot/Serial quantities can be moved from one package to another with respective quantity distributed.



A prompt will appear when accepting the Item Packaging Maintenance if the Lot/serial No quantity in the package doesn't match the quantity distributed:





After the Sales Journal is updated Lot/Serial packaging information is moved to the "AR068_MXPTrackingByItemLotHist.M4T" table.

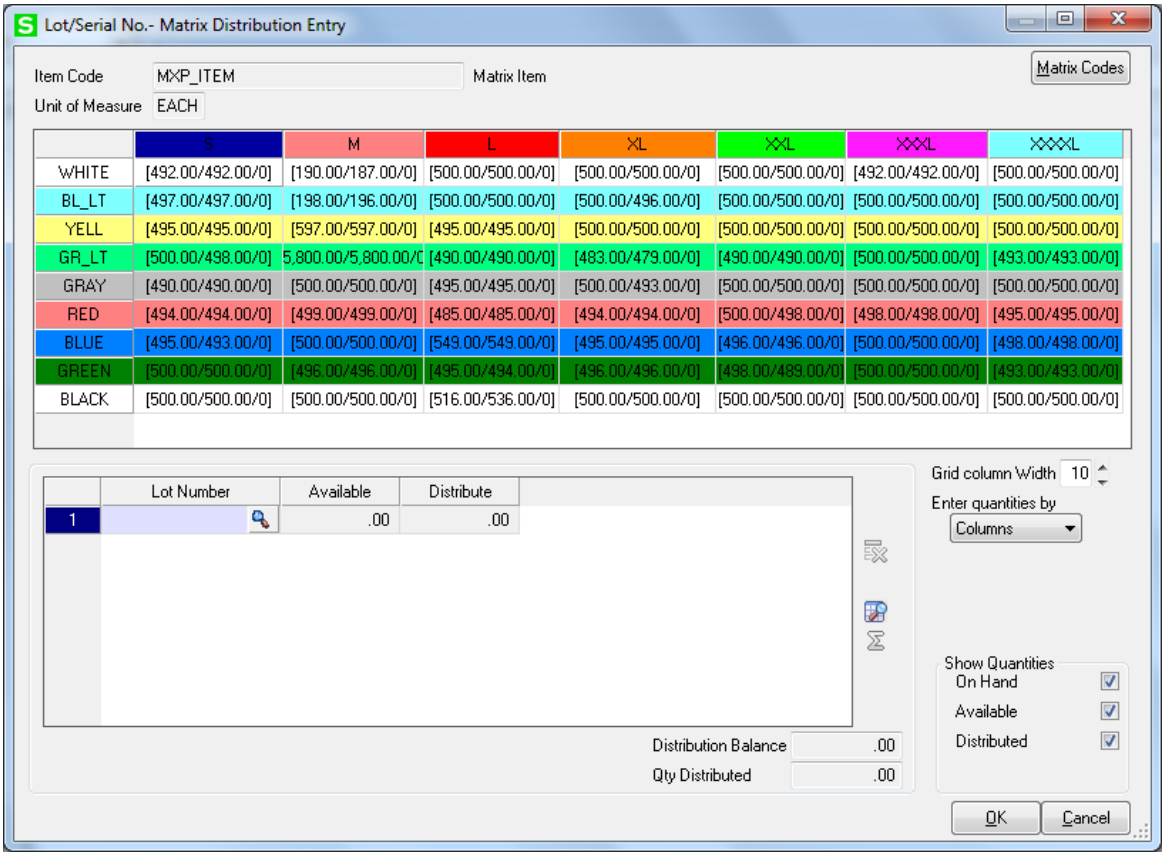
Inventory Transaction Entry

Select the **Transaction Entry** program under the **Inventory Management Main** menu.

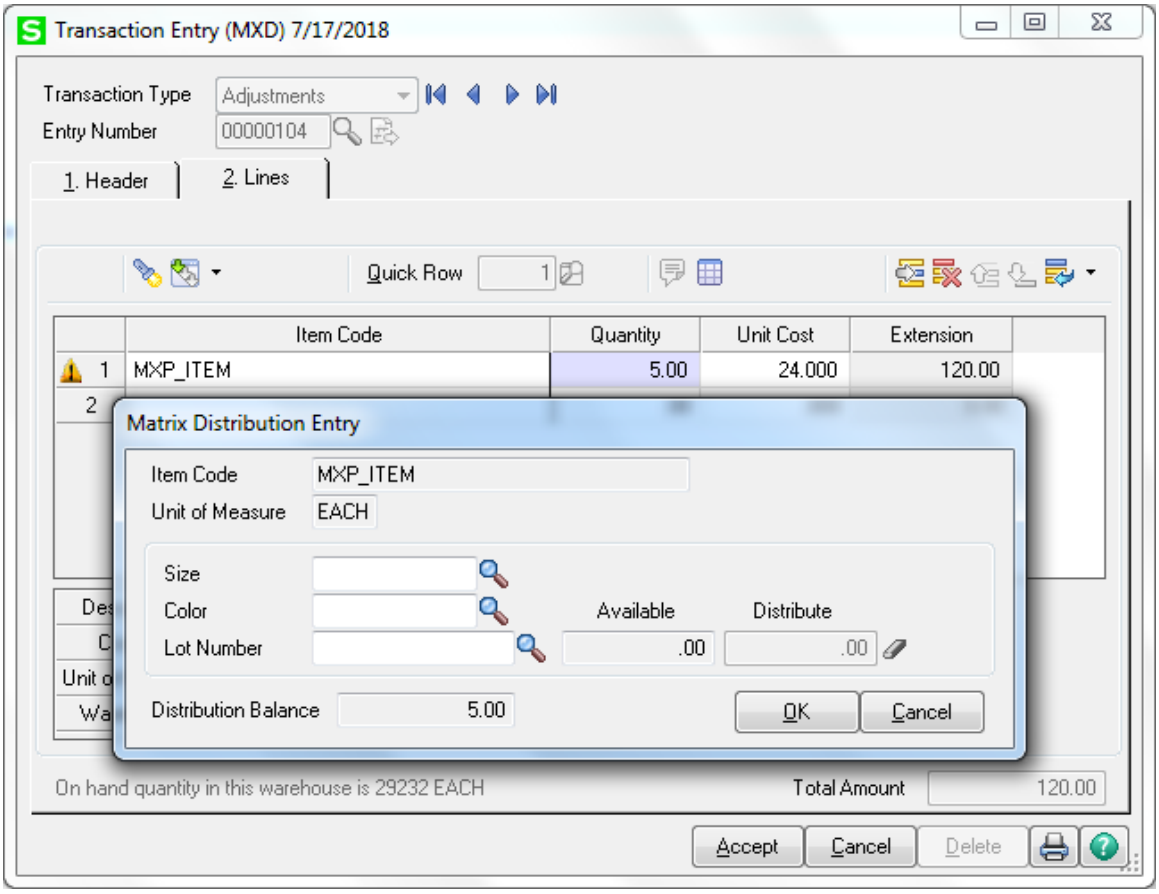
The Matrix Distribution screen is the same for Sales, Transfers, and Receipts transaction Types.

In the Lines tab, select a Matrix Item. If the Inventory Transaction Entry box is checked in the Matrix Distribution in section of the Inventory tab on the Matrix Options screen, the following Matrix Distribution Entry screen is displayed instead of the standard Lot/Serial No. Distribution screen.

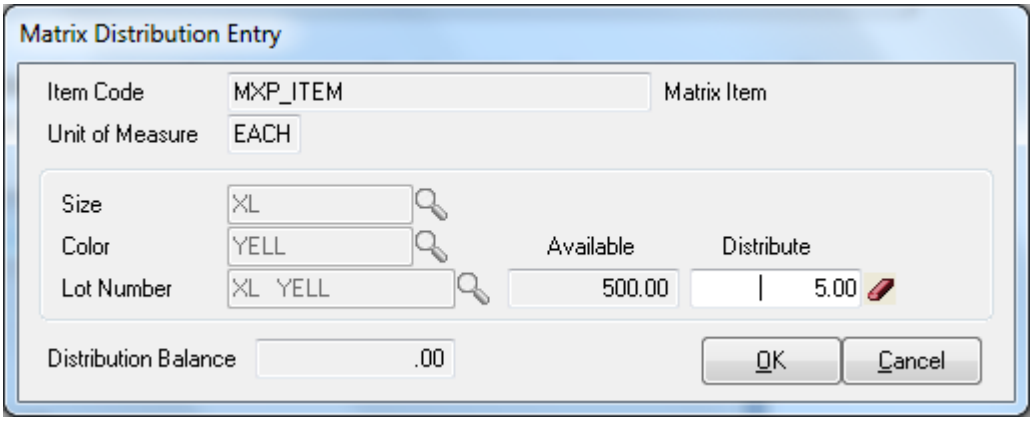
The Matrix Distribution screen is similar to the screen in the Sales Order Entry program.



For **Adjustment Transaction** the Matrix Distribution Entry is opened allowing the user to specify the Lot Number/Matrix Codes for the line item being adjusted.



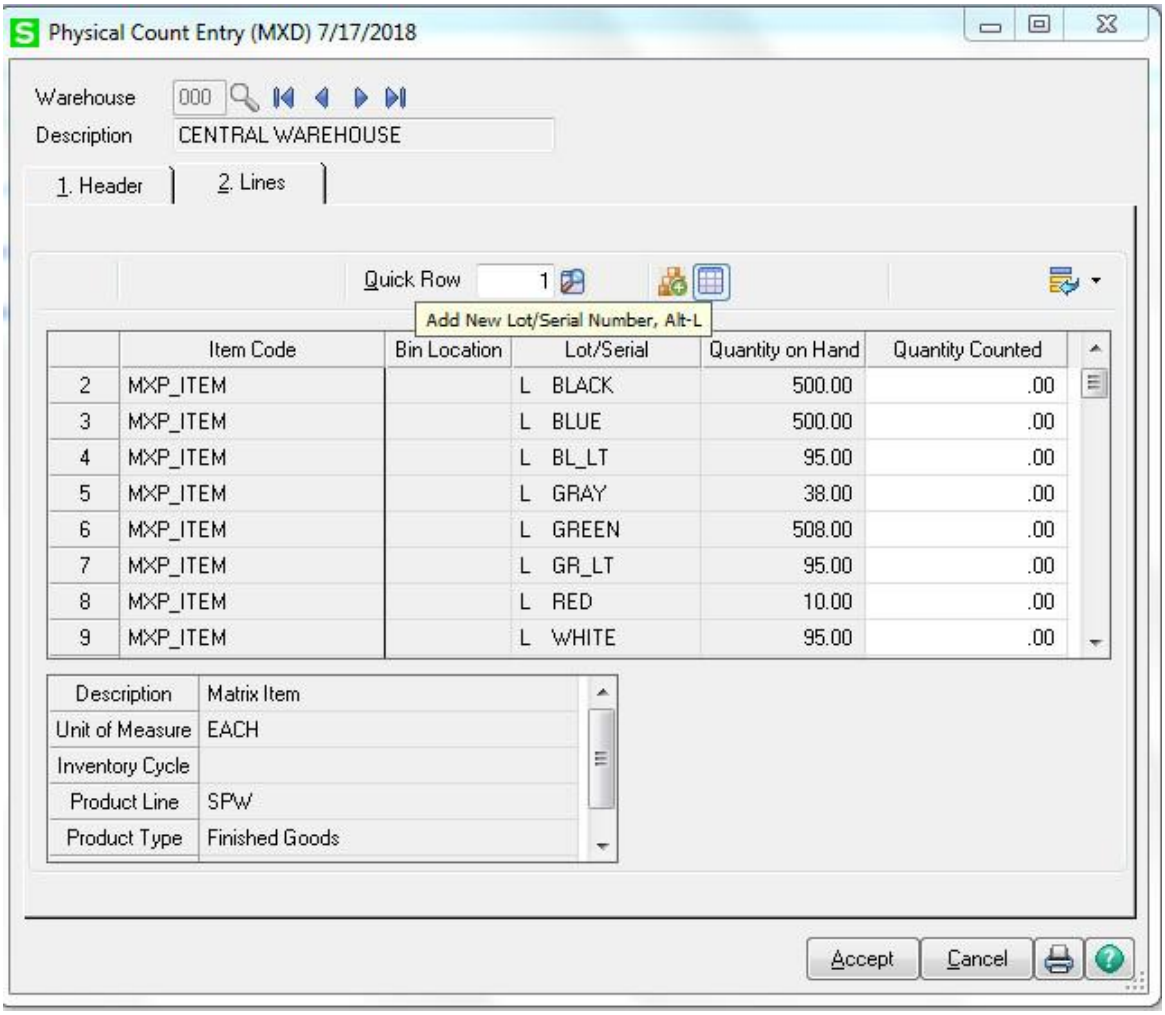
The user may select the Size and Color code to create the Lot Number automatically or specify an existing Lot Number.



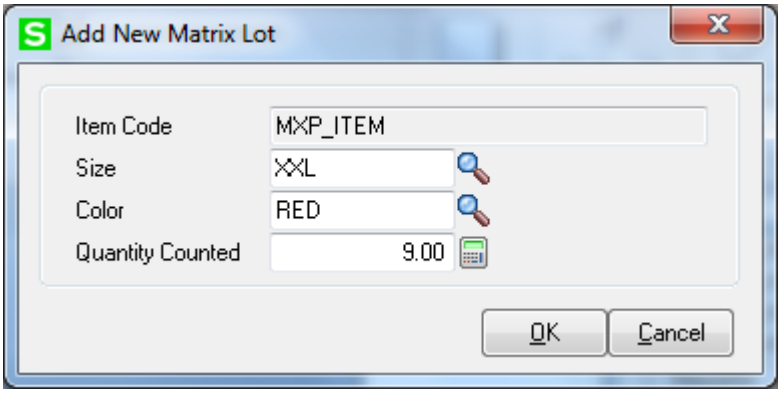
During the Transaction Register Update, checking is performed by the Matrix item Lot Committed Qty by warehouse and error log is printed to prevent the user from updating transaction journal if the Qty Committed in the I/M Transactions for some lot number by Warehouse exceeds the **Qty On Hand** for it.

Physical Count Entry

Select the **Physical Count Entry** program under the Inventory Management Physical menu.



On the **Lines** tab, clicking the **Add New Lot/Serial** button for Matrix Item displays the following screen instead of the standard:

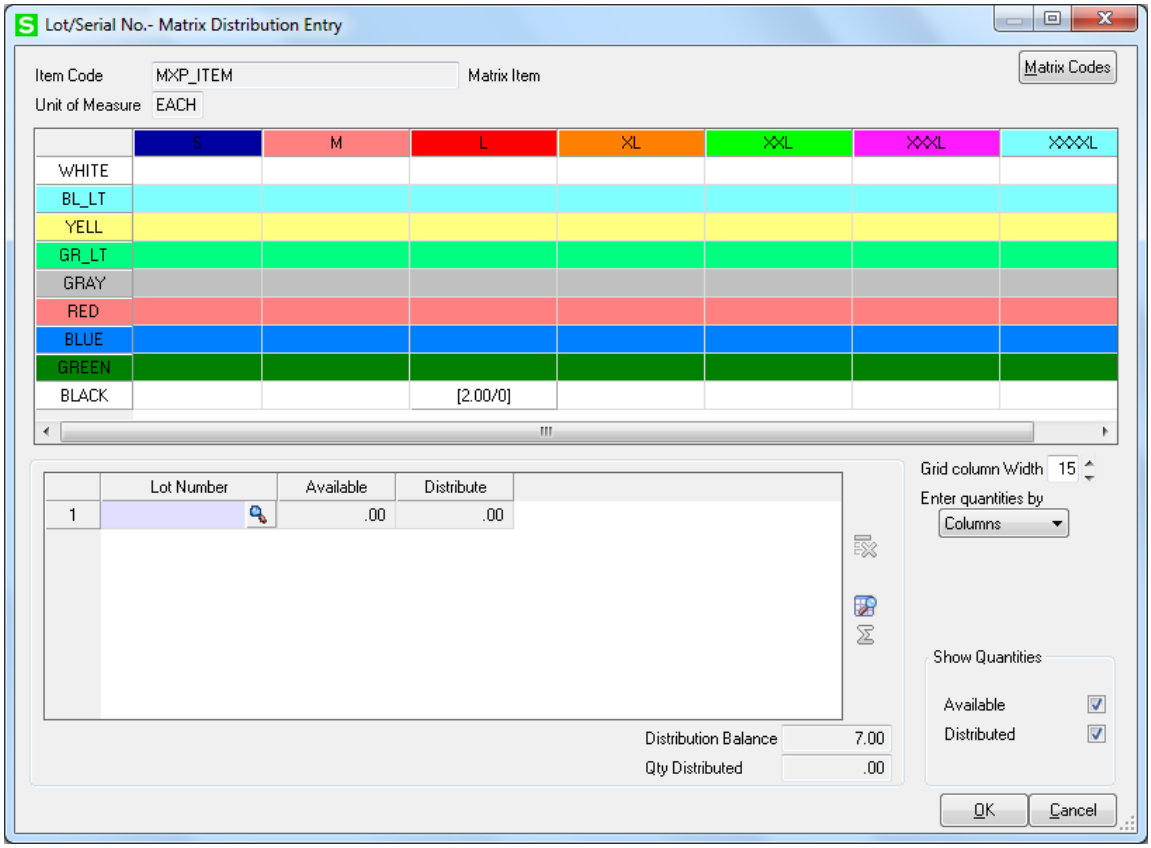


Enter Codes of the first and second Categories, which descriptions are displayed. You can enter new Matrix Codes, or enter/select existing Matrix Code from the lookup.

RMA Data and RMA Receipts Entry

In the **RMA Data Entry** and **RMA Receipts Entry** programs under the **Return Merchandise Authorization Main** menu, if the selected item in the **Lines** tab is a Matrix Item, the **Matrix Distribution** screen will be displayed for the line, instead of the standard Lot/Serial Distribution screen.

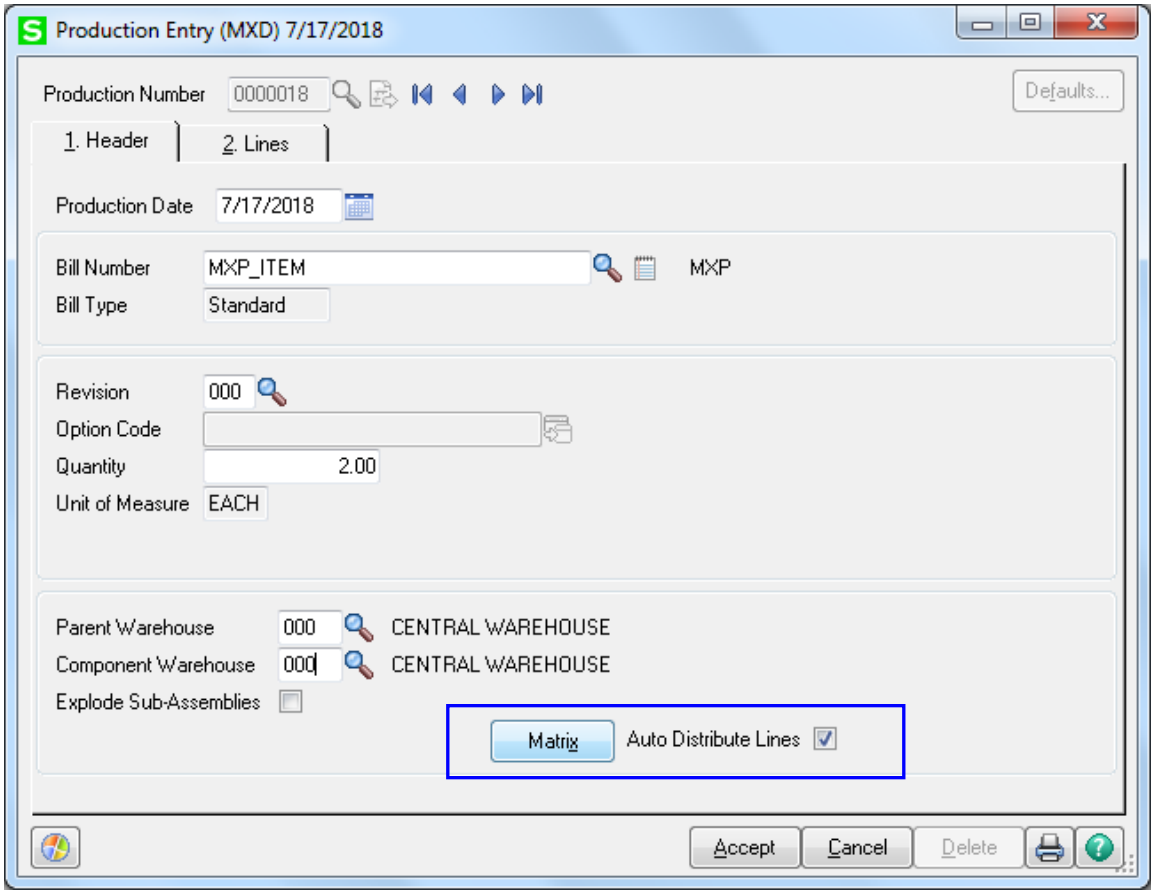
The Matrix Distribution screen for the **RMA Entry** programs is like the one in the **Invoice Data Entry** program.



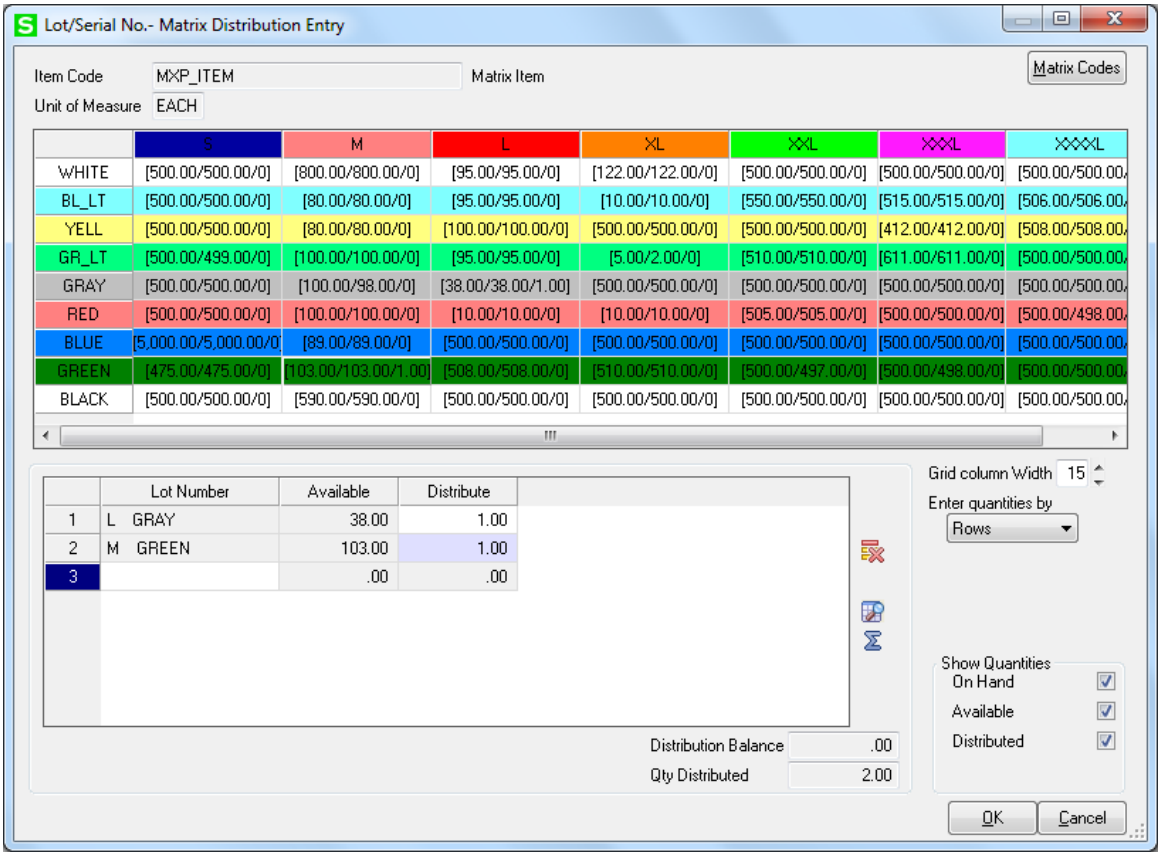
The **Available** Quantities are the quantities available for Return for the selected Customer.

Production Entry

Select the **Production Entry** program under the Bill of Materials Main menu.

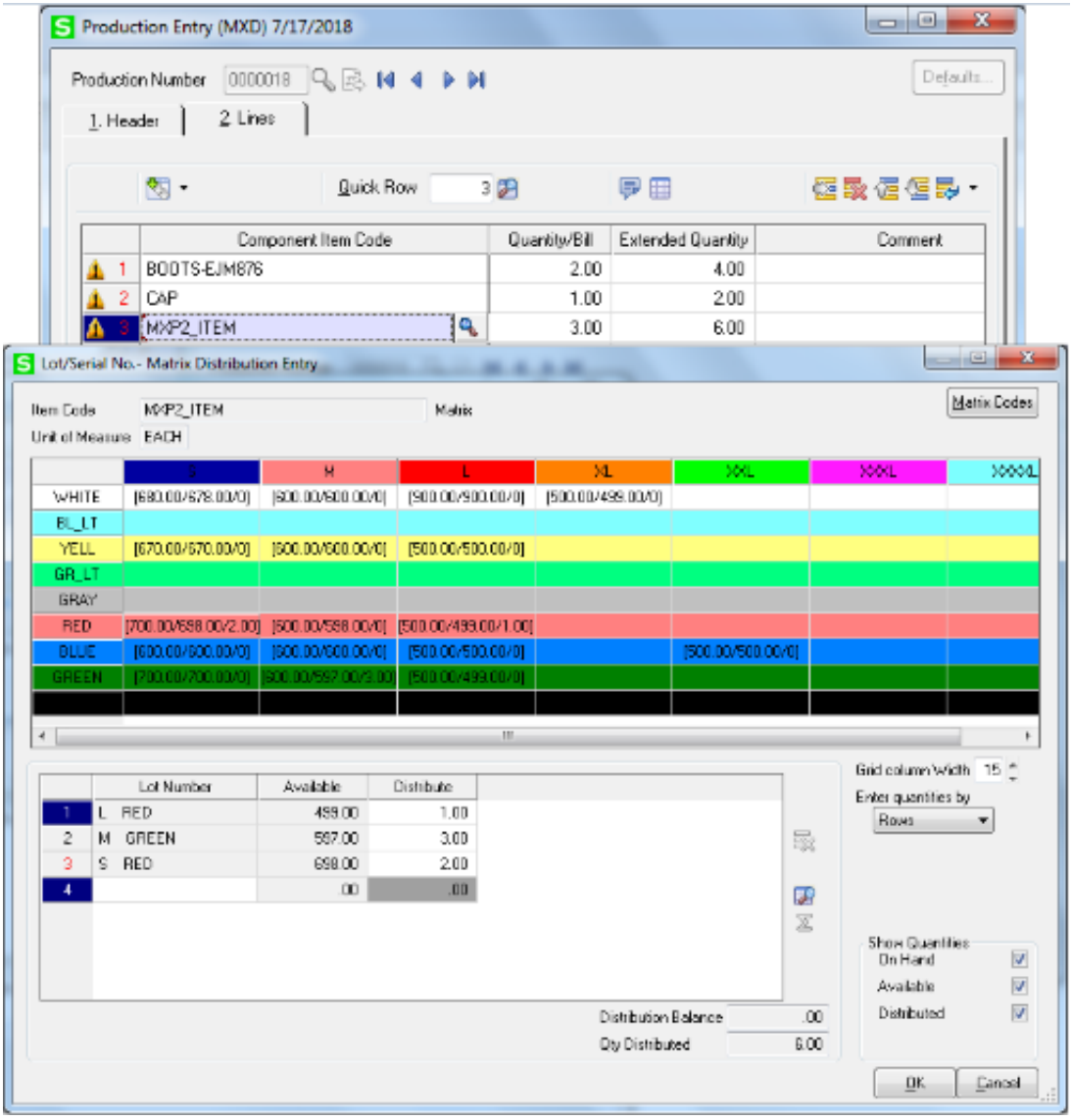


The **Matrix** button is available only for Bill Items flagged as Matrix Item in the Item Maintenance. This button enables distribution of Bill Item by Matrix Lots:



The **Auto Distribute Lines** check box is available only if the **Auto Distribute Lines** is selected in the **Matrix Options**. Check the **Auto Distribute Lines** box to use the Header Bill Matrix distribution for the distribution of the Lines Matrix items.
The Auto Distribution will be done only when entering new Production Entry, to the maximum quantity available for distribution in the Lines Matrix items.

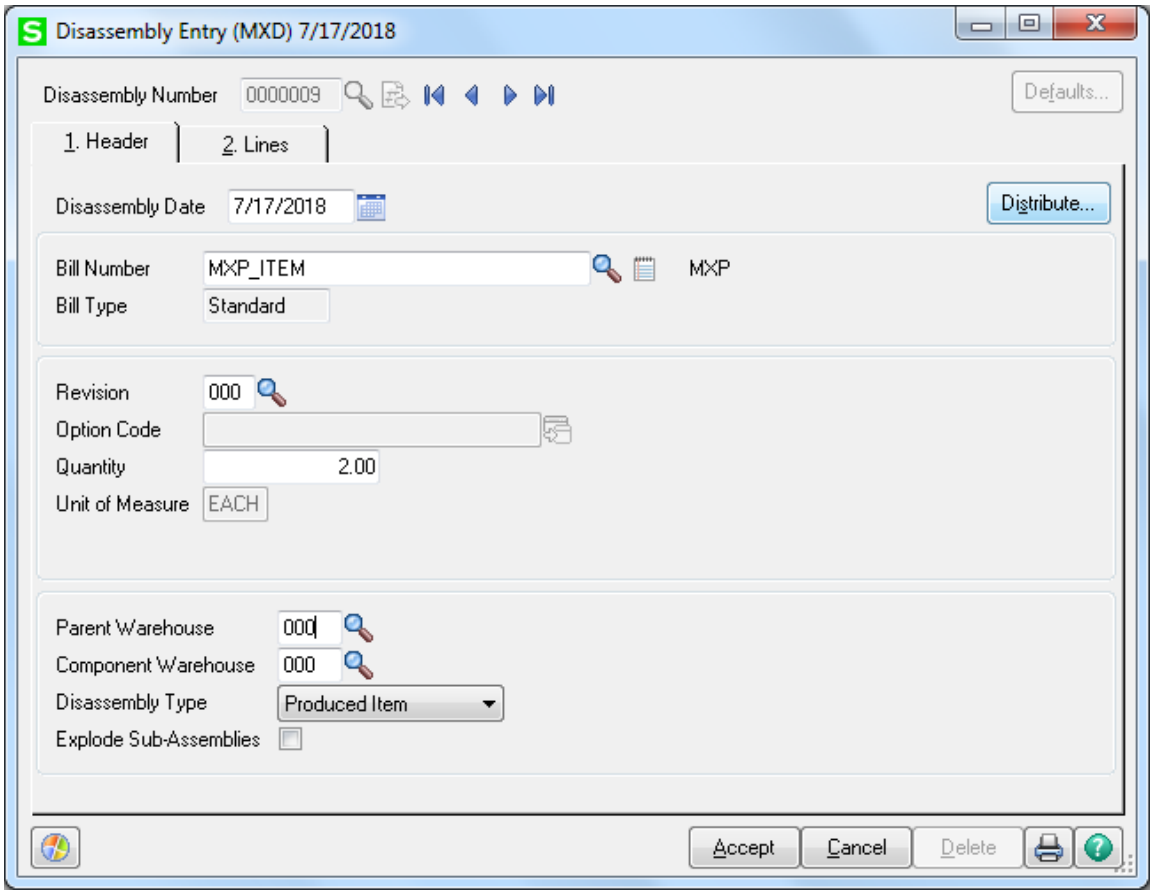
If a component in the **Lines** tab is a Matrix Item, the **Matrix Distribution** screen will be displayed for the line.



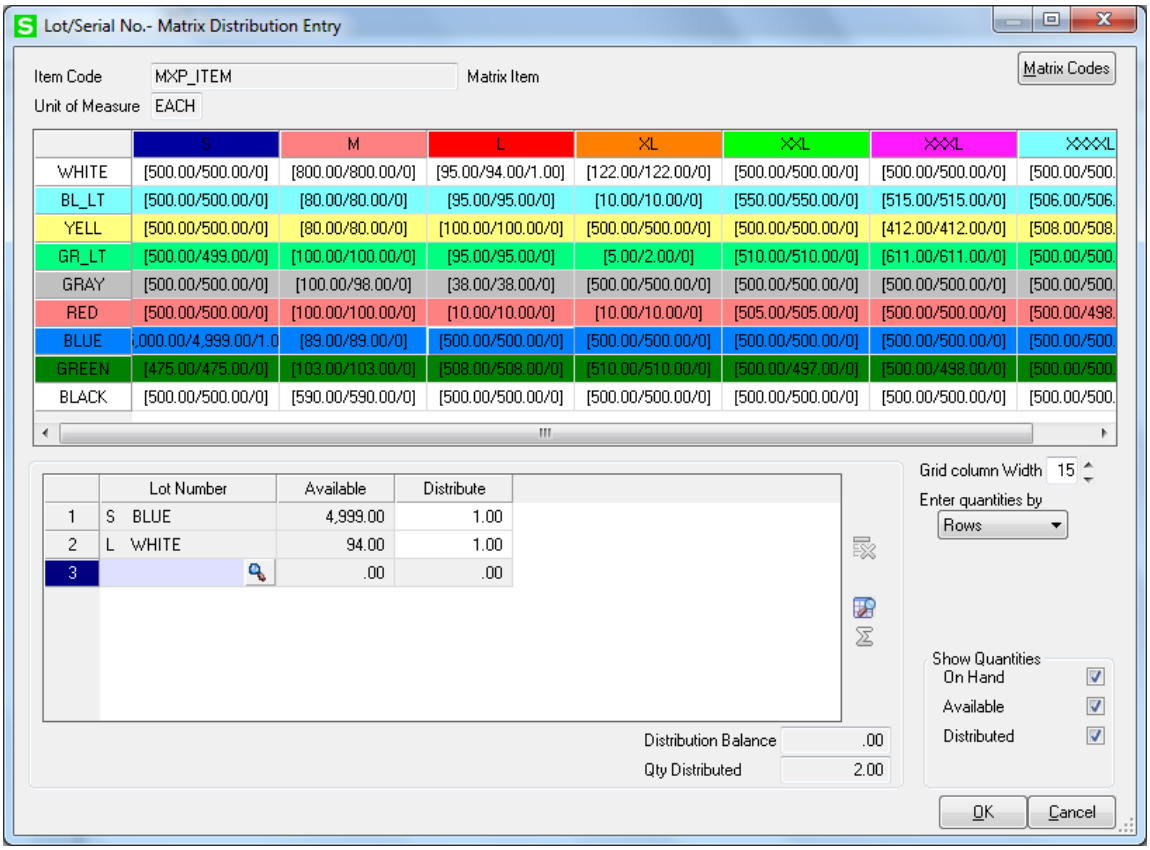
The Matrix Distribution screen for the **Production Entry** program is the same as in the **Sales Order Entry** program.

Disassembly Entry

Select the Disassembly Entry program under the Bill of Materials Main menu.



The **Distribute** button opens the Matrix Distribution grid for the selected Bill Number.

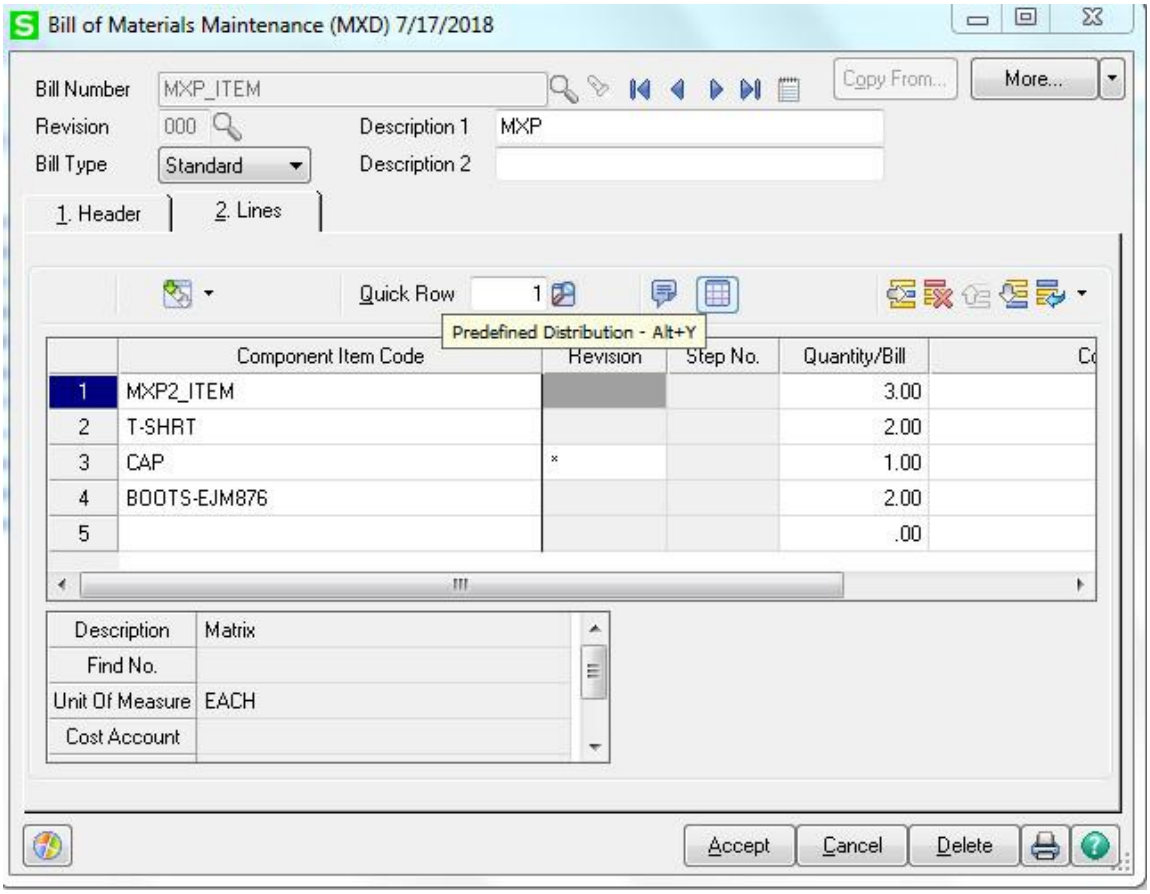


The Matrix Distribution screen for the **Disassembly Entry** program is the same as in the **Production Entry** program.

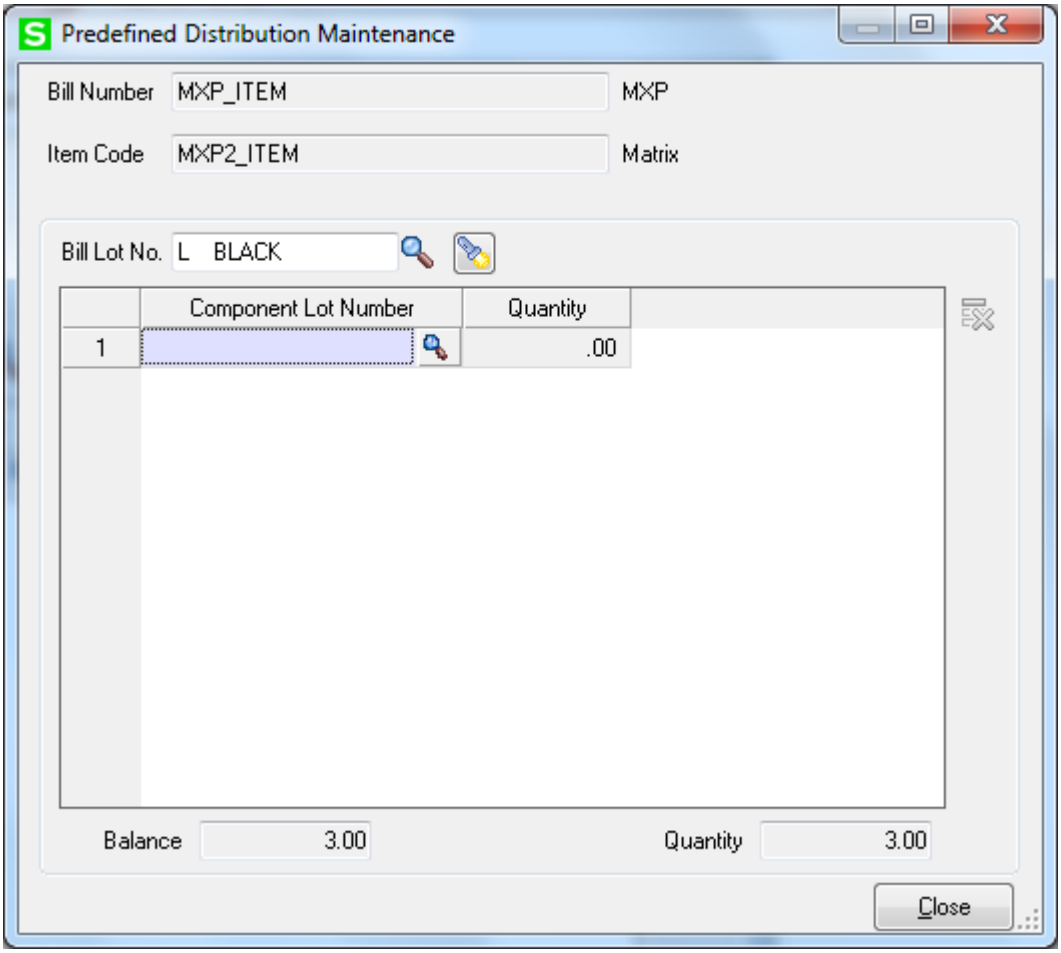
Predefined Distribution in Bills

Bill of Materials Maintenance

The **Predefined Distribution** button has been added to the Lines tab of the Bill of Materials Maintenance.
It is only available for Matrix Component lines for Standard Type Matrix Bill items.



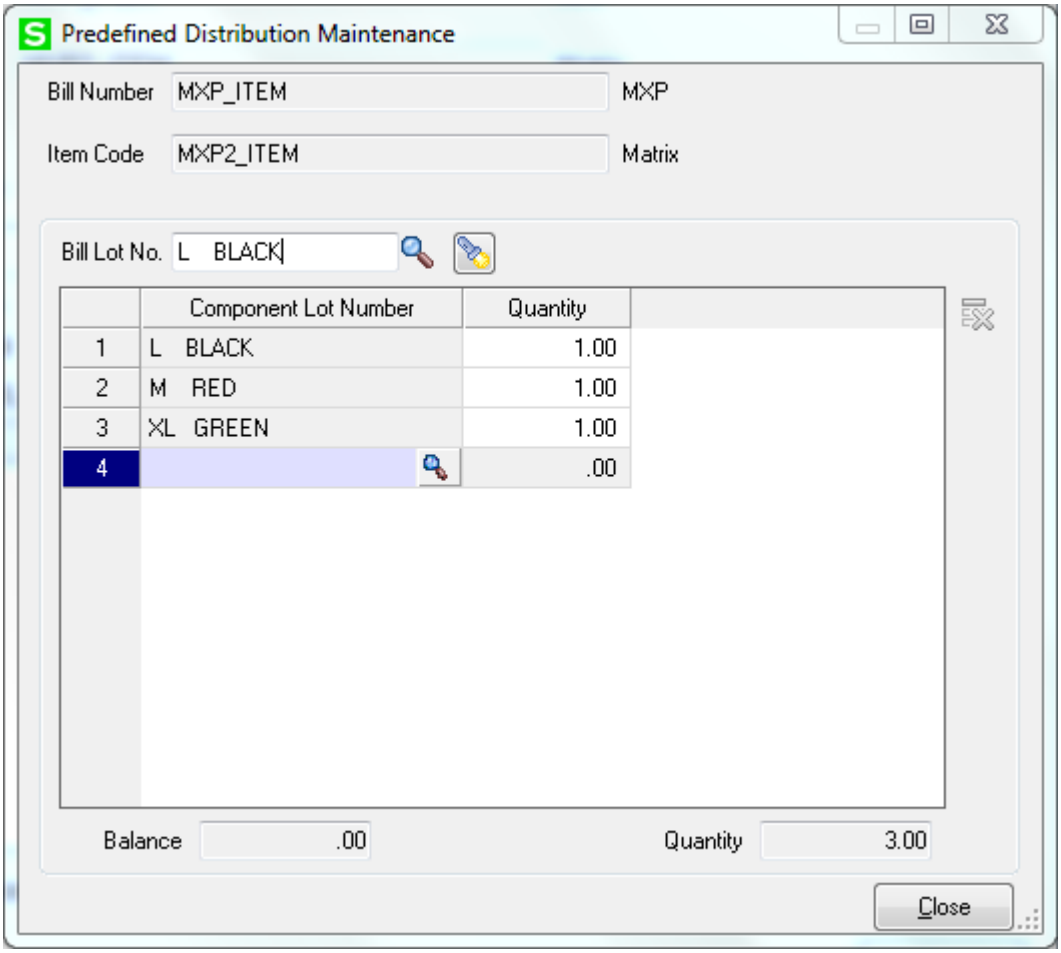
Clicking the **Predefined Distribution** button opens the **Predefined Distribution Maintenance** screen for the selected component.



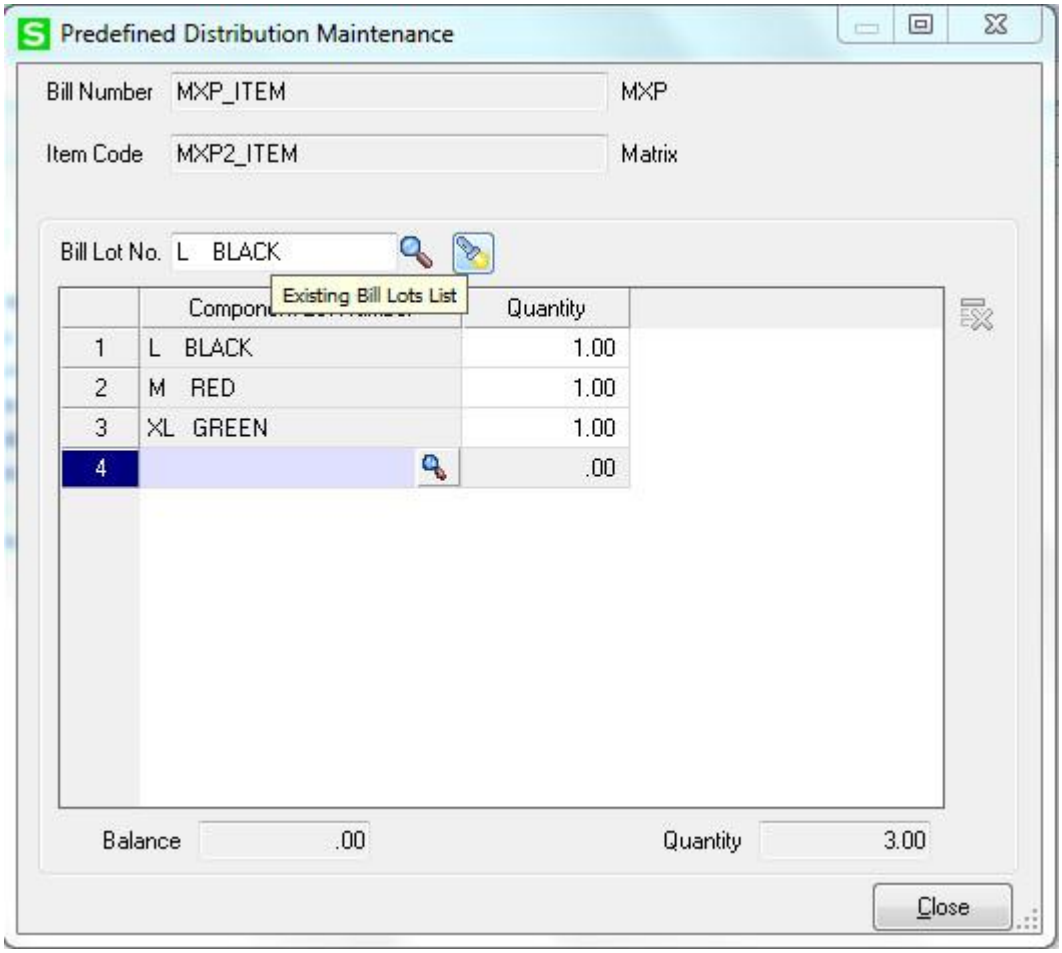
Select a **Bill Lot No.**, and distribute the **Quantity** displayed at the bottom of the screen to the **Component Lot Numbers**.

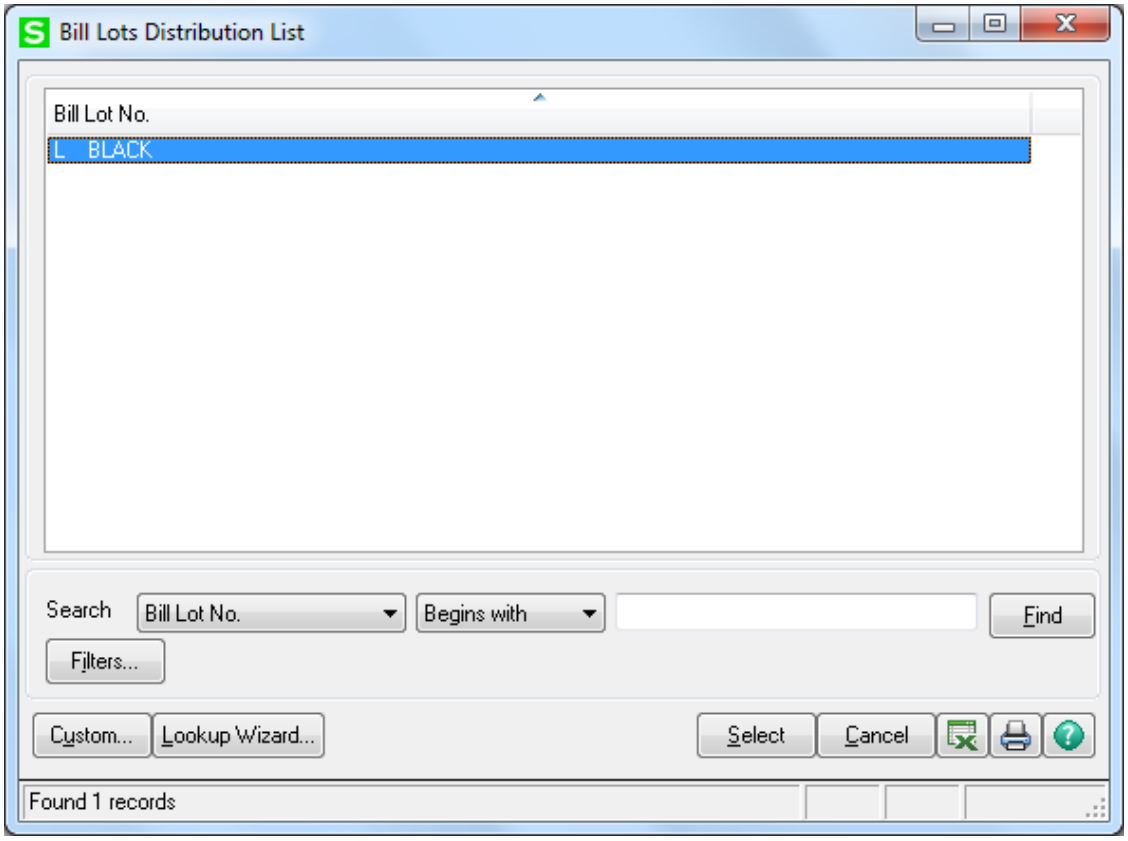
Distribution for the currently selected **Bill Lot Number** is displayed in the list.

It is recommended to make complete distribution for each selected **Bill Lot Number** (so that **Balance** at the bottom of the screen is zero), to use the **Predefined Distribution** feature effectively.



While the first lookup of the **Bill Lot No.** lists all the Lot Numbers of the Bill Item, the second displays only already entered (distributed) Lots.

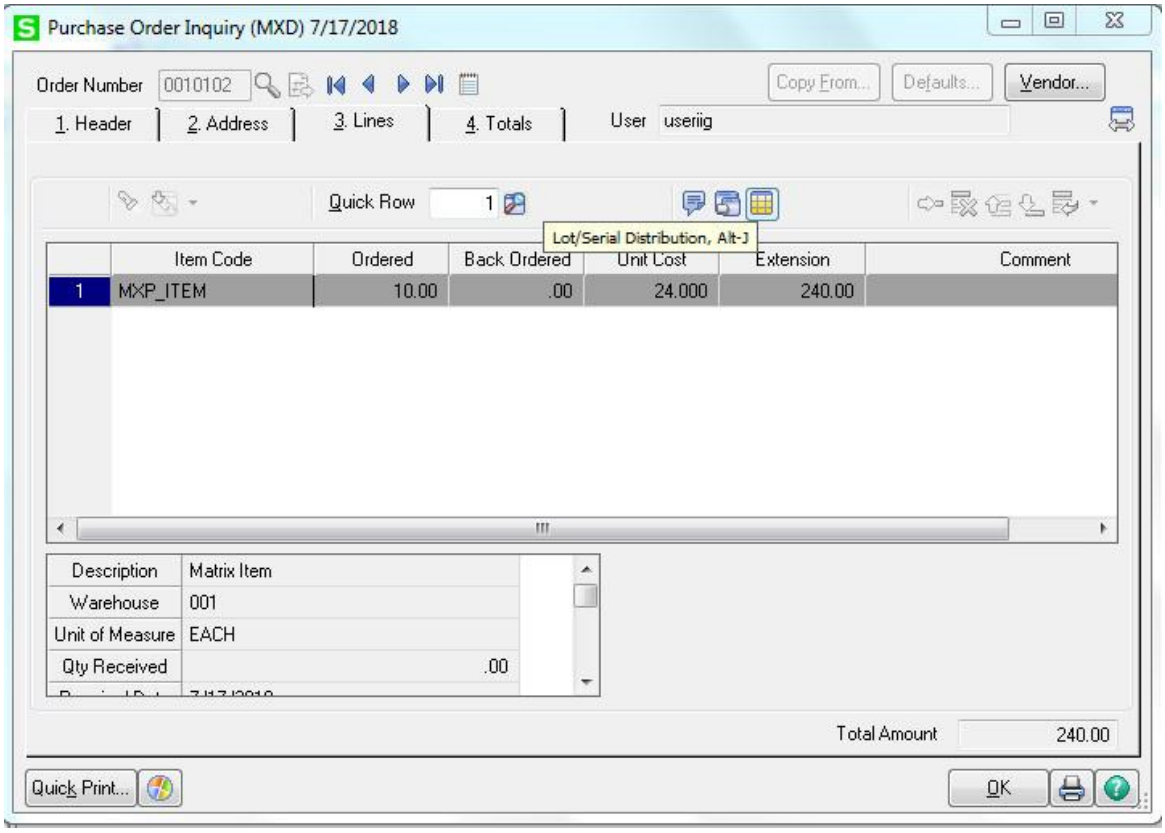

Predefined Distribution Maintenance
Bill Number MXP_ITEM MXP
Item Code MXP2_ITEM Matrix
Bill Lot No. L BLACK
Existing Bill Lots List
Quantity
1 L BLACK 1.00
2 M RED 1.00
3 XL GREEN 1.00
4 .00
Balance .00
Quantity 3.00
Close

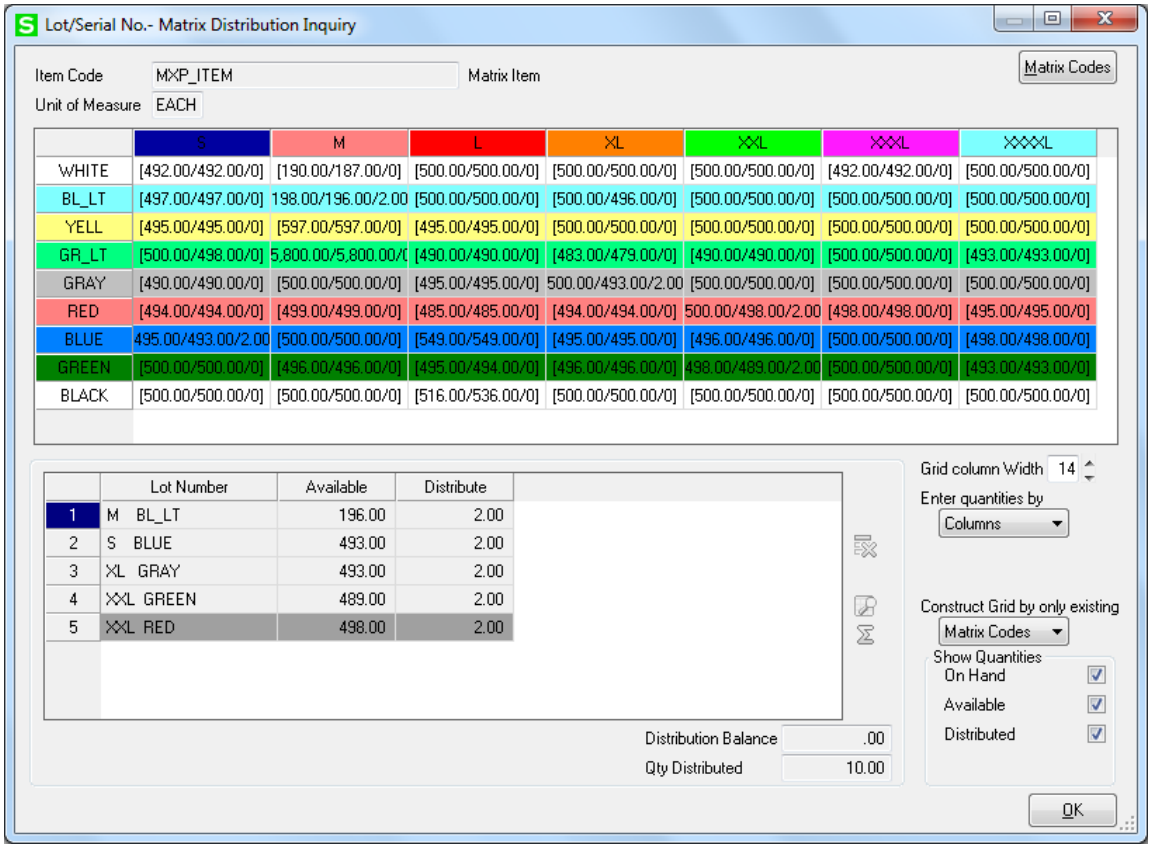


Inquiries

Purchase Order Inquiry

The **Lot/Serial Distribution** button on the **Lines** tab of the **Purchase Order Inquiry** screen displays the **Matrix Distribution Grid** for reviewing (display-only), when Matrix Item is selected.


Purchase Order Inquiry (MXD) 7/17/2018
Order Number 0010102
Copy From...
Defaults...
Vendor...
1. Header
2. Address
3. Lines
4. Totals
User useriig
Quick Row 1
Lot/Serial Distribution, Alt-J
Item Code
Ordered
Back Ordered
Unit Cost
Extension
Comment
1
MXP_ITEM
10.00
.00
24.000
240.00
Description
Matrix Item
Warehouse
001
Unit of Measure
EACH
Qty Received
.00
Total Amount
240.00
Quick Print...
OK



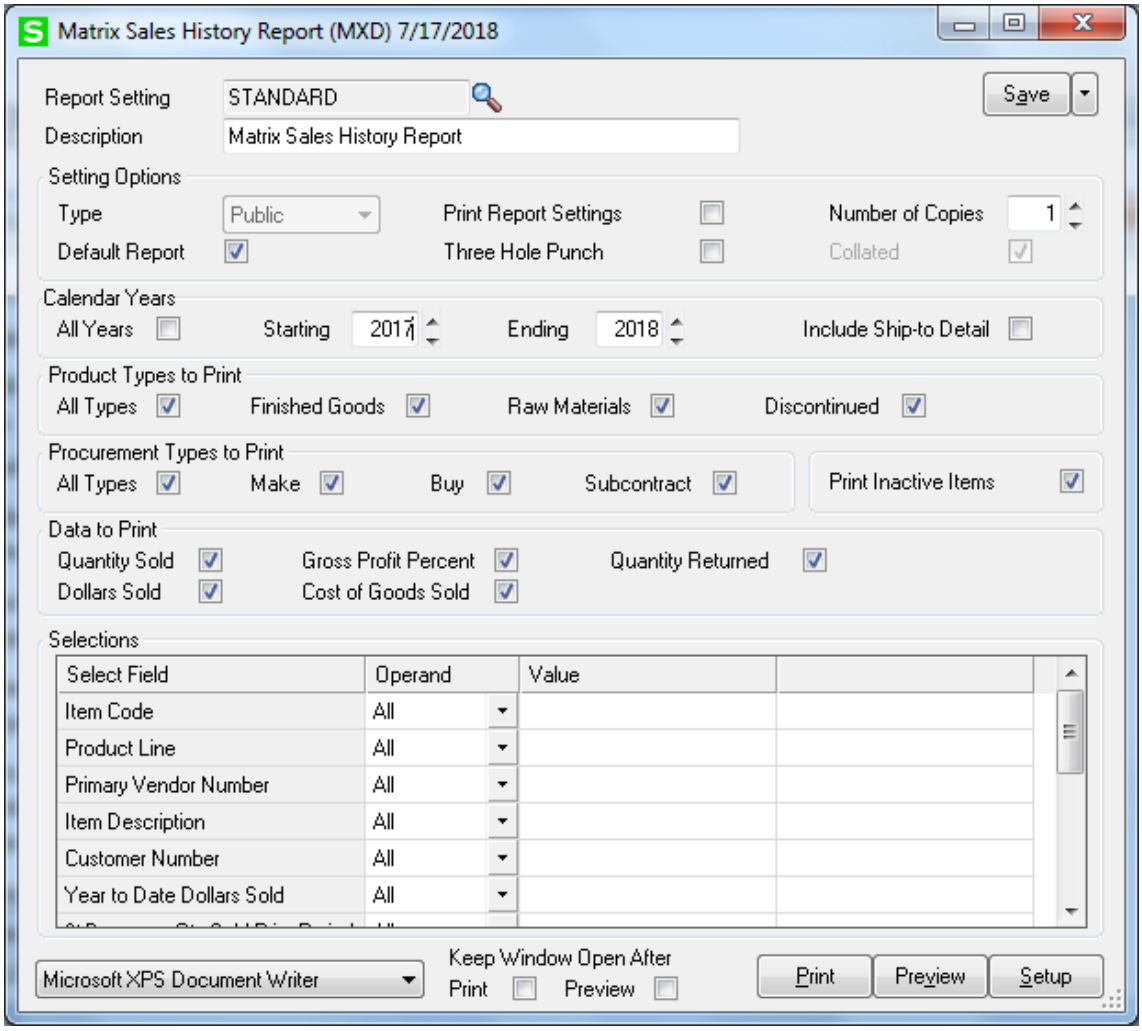
The **Lot/Serial No Matrix Distribution Inquiry** is accessible also from Sales Order Inquiry.

Printings

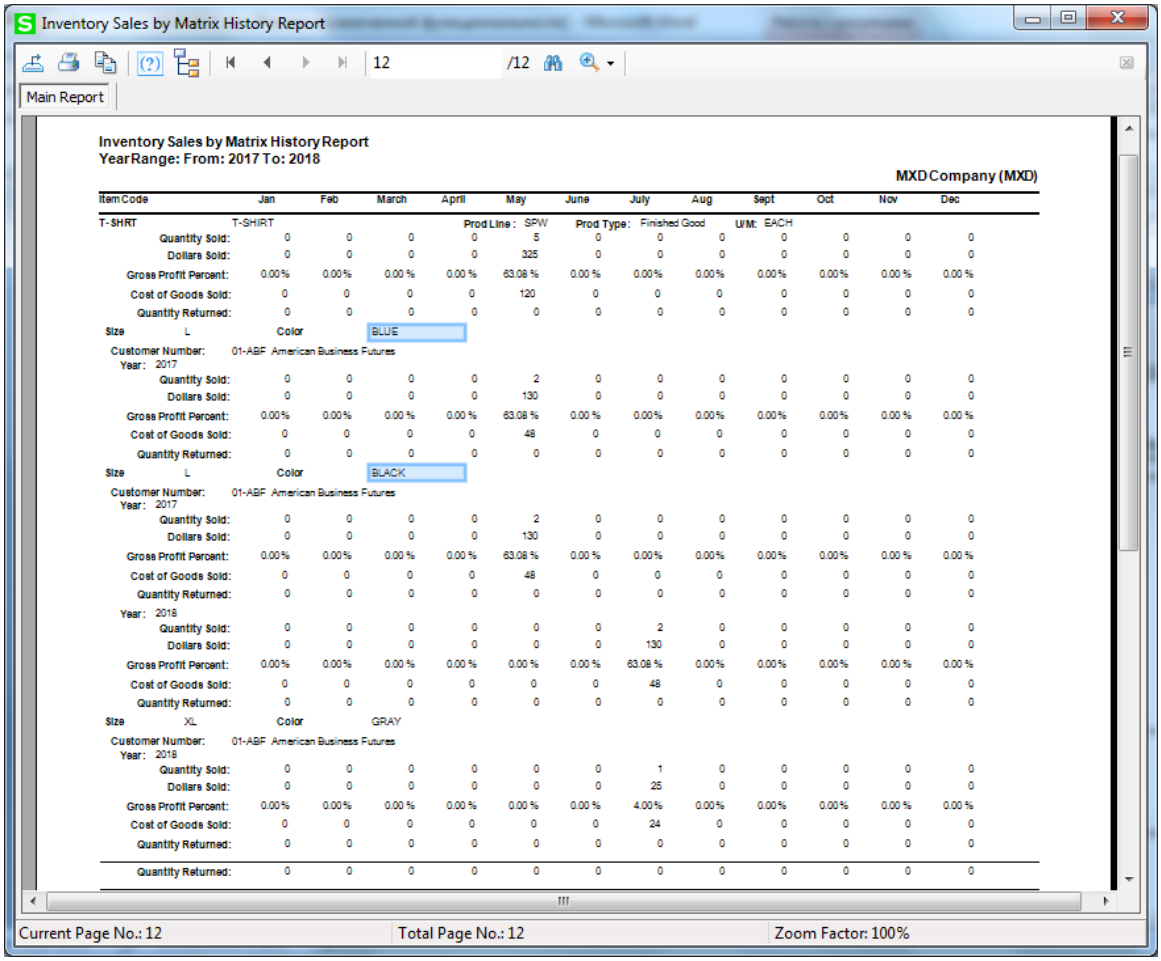
Matrix Sales History Report

Select the **Matrix Sales History Report** program under the **Inventory Management Reports** menu.

The report has been added to print Sales History for Matrix Items.



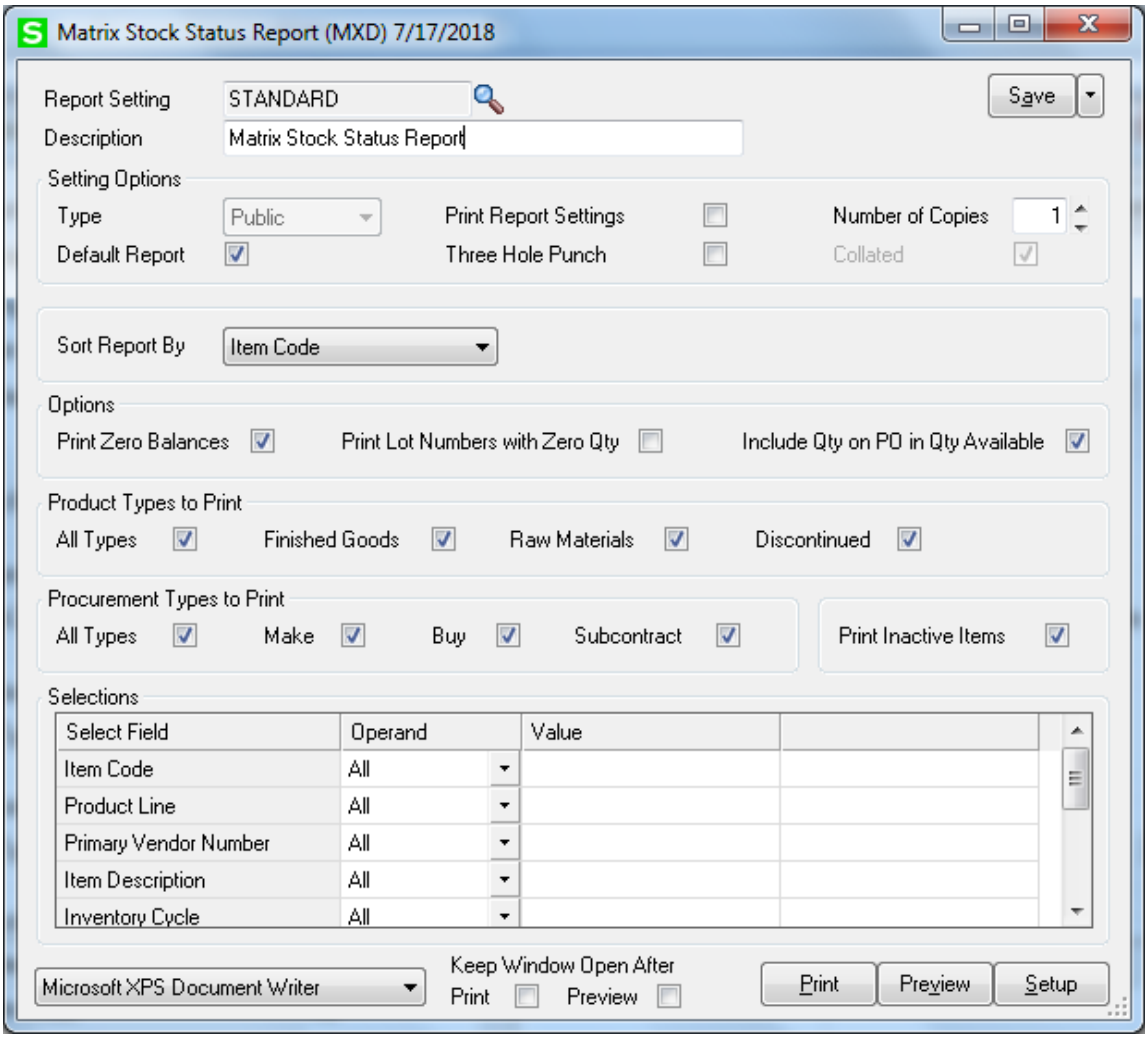
The selections are similar to the **Inventory Sales History Report**. In addition, Matrix Items can be filtered by two Categories specified in the Matrix Options program (Size and Color).


Inventory Sales by Matrix History Report
12
/12
Main Report
Inventory Sales by Matrix History Report
YearRange: From: 2017 To: 2018
MXD Company (MXD)
Item Code Jan Feb March April May June July Aug Sept Oct Nov Dec
T-SHRT T-SHIRT Prod Line : SPW Prod Type: Finished Good U/M: EACH
Quantity Sold: 0 0 0 0 5 0 0 0 0 0 0 0
Dollars Sold: 0 0 0 0 325 0 0 0 0 0 0 0
Gross Profit Percent: 0.00% 0.00% 0.00 % 0.00 % 63.08 % 0.00 % 0.00% 0.00% 0.00% 0.00% 0.00 % 0.00 %
Cost of Goods Sold: 0 0 0 0 120 0 0 0 0 0 0 0
Quantity Returned: 0 0 0 0 0 0 0 0 0 0 0 0
Size L Color BLUE
Customer Number: 01-ABF American Business Futures
Year: 2017
Quantity Sold: 0 0 0 0 2 0 0 0 0 0 0 0
Dollars Sold: 0 0 0 0 130 0 0 0 0 0 0 0
Gross Profit Percent: 0.00% 0.00% 0.00 % 0.00 % 63.08 % 0.00 % 0.00% 0.00% 0.00% 0.00% 0.00 % 0.00 %
Cost of Goods Sold: 0 0 0 0 48 0 0 0 0 0 0 0
Quantity Returned: 0 0 0 0 0 0 0 0 0 0 0 0
Size L Color BLACK
Customer Number: 01-ABF American Business Futures
Year: 2017
Quantity Sold: 0 0 0 0 2 0 0 0 0 0 0 0
Dollars Sold: 0 0 0 0 130 0 0 0 0 0 0 0
Gross Profit Percent: 0.00% 0.00% 0.00 % 0.00 % 63.08 % 0.00 % 0.00% 0.00% 0.00% 0.00% 0.00 % 0.00 %
Cost of Goods Sold: 0 0 0 0 48 0 0 0 0 0 0 0
Quantity Returned: 0 0 0 0 0 0 0 0 0 0 0 0
Year: 2018
Quantity Sold: 0 0 0 0 0 0 2 0 0 0 0 0
Dollars Sold: 0 0 0 0 0 0 130 0 0 0 0 0
Gross Profit Percent: 0.00% 0.00% 0.00 % 0.00 % 0.00 % 0.00 % 63.08 % 0.00% 0.00% 0.00% 0.00 % 0.00 %
Cost of Goods Sold: 0 0 0 0 0 0 48 0 0 0 0 0
Quantity Returned: 0 0 0 0 0 0 0 0 0 0 0 0
Size XL Color GRAY
Customer Number: 01-ABF American Business Futures
Year: 2018
Quantity Sold: 0 0 0 0 0 0 1 0 0 0 0 0
Dollars Sold: 0 0 0 0 0 0 25 0 0 0 0 0
Gross Profit Percent: 0.00% 0.00% 0.00 % 0.00 % 0.00 % 0.00 % 4.00 % 0.00% 0.00% 0.00% 0.00 % 0.00 %
Cost of Goods Sold: 0 0 0 0 0 0 24 0 0 0 0 0
Quantity Returned: 0 0 0 0 0 0 0 0 0 0 0 0
Quantity Returned: 0 0 0 0 0 0 0 0 0 0 0 0
Current Page No.: 12
Total Page No.: 12
Zoom Factor: 100%

Matrix Stock Status Report

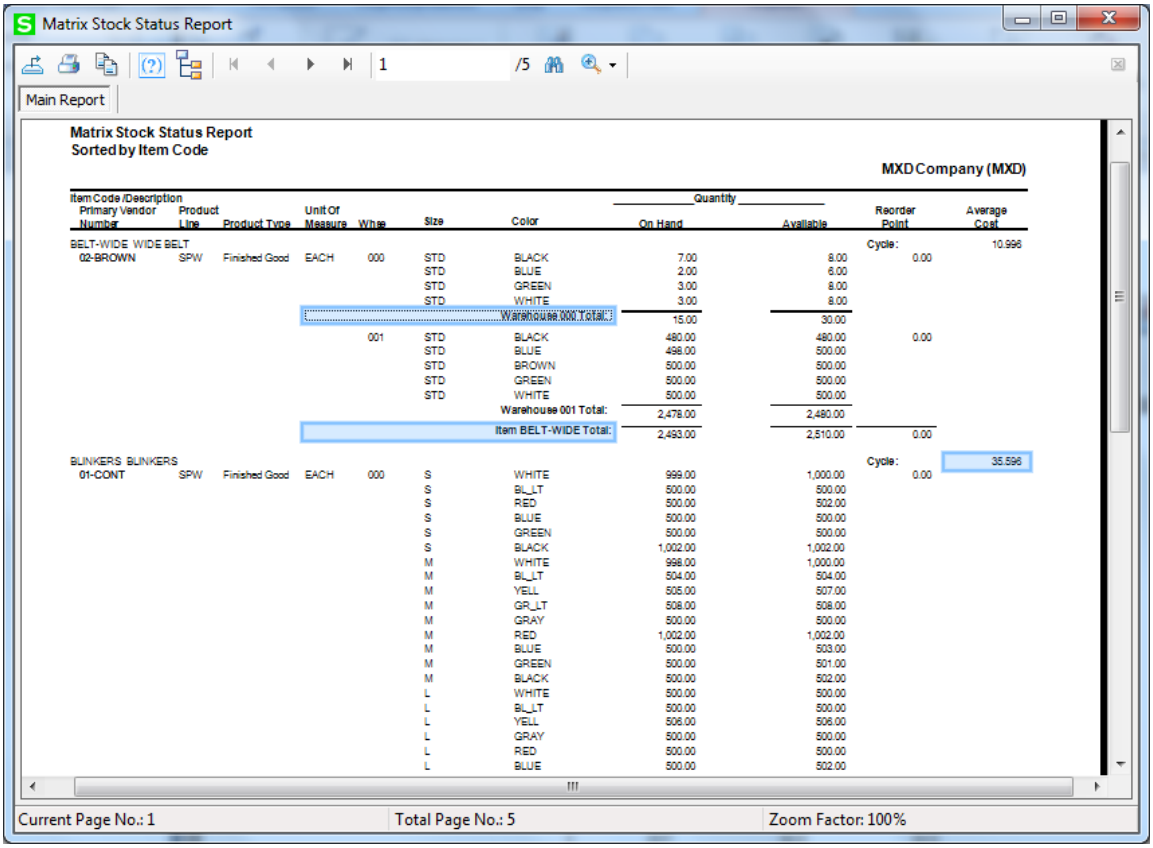
Select the **Matrix Stock Status Report** program under the **Inventory Management Reports** menu.

The report has been added to print Stock Status for Matrix Items.

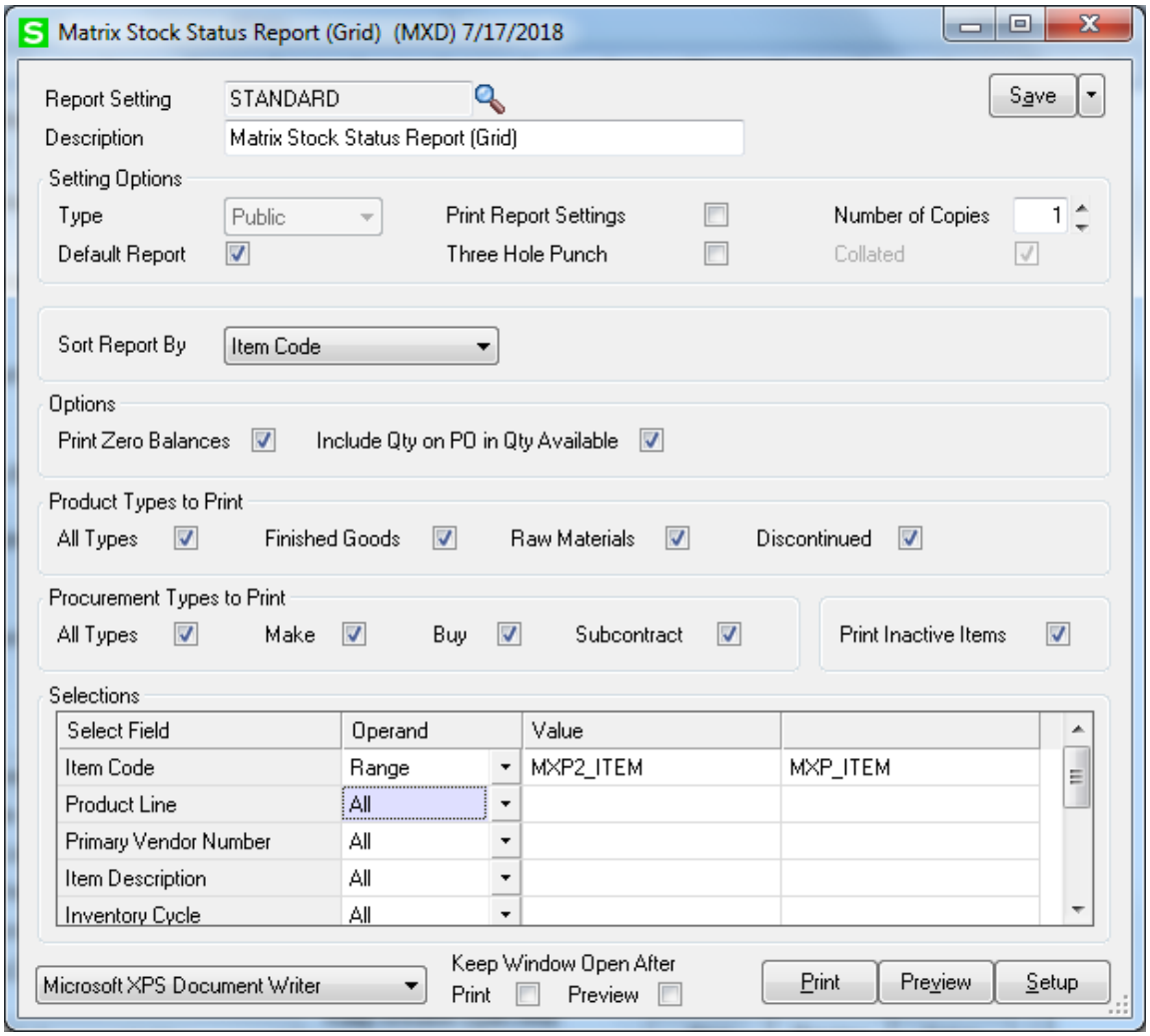


The selections are similar to the **Inventory Stock Status Report**. In addition, Matrix Items can be filtered by two Categories specified in the Matrix Options program (Size and Color).
The **Include Qty on PO in Qty Available** option is turned on by default to include the quantity on PO in the Quantity available calculation for Matrix lot.

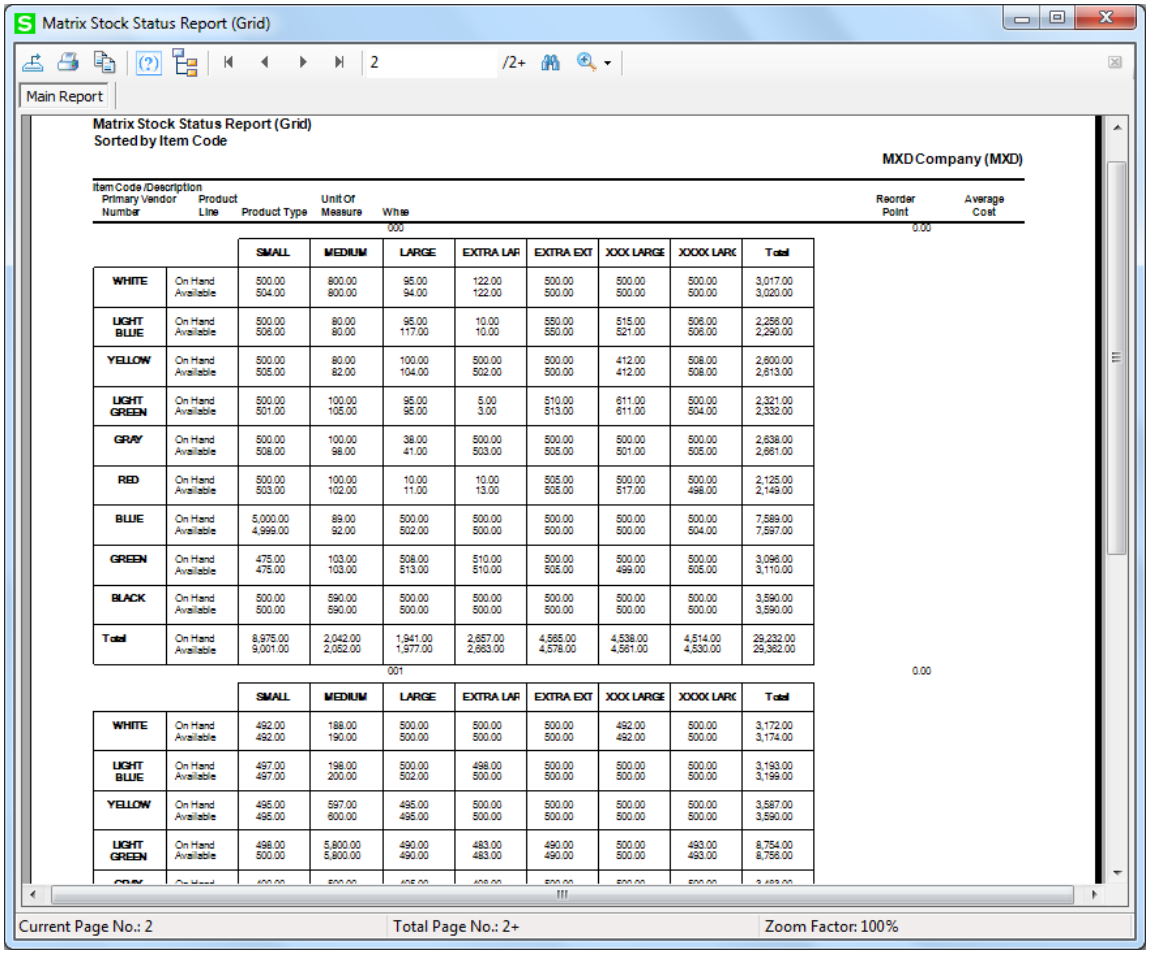
Only Lot Numbers existing for an Item are printed in the report. Checking the Print Lot Numbers with Zero Qty box allows printing Lot Numbers with no quantity available. Here is an example of the printout:



Matrix Stock Status Report (Grid)

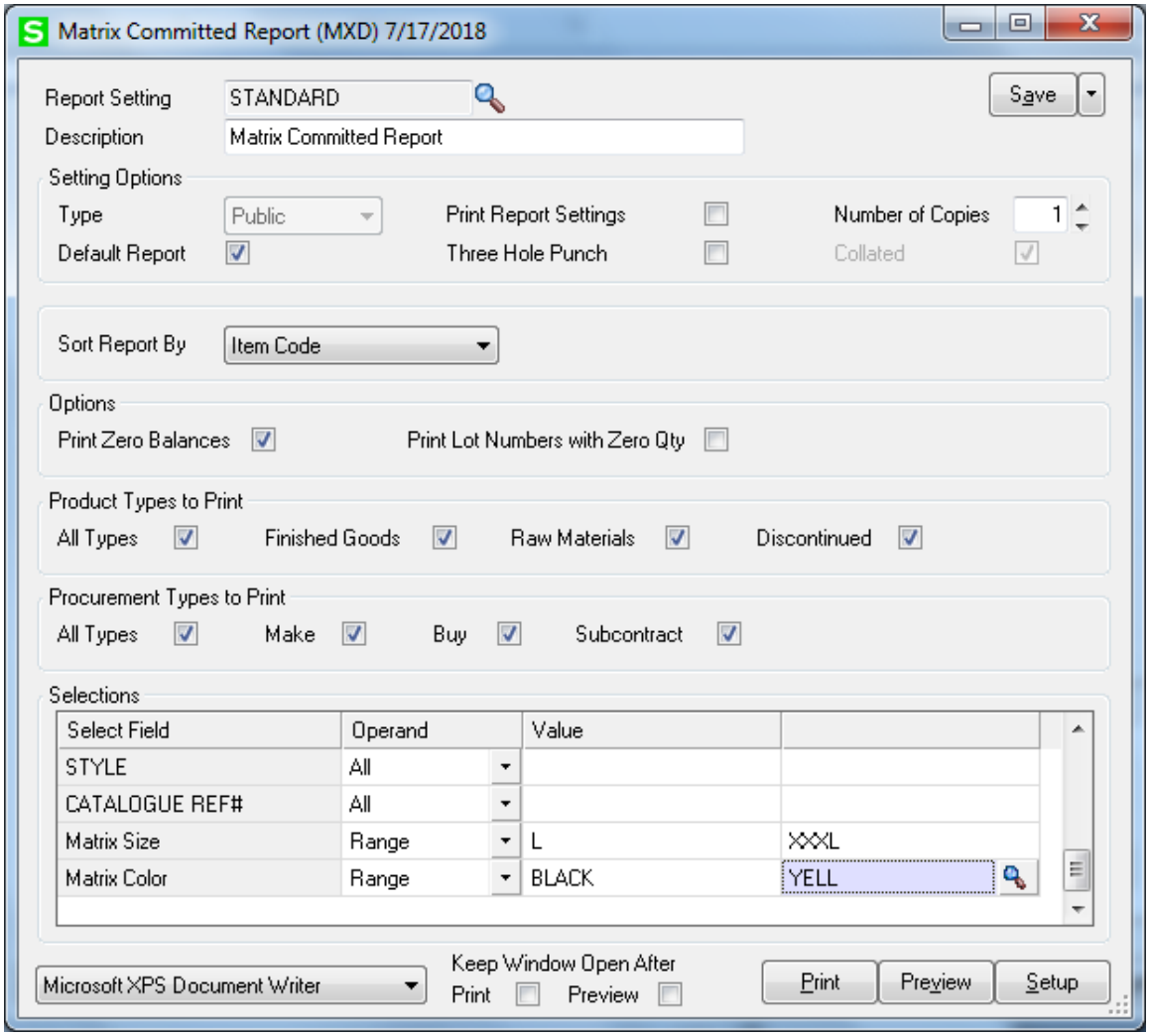


Select the **Matrix Stock Status Report (Grid)** if you want the information to be printed by a grid:


Matrix Stock Status Report (Grid)
Main Report
Matrix Stock Status Report (Grid)
Sorted by Item Code
MXD Company (MXD)
Item Code /Description
Primary Vendor Number
Product Line
Product Type
Unit Of Measure
Whse
Reorder Point
Average Cost
000
0.00
SMALL
MEDIUM
LARGE
EXTRA LAR
EXTRA EXT
XXX LARGE
XXXX LARG
Total
WHITE
On Hand
Available
500.00 504.00
800.00 800.00
95.00 94.00
122.00 122.00
500.00 500.00
500.00 500.00
500.00 500.00
3,017.00 3,020.00
LIGHT BLUE
On Hand
Available
500.00 506.00
80.00 80.00
95.00 117.00
10.00 10.00
550.00 550.00
515.00 521.00
506.00 506.00
2,256.00 2,290.00
YELLOW
On Hand
Available
500.00 505.00
80.00 82.00
100.00 104.00
500.00 502.00
500.00 500.00
412.00 412.00
508.00 508.00
2,600.00 2,613.00
LIGHT GREEN
On Hand
Available
500.00 501.00
100.00 105.00
95.00 95.00
5.00 3.00
510.00 513.00
611.00 611.00
500.00 504.00
2,321.00 2,332.00
GRAY
On Hand
Available
500.00 508.00
100.00 98.00
38.00 41.00
500.00 503.00
500.00 505.00
500.00 501.00
500.00 505.00
2,638.00 2,661.00
RED
On Hand
Available
500.00 503.00
100.00 102.00
10.00 11.00
10.00 13.00
505.00 505.00
500.00 517.00
500.00 498.00
2,125.00 2,149.00
BLUE
On Hand
Available
5,000.00 4,999.00
89.00 92.00
500.00 502.00
500.00 500.00
500.00 500.00
500.00 500.00
500.00 504.00
7,589.00 7,597.00
GREEN
On Hand
Available
475.00 475.00
103.00 103.00
508.00 513.00
510.00 510.00
500.00 505.00
500.00 499.00
500.00 505.00
3,096.00 3,110.00
BLACK
On Hand
Available
500.00 500.00
590.00 590.00
500.00 500.00
500.00 500.00
500.00 500.00
500.00 500.00
500.00 500.00
3,590.00 3,590.00
Total
On Hand
Available
8,975.00 9,001.00
2,042.00 2,052.00
1,941.00 1,977.00
2,657.00 2,663.00
4,565.00 4,578.00
4,538.00 4,561.00
4,514.00 4,530.00
29,232.00 29,382.00
001
0.00
SMALL
MEDIUM
LARGE
EXTRA LAR
EXTRA EXT
XXX LARGE
XXXX LARG
Total
WHITE
On Hand
Available
492.00 492.00
188.00 190.00
500.00 500.00
500.00 500.00
500.00 500.00
492.00 492.00
500.00 500.00
3,172.00 3,174.00
LIGHT BLUE
On Hand
Available
497.00 497.00
198.00 200.00
500.00 502.00
498.00 500.00
500.00 500.00
500.00 500.00
500.00 500.00
3,193.00 3,199.00
YELLOW
On Hand
Available
495.00 495.00
597.00 600.00
495.00 495.00
500.00 500.00
500.00 500.00
500.00 500.00
500.00 500.00
3,587.00 3,590.00
LIGHT GREEN
On Hand
Available
498.00 500.00
5,800.00 5,800.00
490.00 490.00
483.00 483.00
490.00 490.00
500.00 500.00
493.00 493.00
8,754.00 8,756.00
Current Page No.: 2
Total Page No.: 2+
Zoom Factor: 100%

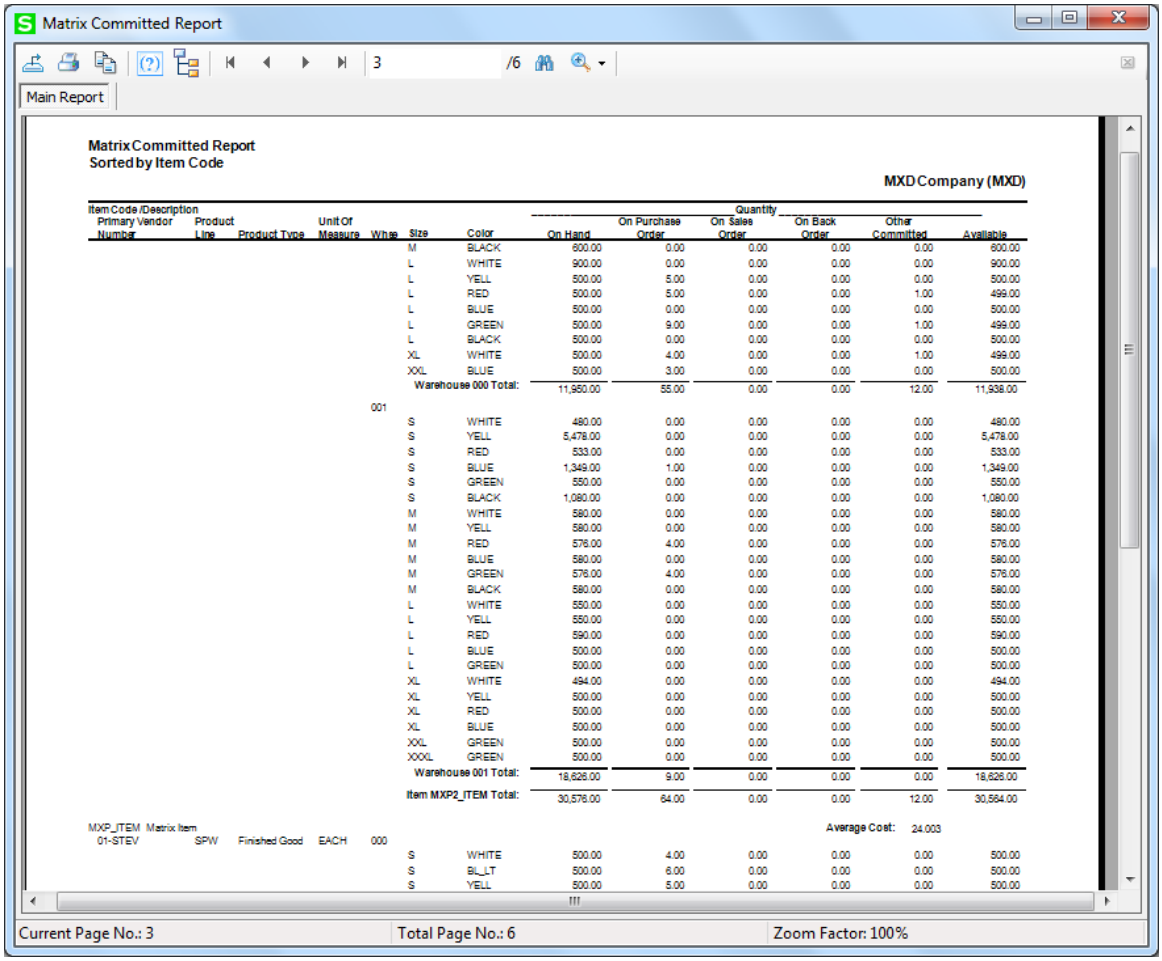
Matrix Committed Report

Select the **Matrix Committed Report** program under the **Inventory Management Reports** menu.



The report has been added to print Quantities on Sales Orders and Back Orders as well as Quantities on Purchase Orders for Matrix Items.

Here is an example of the printout:



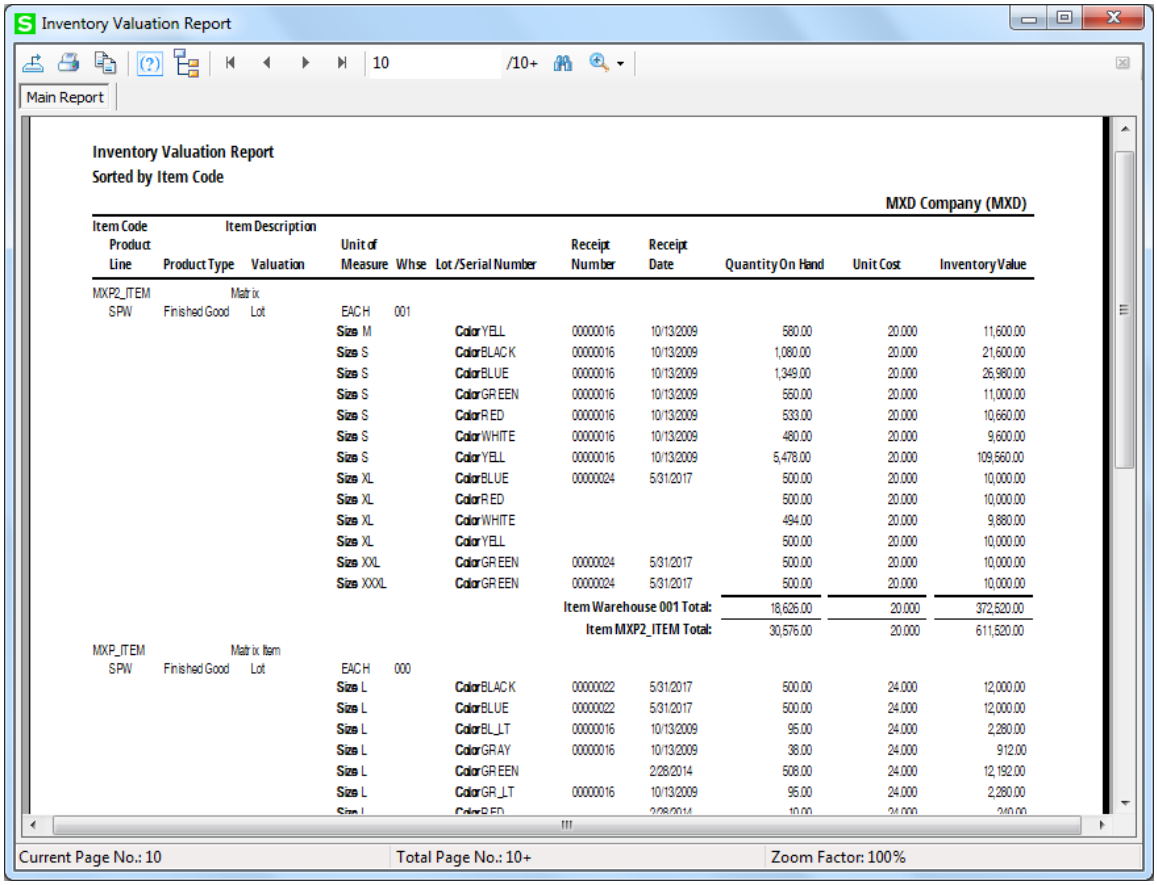
The quantity **Available** printed on the report is calculated as follows: "**Qty On Hand + Qty On Purchase Order – Qty On Sales Order**" if the Include in Quantity Available option is set to "**Purchase Orders"** or **"POs and WOs"**, otherwise it is calculated as **"Qty On Hand– Qty On Sales Order"**.

Note: The quantities committed on WO, IM Transactions and B/M Entries are not taken into account during Available quantity calculation.

Inventory Valuation Report

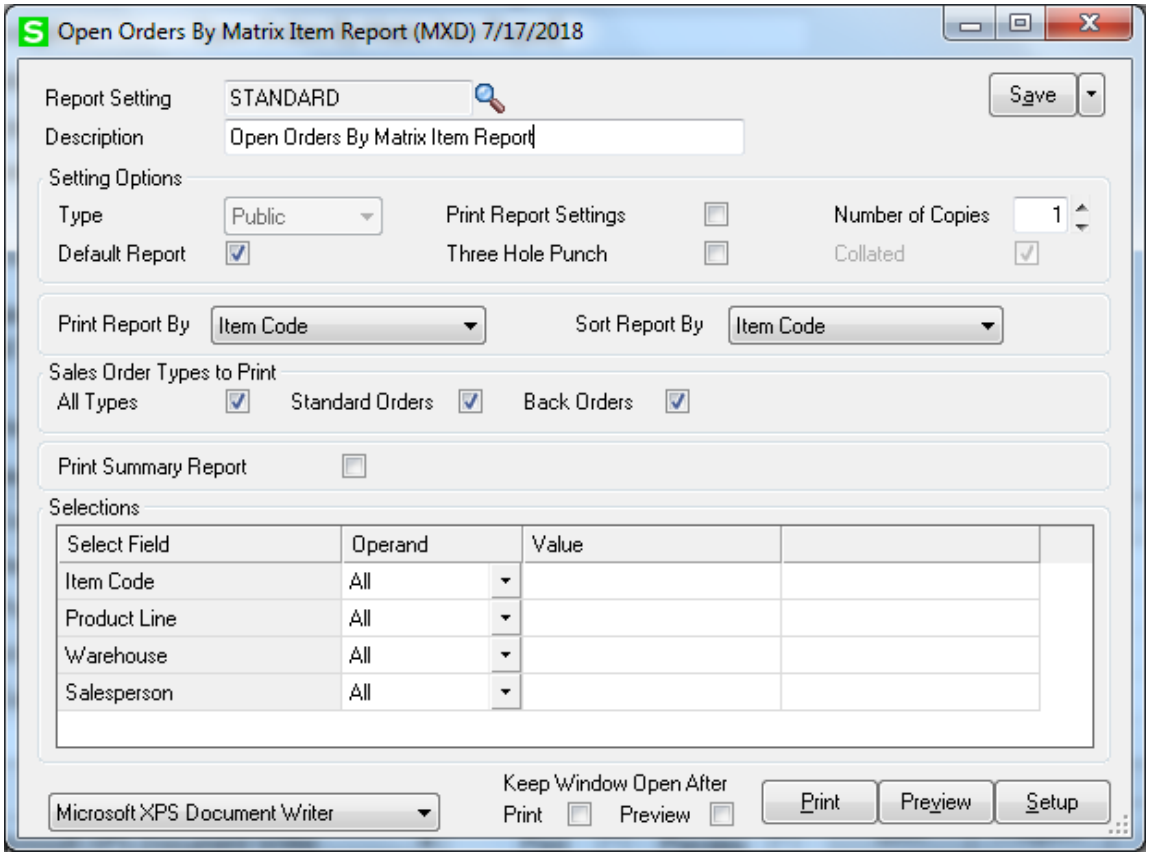
Select the **Inventory Valuation Report** program under the **Inventory Management Reports** menu.

The report has been modified to display Lot Numbers for Matrix Items as a pair of Matrix Codes with their Category Descriptions.


Inventory Valuation Report
10
/10+
Main Report
Inventory Valuation Report
Sorted by Item Code
MXD Company (MXD)
Item Code
Product Line
Item Description
Product Type
Valuation
Unit of Measure
Whse
Lot /Serial Number
Receipt Number
Receipt Date
Quantity On Hand
Unit Cost
Inventory Value
MXP2_ITEM
Matrix
SPW
Finished Good
Lot
EACH
001
Size M
Color YELL
00000016
10/13/2009
580.00
20.000
11,600.00
Size S
Color BLACK
00000016
10/13/2009
1,080.00
20.000
21,600.00
Size S
Color BLUE
00000016
10/13/2009
1,349.00
20.000
26,980.00
Size S
Color GREEN
00000016
10/13/2009
550.00
20.000
11,000.00
Size S
Color RED
00000016
10/13/2009
533.00
20.000
10,660.00
Size S
Color WHITE
00000016
10/13/2009
480.00
20.000
9,600.00
Size S
Color YELL
00000016
10/13/2009
5,478.00
20.000
109,560.00
Size XL
Color BLUE
00000024
5/31/2017
500.00
20.000
10,000.00
Size XL
Color RED
500.00
20.000
10,000.00
Size XL
Color WHITE
494.00
20.000
9,880.00
Size XL
Color YELL
500.00
20.000
10,000.00
Size XXL
Color GREEN
00000024
5/31/2017
500.00
20.000
10,000.00
Size XXXL
Color GREEN
00000024
5/31/2017
500.00
20.000
10,000.00
Item Warehouse 001 Total:
18,626.00
20.000
372,520.00
Item MXP2_ITEM Total:
30,576.00
20.000
611,520.00
MXP_ITEM
Matrix Item
SPW
Finished Good
Lot
EACH
000
Size L
Color BLACK
00000022
5/31/2017
500.00
24.000
12,000.00
Size L
Color BLUE
00000022
5/31/2017
500.00
24.000
12,000.00
Size L
Color BL_LT
00000016
10/13/2009
95.00
24.000
2,280.00
Size L
Color GRAY
00000016
10/13/2009
38.00
24.000
912.00
Size L
Color GREEN
2/28/2014
508.00
24.000
12,192.00
Size L
Color GR_LT
00000016
10/13/2009
95.00
24.000
2,280.00
Current Page No.: 10
Total Page No.: 10+
Zoom Factor: 100%

Open Orders by Matrix Item Report

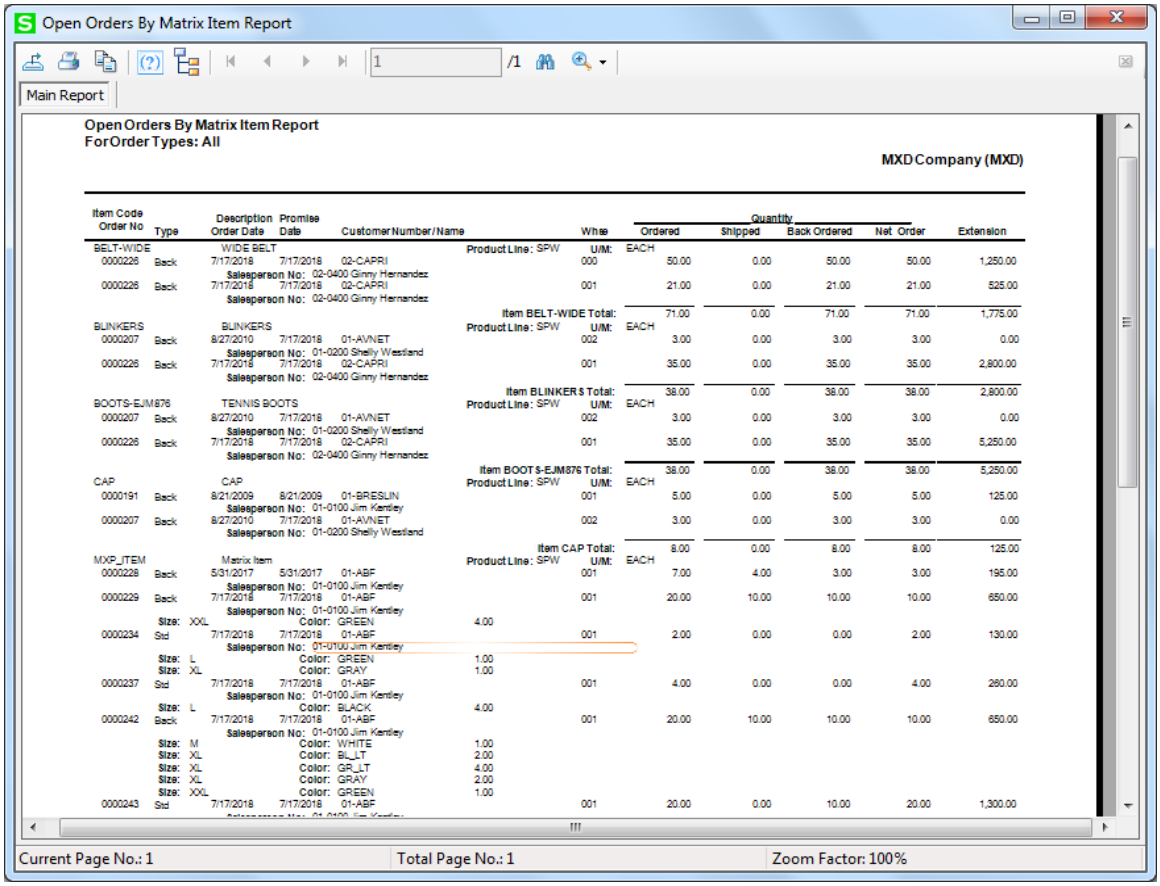
The **Open Orders by Matrix Item Report** provides open sales orders information for Matrix Items' Lots. Select the **Open Orders by Matrix Item Report** program under the **Sales Order Reports** menu.



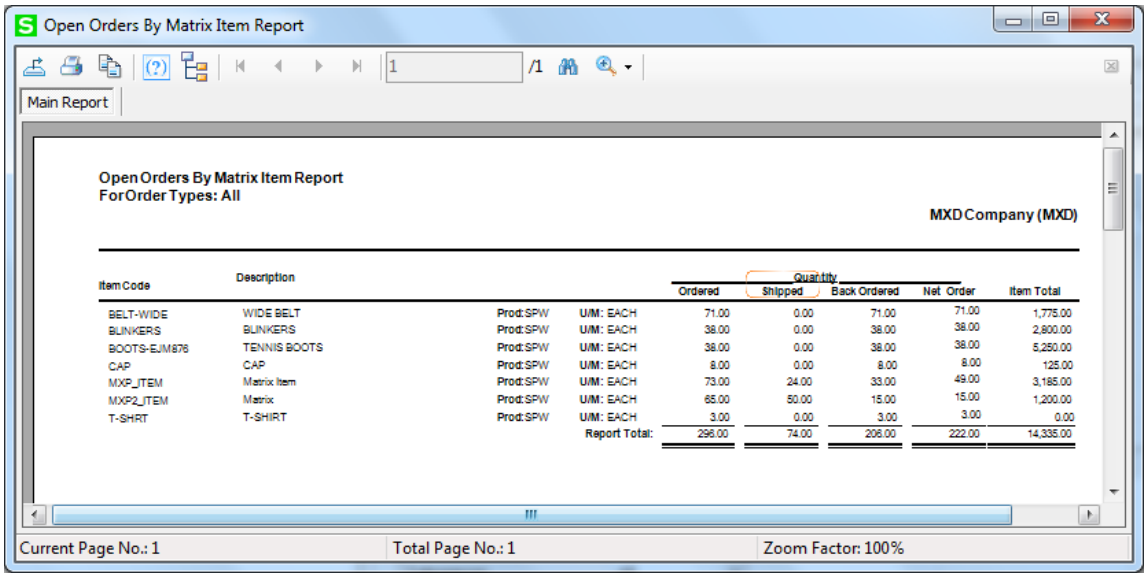
Print Report By and **Sort Report by** options allow for printing of open orders for each Salesperson by Items or for each Item by Salespersons.

Selections by Item Code, Product Line, Warehouse and Salesperson are available.

Here is an example of a report printed by Salesperson and sorted by Item Code:

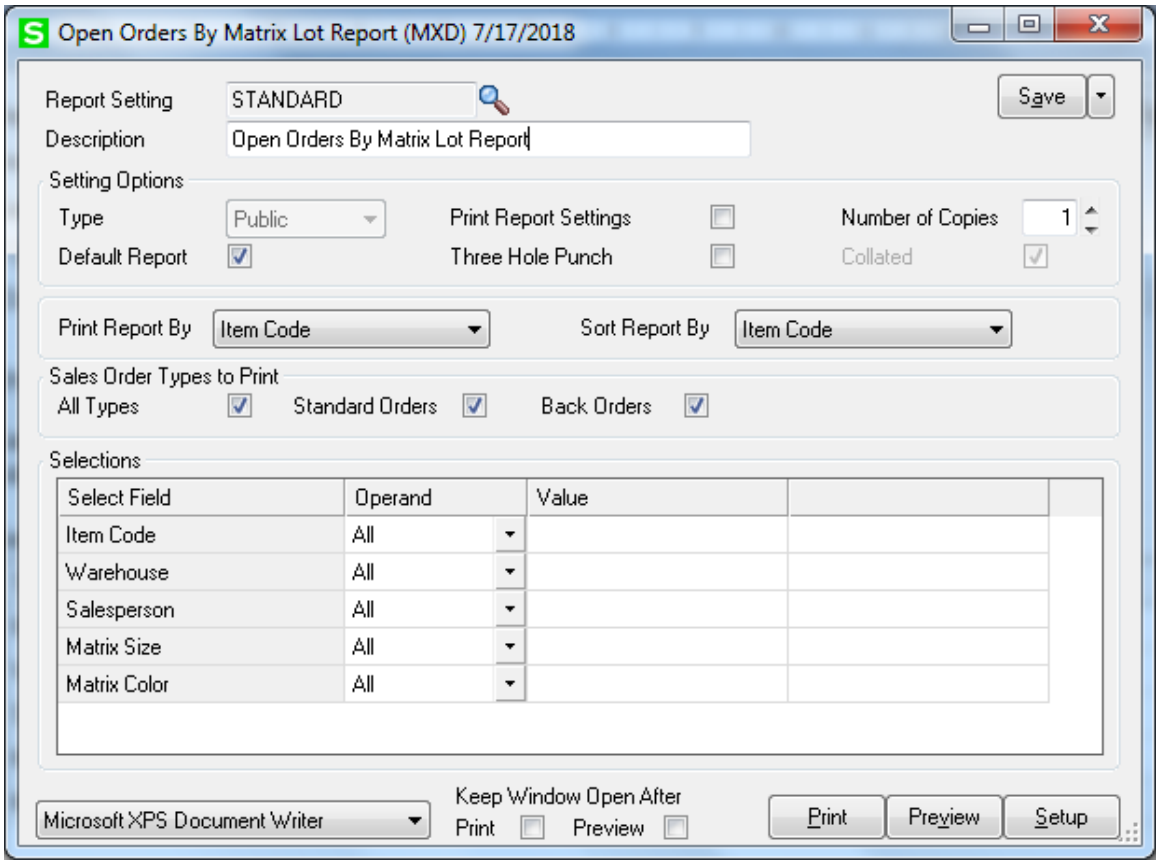


Here is an example of the summary report printout:



Open Orders by Matrix Lot Report

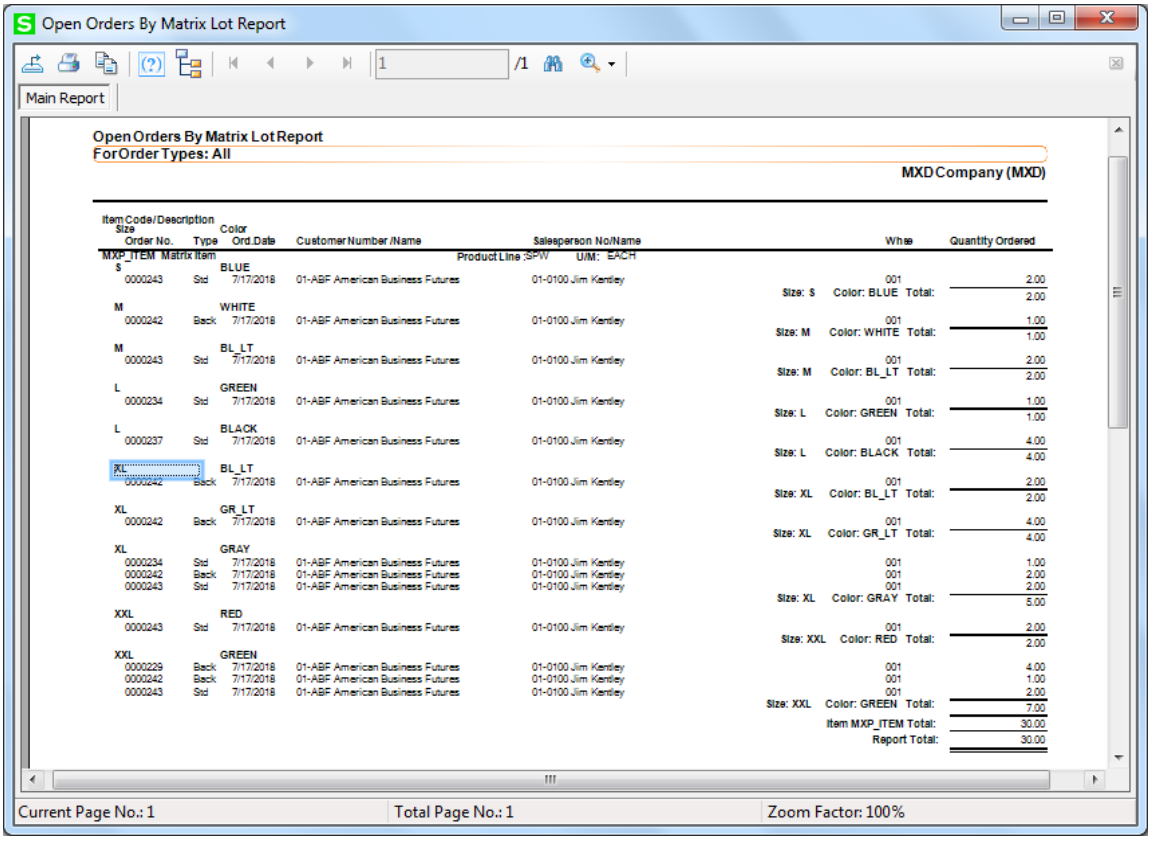
The **Open Orders by Matrix Lot Report** program has been added to the **Sales Order Reports** menu to allow printing open sales orders by Matrix Size and Matrix Color to make easy tracking of outstanding orders for each Matrix Lot.
By default the report is sorted by item code. It can be sorted also by the Salesperson.
There is an option to include Standard Orders, Back Orders or both types (All).



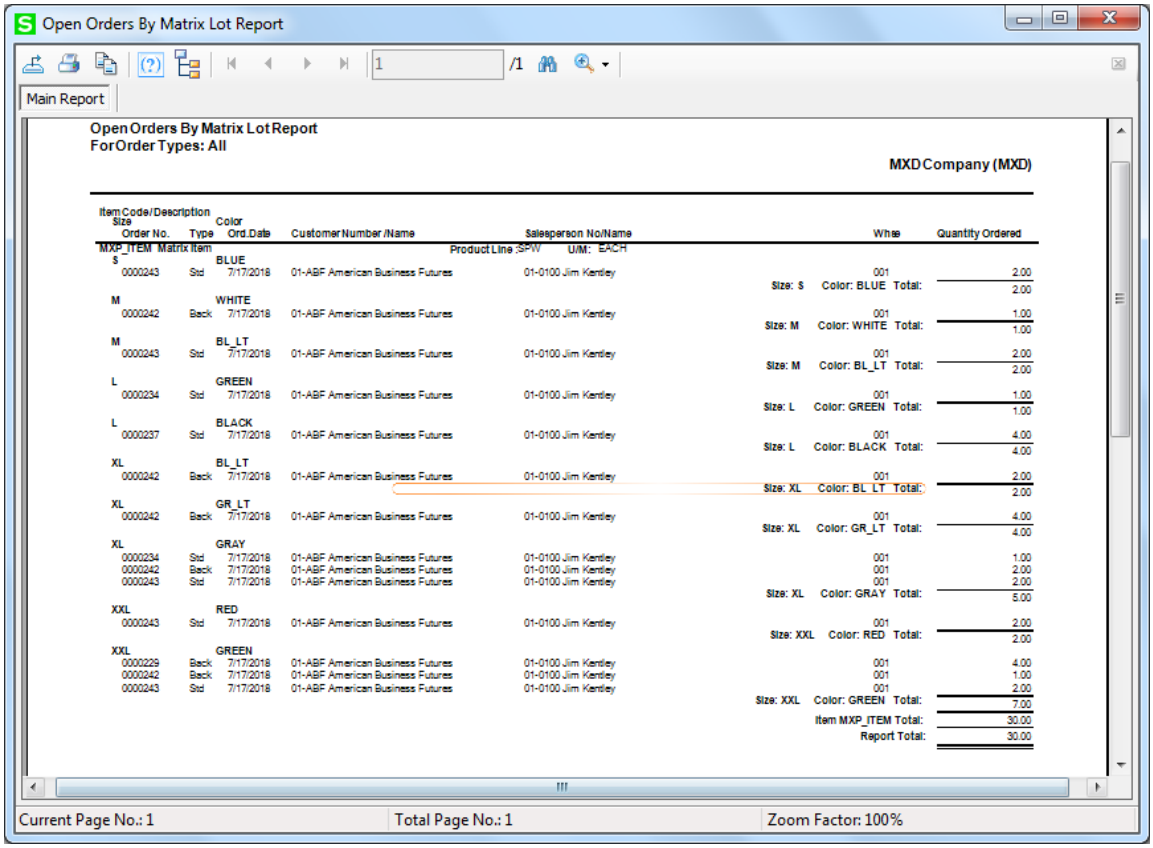
Selection of Item Code, Product Line, Warehouse, Salesperson, Matrix Size and Matrix Color may be applied to the report.

Print Report By and **Sort Report by** options allow for printing of open orders for each Salesperson sorted by Items or for each Item sorted by Salespersons.

Here is an example of a report printed by Salesperson sorted by Item Code

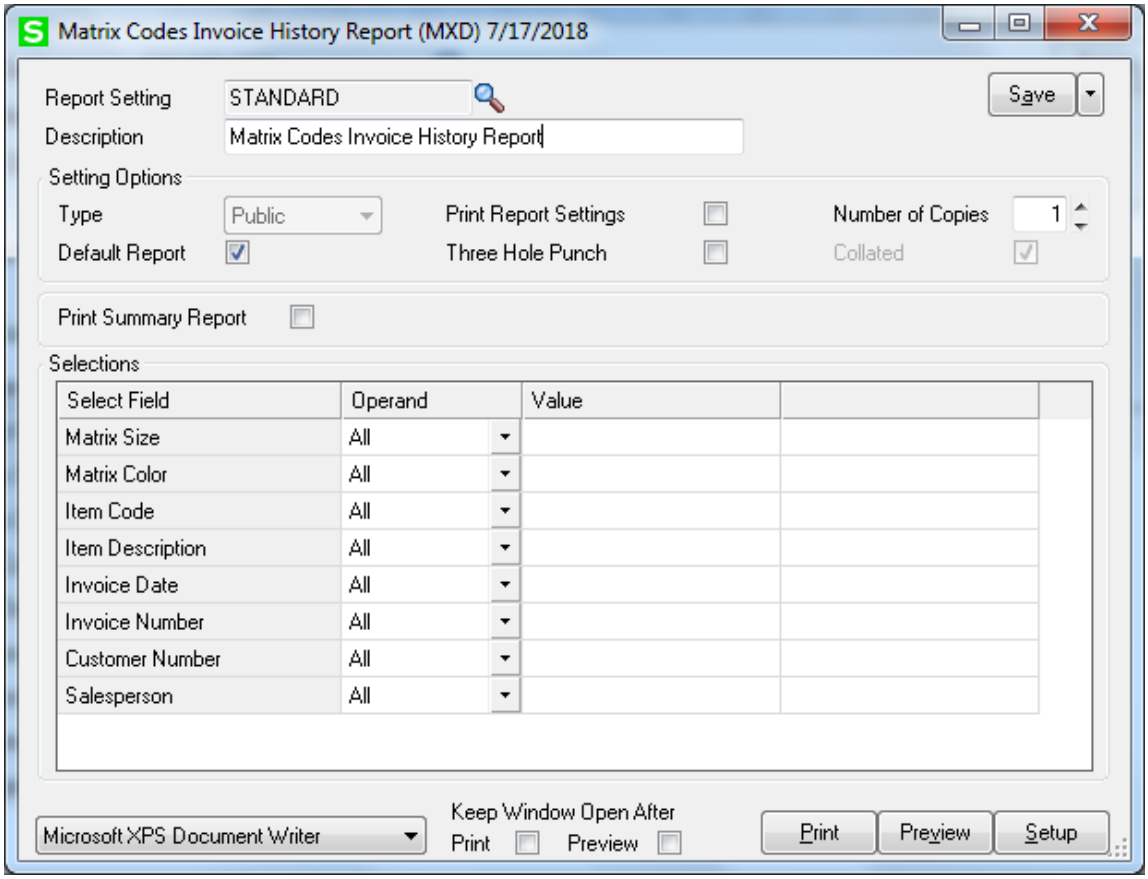


Here is an example of the report printed by Item Code and Sorted by Salesperson.

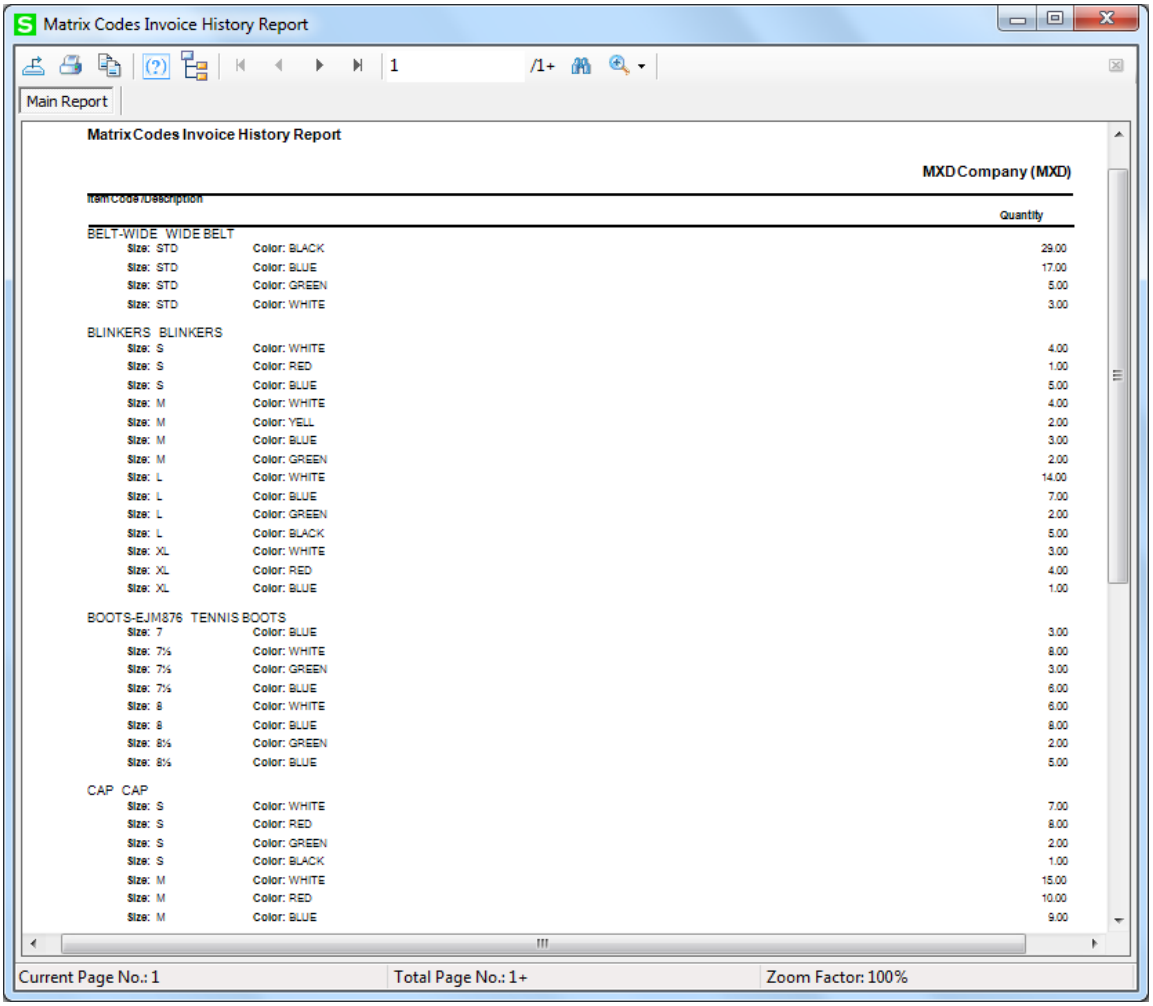

Open Orders By Matrix Lot Report
Main Report
Open Orders By Matrix Lot Report
For Order Types: All
MXD Company (MXD)
Item Code/Description
Size
Order No.
Type
Color
Ord.Date
Customer Number /Name
Salesperson No/Name
Whse
Quantity Ordered
MXP_ITEM Matrix Item
Product Line :SPW
U/M: EACH
$
BLUE
0000243 Std 7/17/2018 01-ABF American Business Futures 01-0100 Jim Kentley 001 2.00
Size: $ Color: BLUE Total: 2.00
M
WHITE
0000242 Back 7/17/2018 01-ABF American Business Futures 01-0100 Jim Kentley 001 1.00
Size: M Color: WHITE Total: 1.00
M
BL_LT
0000243 Std 7/17/2018 01-ABF American Business Futures 01-0100 Jim Kentley 001 2.00
Size: M Color: BL_LT Total: 2.00
L
GREEN
0000234 Std 7/17/2018 01-ABF American Business Futures 01-0100 Jim Kentley 001 1.00
Size: L Color: GREEN Total: 1.00
L
BLACK
0000237 Std 7/17/2018 01-ABF American Business Futures 01-0100 Jim Kentley 001 4.00
Size: L Color: BLACK Total: 4.00
XL
BL_LT
0000242 Back 7/17/2018 01-ABF American Business Futures 01-0100 Jim Kentley 001 2.00
Size: XL Color: BL_LT Total: 2.00
XL
GR_LT
0000242 Back 7/17/2018 01-ABF American Business Futures 01-0100 Jim Kentley 001 4.00
Size: XL Color: GR_LT Total: 4.00
XL
GRAY
0000234 Std 7/17/2018 01-ABF American Business Futures 01-0100 Jim Kentley 001 1.00
0000242 Back 7/17/2018 01-ABF American Business Futures 01-0100 Jim Kentley 001 2.00
0000243 Std 7/17/2018 01-ABF American Business Futures 01-0100 Jim Kentley 001 2.00
Size: XL Color: GRAY Total: 5.00
XXL
RED
0000243 Std 7/17/2018 01-ABF American Business Futures 01-0100 Jim Kentley 001 2.00
Size: XXL Color: RED Total: 2.00
XXL
GREEN
0000229 Back 7/17/2018 01-ABF American Business Futures 01-0100 Jim Kentley 001 4.00
0000242 Back 7/17/2018 01-ABF American Business Futures 01-0100 Jim Kentley 001 1.00
0000243 Std 7/17/2018 01-ABF American Business Futures 01-0100 Jim Kentley 001 2.00
Size: XXL Color: GREEN Total: 7.00
Item MXP_ITEM Total: 30.00
Report Total: 30.00
Current Page No.: 1
Total Page No.: 1
Zoom Factor: 100%

Matrix Codes Invoice History Report

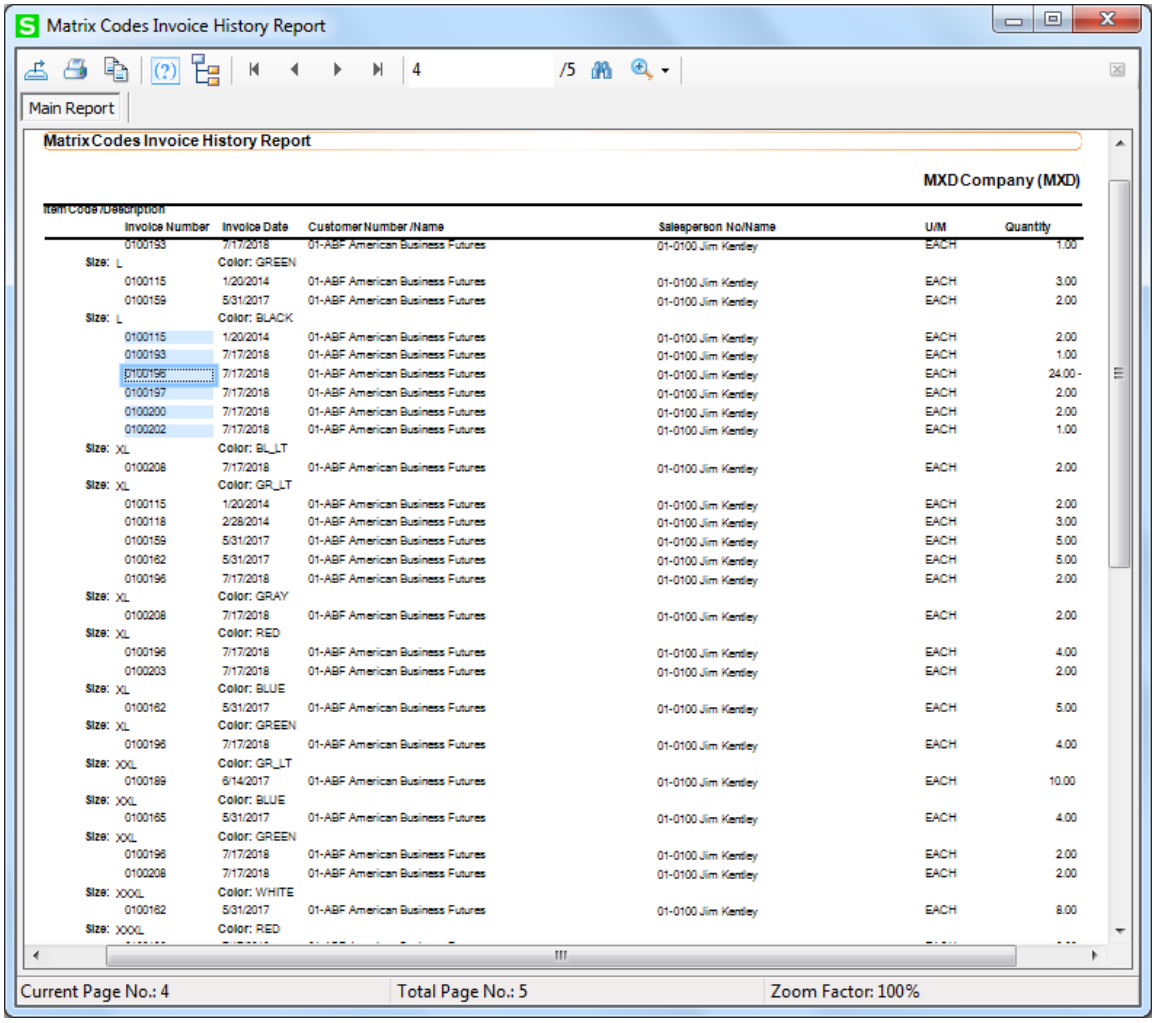
The **Matrix Codes Invoice History Report** added under the Sales Order Reports menu provides detail/summary sales history information about the Matrix Codes.



Here is an example of printout for summary report form:



Here is an example of printout for detail report form:

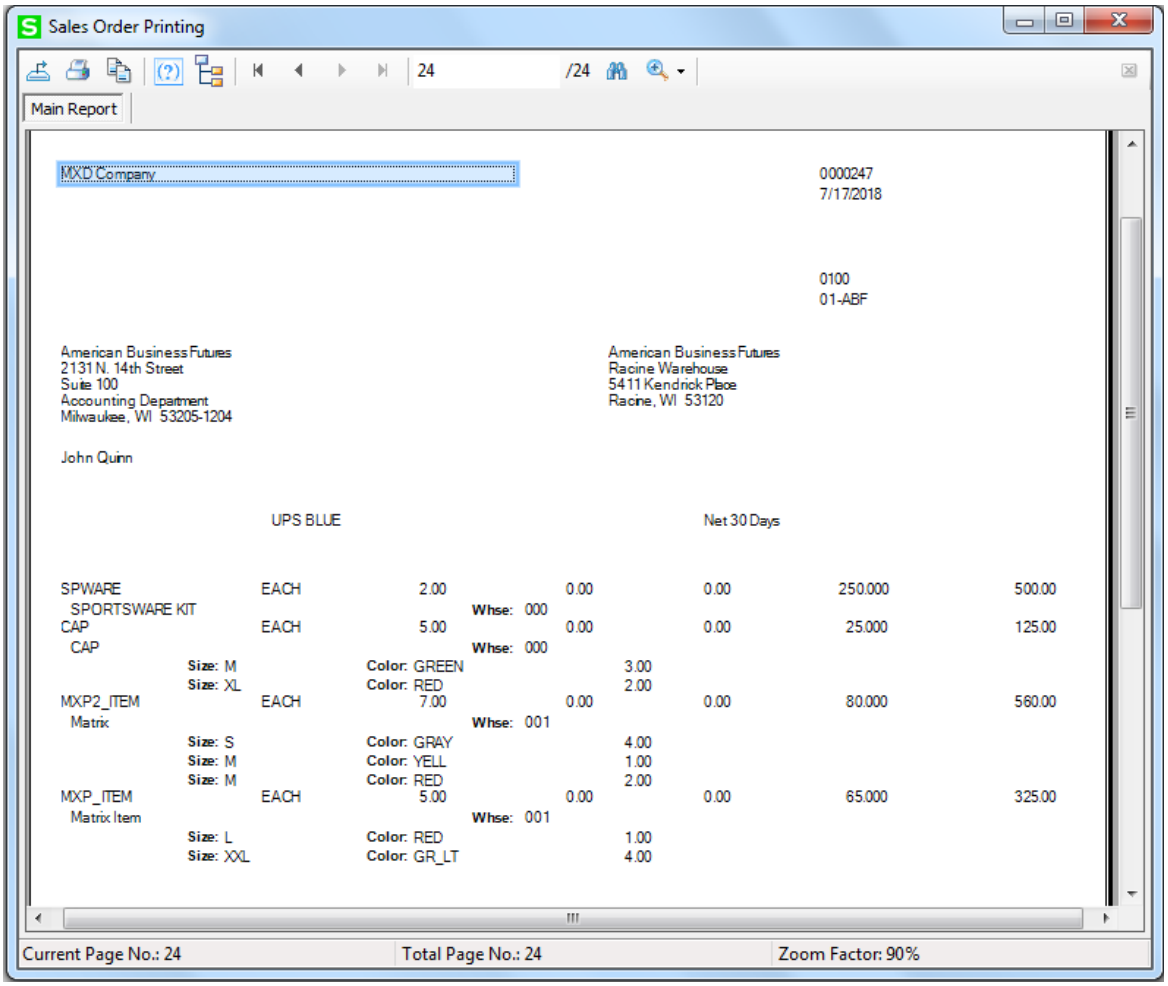

Matrix Codes Invoice History Report
4
/5
Main Report
Matrix Codes Invoice History Report
MXD Company (MXD)
Item Code /Description
Invoice Number
Invoice Date
Customer Number /Name
Salesperson No/Name
U/M
Quantity
Size: L
Color: GREEN
Size: L
Color: BLACK
Size: XL
Color: BL_LT
Size: XL
Color: GR_LT
Size: XL
Color: GRAY
Size: XL
Color: RED
Size: XL
Color: BLUE
Size: XL
Color: GREEN
Size: XXL
Color: GR_LT
Size: XXL
Color: BLUE
Size: XXL
Color: GREEN
Size: XXXL
Color: WHITE
Size: XXXL
Color: RED
01-ABF American Business Futures
01-0100 Jim Kentley
EACH
Current Page No.: 4
Total Page No.: 5
Zoom Factor: 100%

Other Printing Forms

Preprinted Laser

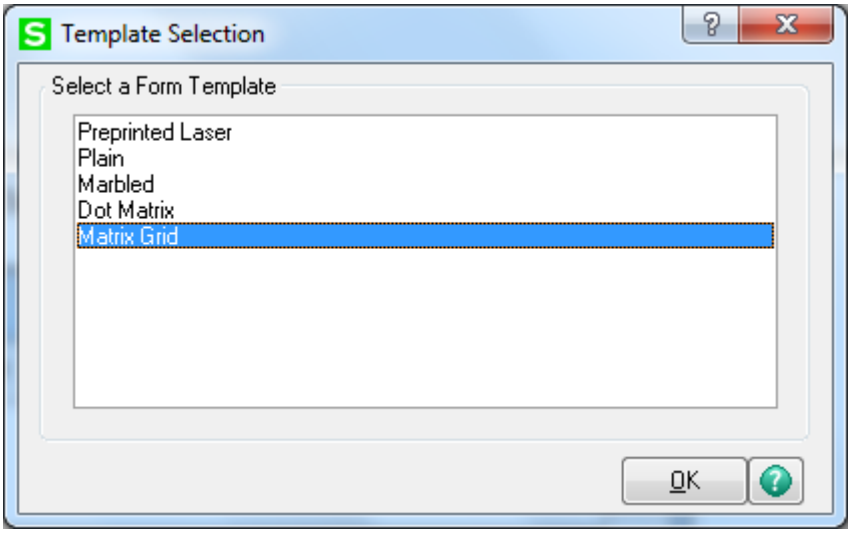
The **Preprinted** form of graphical printing in **Sales Order**, **S/O Invoice**, **Picking Sheet**, **Packing List** and **Purchase Order** have been modified to display Lot Numbers for Matrix Items as a pair of Matrix Codes with their Category Descriptions.

Here is an example of printout:

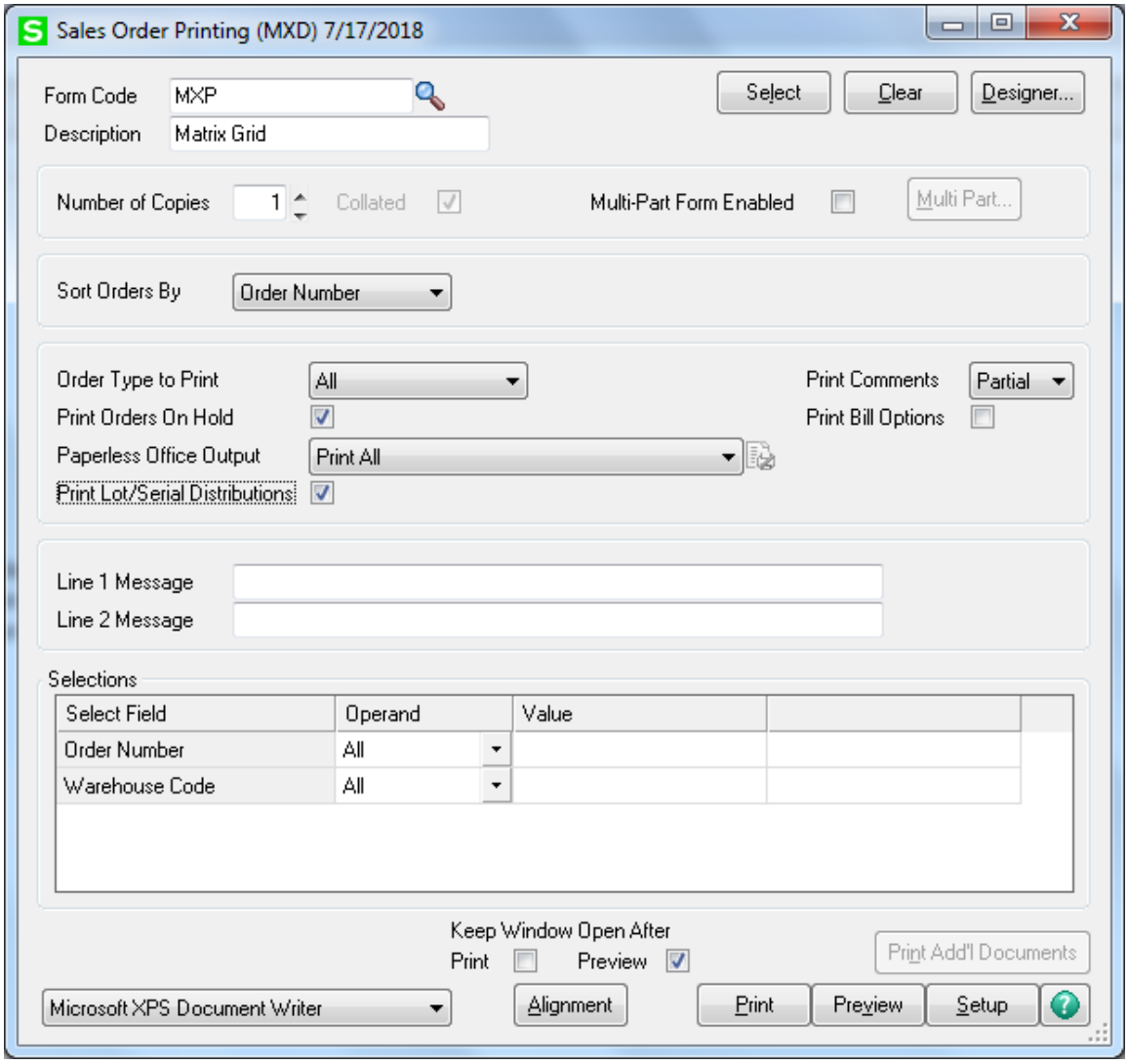


Matrix Grid

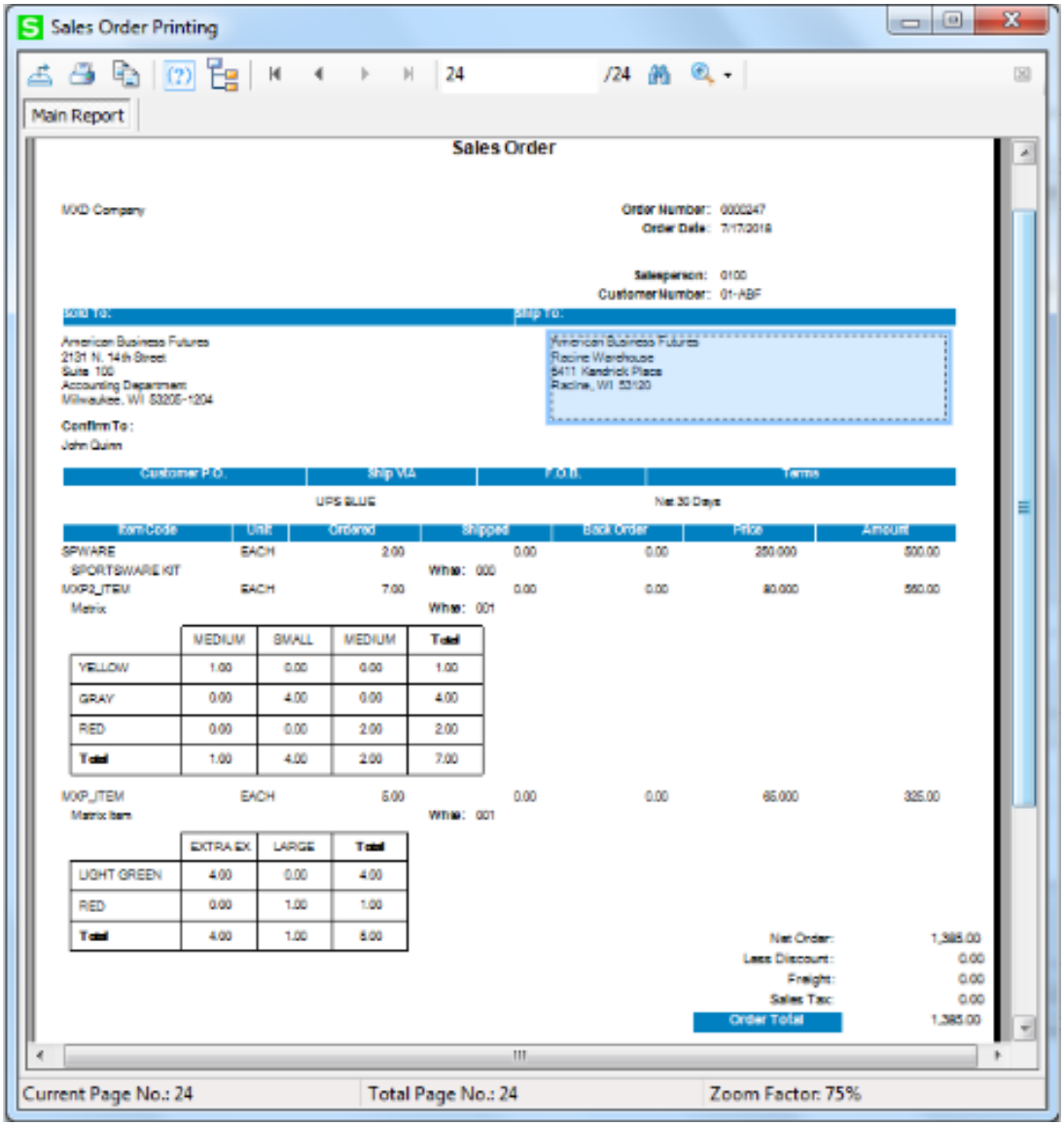
The **Matrix Grid** printing form has been added to the graphical printing Form Templates to allow printing the Matrix Distribution grid information on the report.



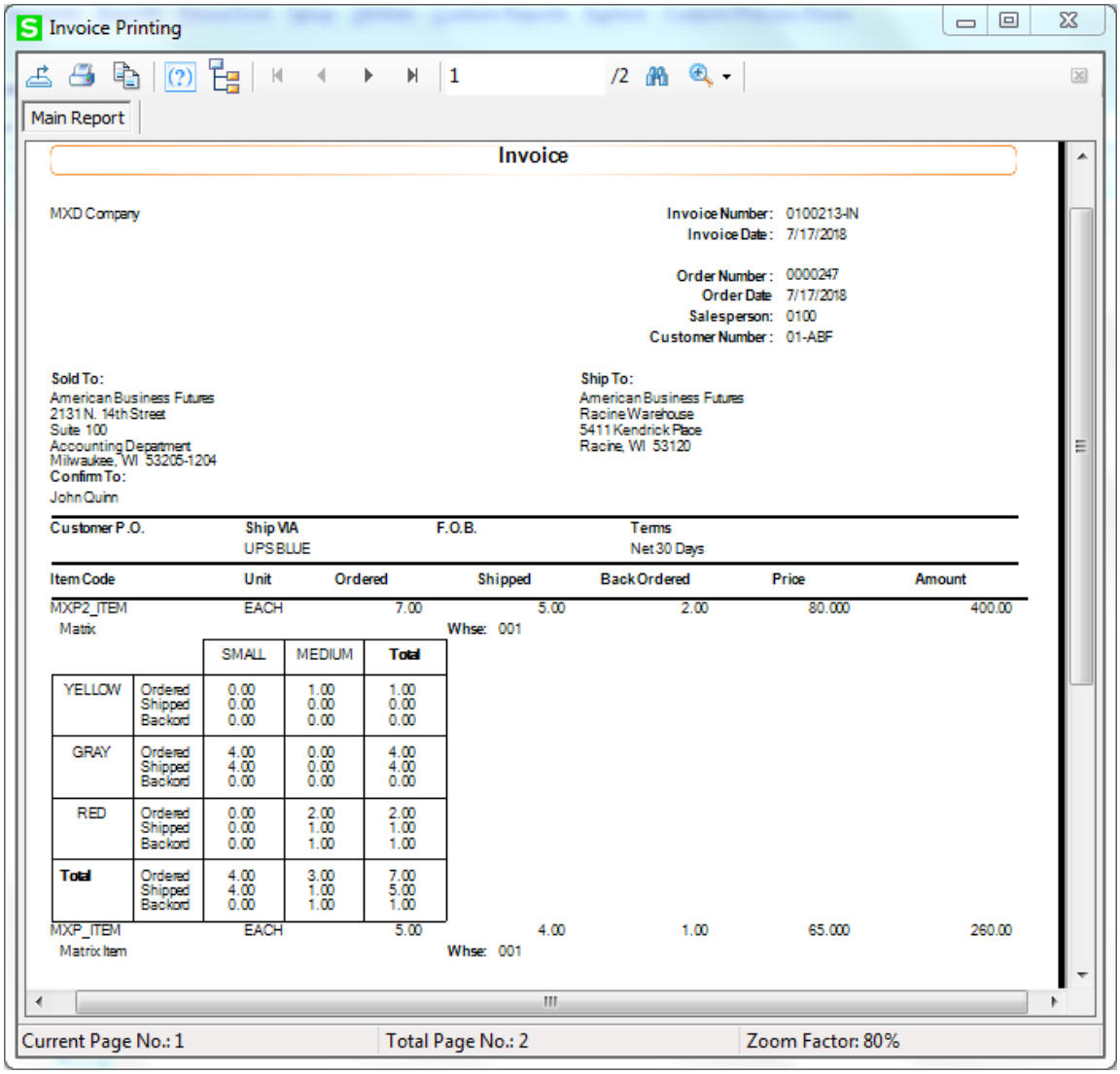
The Matrix Grid form is available for the Sales Order, S/O Invoice, Picking Sheet, Packing List and Purchase Order Printings.

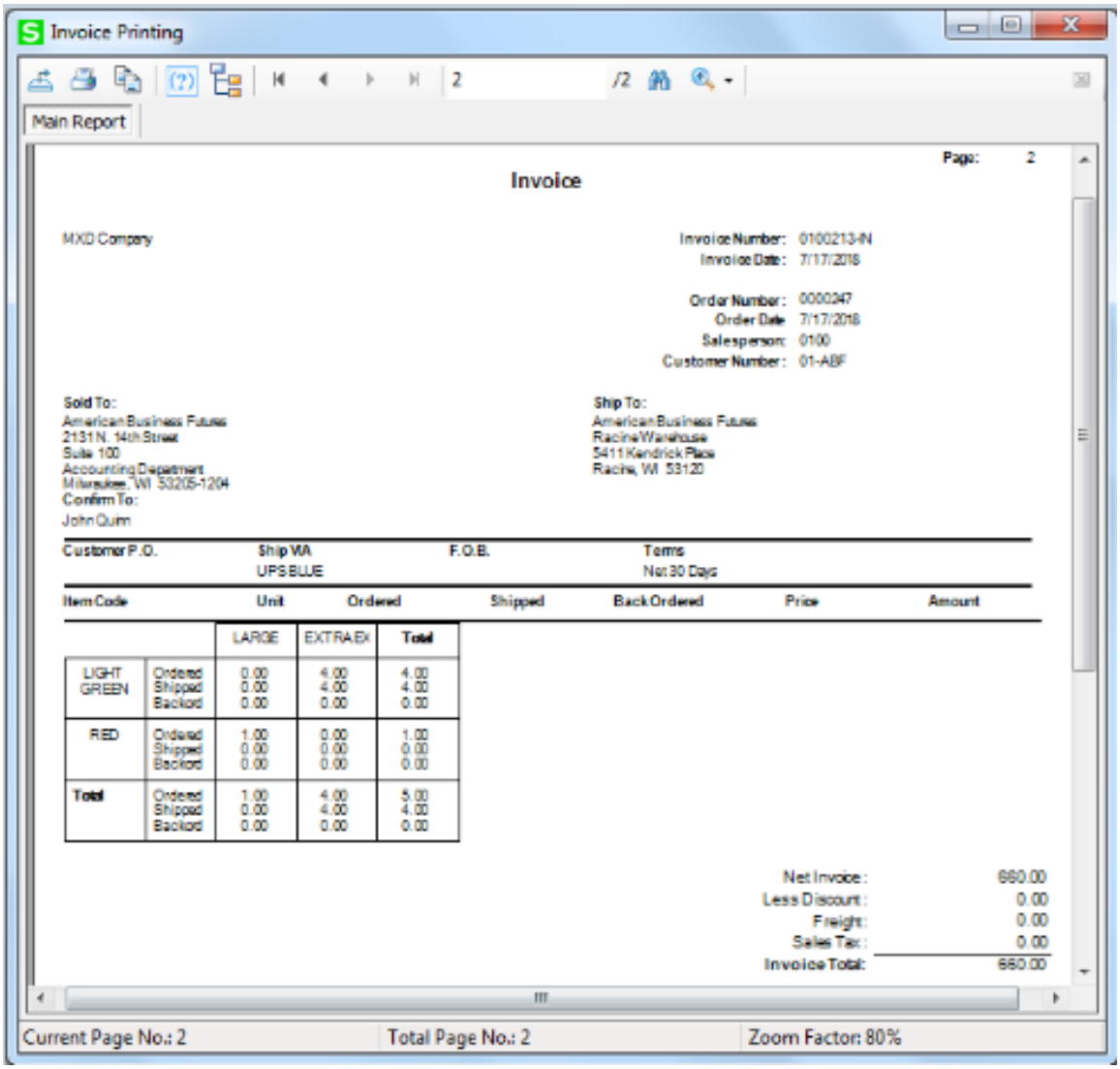


Here is an example of **Sales Order Printing** by the Matrix Grid Form Code:

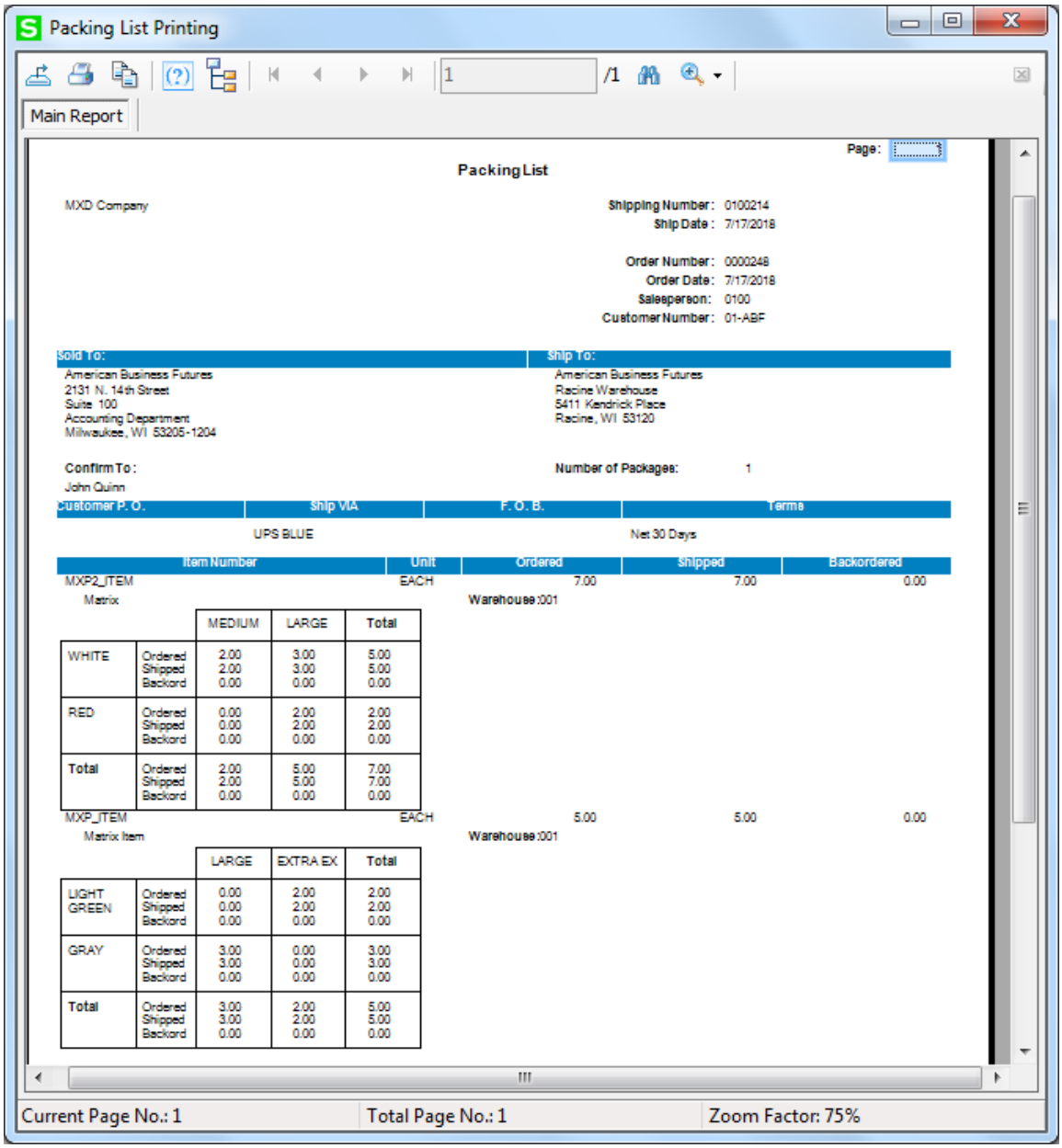


The **Invoice** and **Packing List** printings by Matrix Grid form print the Quantity Shipped and Backordered for Matrix Lot.
Here is an example of printout for Invoice Printing:


Invoice Printing
1
/2
Main Report
Invoice
MXD Company
Invoice Number: 0100213-IN
Invoice Date: 7/17/2018
Order Number: 0000247
Order Date 7/17/2018
Salesperson: 0100
Customer Number: 01-ABF
Sold To:
American Business Futures
2131 N. 14th Street
Suite 100
Accounting Department
Milwaukee, WI 53205-1204
Confirm To:
John Quinn
Ship To:
American Business Futures
Racine Warehouse
5411 Kendrick Place
Racine, WI 53120
Customer P.O.
Ship VIA
UPS BLUE
F.O.B.
Terms
Net 30 Days
Item Code
Unit
Ordered
Shipped
Back Ordered
Price
Amount
MXP2_ITEM
EACH
7.00
5.00
2.00
80.000
400.00
Matrix
Whse: 001
SMALL
MEDIUM
Total
YELLOW
GRAY
RED
Total
Ordered
Shipped
Backord
MXP_ITEM
EACH
5.00
4.00
1.00
65.000
260.00
Matrix Item
Whse: 001
Current Page No.: 1
Total Page No.: 2
Zoom Factor: 80%



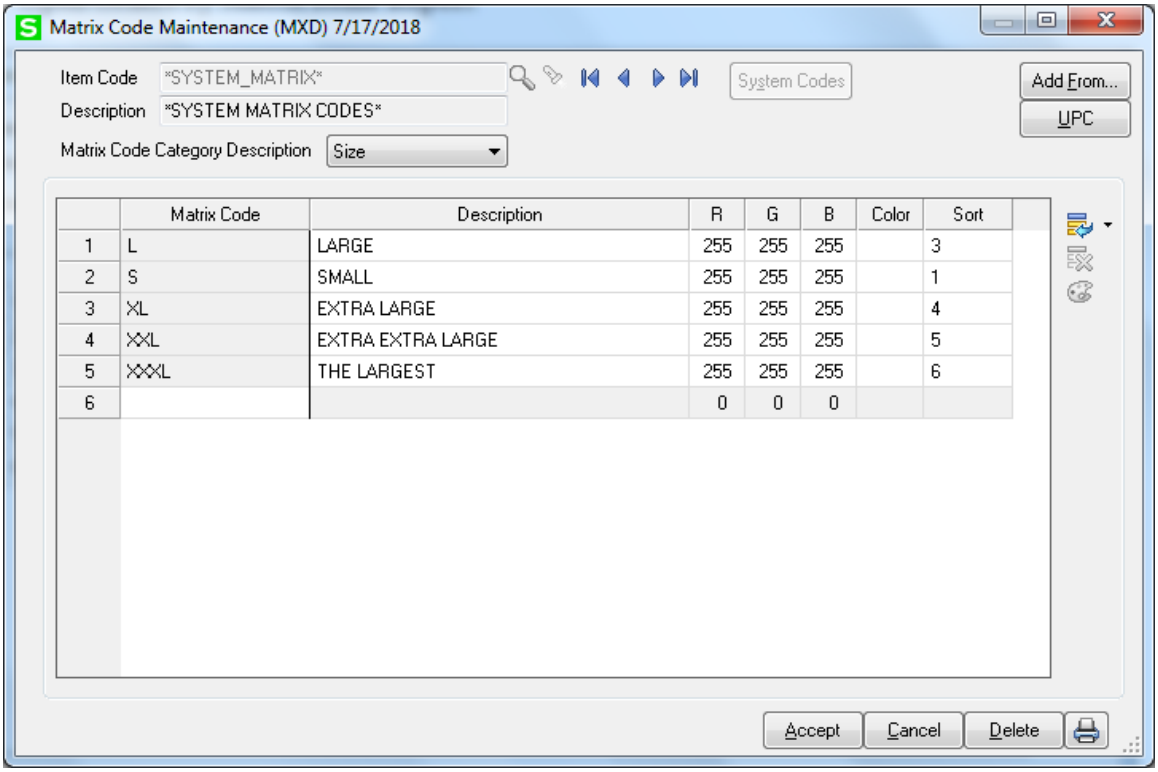
Here is an example of printout for Packing List Printing:


Packing List Printing
Main Report
Page:
Packing List
MXD Company
Shipping Number: 0100214
Ship Date: 7/17/2018
Order Number: 0000248
Order Date: 7/17/2018
Salesperson: 0100
Customer Number: 01-ABF
Sold To:
American Business Futures
2131 N. 14th Street
Suite 100
Accounting Department
Milwaukee, WI 53205-1204
Ship To:
American Business Futures
Racine Warehouse
5411 Kendrick Place
Racine, WI 53120
Confirm To:
John Quinn
Number of Packages: 1
Customer P.O.
Ship VIA
F. O. B.
Terms
UPS BLUE
Net 30 Days
Item Number
Unit
Ordered
Shipped
Backordered
MXP2_ITEM
EACH
7.00
7.00
0.00
Matrix
Warehouse:001
MEDIUM
LARGE
Total
WHITE
RED
Total
Ordered
Shipped
Backord
MXP_ITEM
EACH
5.00
5.00
0.00
Matrix Item
Warehouse:001
LARGE
EXTRA EX
Total
LIGHT GREEN
GRAY
Total
Ordered
Shipped
Backord
Current Page No.: 1
Total Page No.: 1
Zoom Factor: 75%

Matrix Codes Sorting in Printings

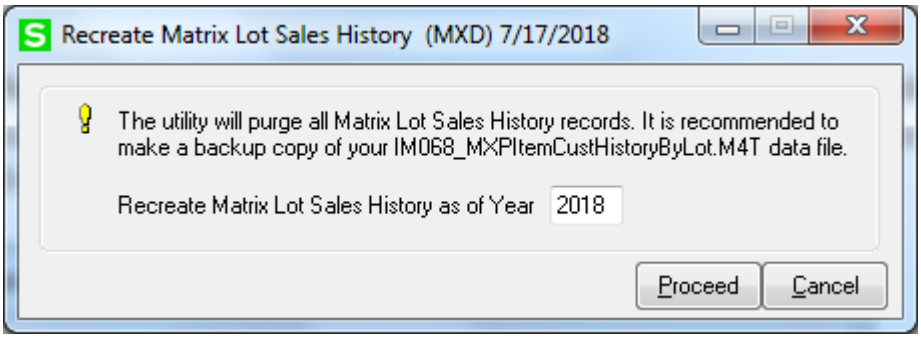
The following printings display **Matrix Codes** based on the **Sort** field value of **Matrix Code Maintenance:**

- Purchase Order Printing
- Picking Sheet Printing
- Sales Order Printing
- S/O Invoice Printing
- Packing List Printing
- Matrix Sales History Report
- Matrix Stock Status Report
- Matrix Stock Status Report (Grid)
- Matrix Committed Report
- Open Orders by Matrix Items Report



Recreate Matrix Lot Sales History

The **Recreate Matrix Lot Sales History** utility added to the **Inventory Management** Utilities menu allows for purging the Sales History for Matrix Lot Items and creates it anew starting from the Year specified on the utility.

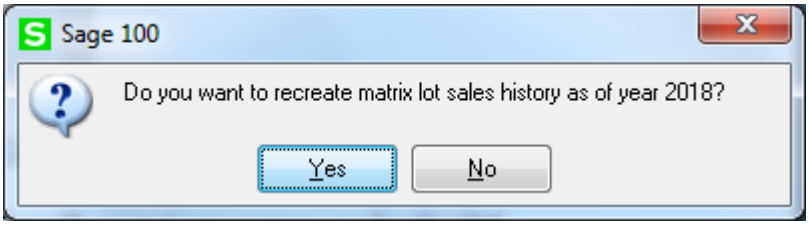


Recreate Matrix Lot Sales History as of Year- Enter the year to be used for recreating Matrix Lot Sales History.

The default Year value is calculated based on the Fiscal/Calendar Periods selected at the Base Inventory Periods On field in the Inventory Management Options and the Years to retain Item History value set in the CI Options.

Note: All Matrix Lot Sales history will be permanently removed from the system regardless the Year specified.

The following message is popup upon pressing the **Proceed** button.



Selecting **Yes** will remove the Matrix Lot Sales History for all previous years and rebuild new History based on the IM Lot Serial Transaction History data file.

Rebuild Sort Files

The **Rebuild Sort Files** utility has been modified to take into account also the On PO Qty for Matrix Lots while recalculating committed lot/serial quantities.

Visual Integrator

The files listed below have been added, or changed, in the Data Dictionary by MXP enhancement for Visual Integrator purposes.

Tables	Fields
AR_InvoiceHistoryLotSerial	AR068_MXPInvoiceDate AR068_MXPQuantityOrdered AR068_MXPQuantityBackordered
BM068_MXPPreComponentsDist	All Fields
CI_Item	CI068_MXPMatrixItem
IM068_MXPItemCustHistoryByLot	
IM068_MXPMatrixCodesDetail	All Fields
IM068_MXPMatrixCodesHeader	All Fields
IM068_MXPMatrixOptions	
IM068_MXPPrepackCodeDetail	All Fields
IM068_MXPPrepackCodeHeader	All Fields
IM068_MXPUnivProdCode	All Fields
IM_ItemCost	IM068_MXPQuantityOnPO
SO068_MXPPackageTrackByItemLot	All Fields
SO_SalesOrderHeader	SO068_MXPAssignedOrder

ODBC Dictionary

The files listed below have been added or changed in the ODBC Dictionaries by this enhancement for Crystal Reports purposes.

Tables	Fields
IM068_MXPMatrixCodesListingWrk	All Fields
IM068_MXPMatrixCommitReportWrk	All Fields
IM068_MXPMatrixHistWrk	All Fields
IM068_MXPMatrixOptListingWrk	All Fields
IM068_MXPMatrixStockStatusWrk	All Fields
IM_ValuationReportWrk	IM068_MXPMatrixItem
PO068_MXPOpenMatrixItemWrk	All Fields
SO068_MXPMatrixCodesInvHistWrk	All Fields
SO068_MXPOpenSOByItemWrk	All Fields
SO068_MXPOpenSOByMatrixLotWrk	All Fields
SO_InvoiceWrk	SO068_MXPOrderLineKey SO068_MXPMatrixItem SO068_MXPCat1CodeDesc

	SO068_MXPCat2CodeDesc
	SO068_MXPCat1CodeSort
	SO068_MXPCat2CodeSort
	SO068_MXPLotSerQuantityOrdered
	SO068_MXPLotSerQtyBackOrdered
SO_PackingListWrk	SO068_MXPOrderLineKey
	SO068_MXPMatrixItem
	SO068_MXPCat1CodeDesc
	SO068_MXPCat2CodeDesc
	SO068_MXPCat1CodeSort
	SO068_MXPCat2CodeSort
	SO068_MXPLotSerQuantityOrdered
	SO068_MXPLotSerQtyBackOrdered
SO_PickingSheetWrk	SO068_MXPMatrixItem
	SO068_MXPOrderLineKey
	SO068_MXPCat1CodeDesc
	SO068_MXPCat2CodeDesc
	SO068_MXPCat1CodeSort
	SO068_MXPCat2CodeSort
SO_SalesOrderWrk	SO068_MXPMatrixItem
	SO068_MXPCat1CodeDesc
	SO068_MXPCat2CodeDesc
	SO068_MXPCat1CodeSort
	SO068_MXPCat2CodeSort