

Pre-Pack Basic Information LS Retail NAV 6.2

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1 Introduction

1.1 Scope

The scope of this project is to make it possible for users to define pre-packs and to handle them in the same manner as other items. In this document it is described how the requirements are fulfilled in the LS Retail System.

This addition is being developed on the World-Wide version of Microsoft Dynamics™ NAV but must be ported over to the North American version for the rollout into Northern Reflections. This means that BOM functionality as indicated below will become Kitting functionality in the North American release.

1.2 Definitions, Acronyms and Abbreviations

Term	Description
PRP	Pre-pack item. A pre-pack item is an item with BOM Components items attached to it.
Explode a PRP	A PRP can be exploded as a post process to receiving. What happens is that a PRP item(s) are subtracted from inventory and attached BOM components are added to inventory. Explode before receiving (in a PO or TO) are unchanged (Functions->Explode BOM).
PO	Purchase Order
ТО	Transfer Order

1.3 References

Incident Code	Description
LS04-03752	Prepack module

1.4 Functional Overview

A store will be able to handle PRPs as any other items from the Item Master. A PRP will be used as normal item in a new worksheet developed for PRPs, in Purchase Orders and in Transfer Orders. PRP can be exploded before it is posted or when it is posted (received). When a PRP is received it can be determined if it should be exploded or not and if yes then at a store, warehouse or both. Two cost methods are selectable for PRPs one based on quantities (even) or defined (weighted). This functionality will be built in to the InStore replication module in a way that if PRPs are exploded at HO or at an offline store then it will be done automatically at the opposite location.

Chapter 1- Introduction



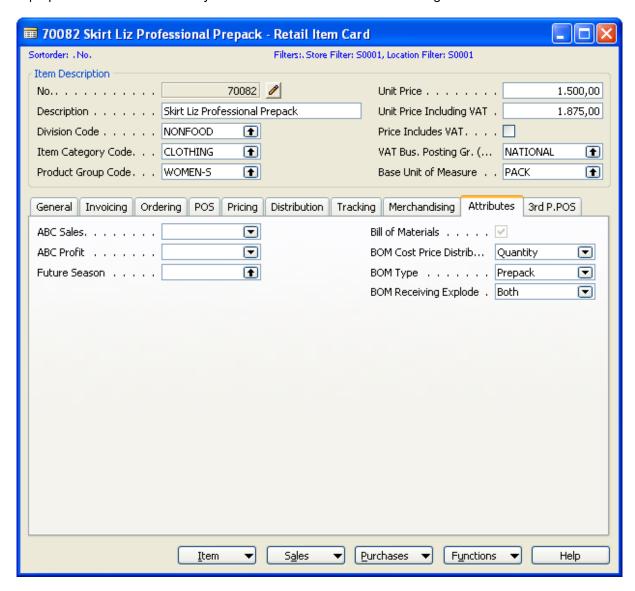
2 Use Cases and Business Processes

Prepacks can be used as normal items in the system. What is shown in details in this chapter are new features and changes made to make prepack handling possible.

2.1 Setup

2.1.1 Creating and managing prepacks.

A prepack item is created as any other item in the Item Master or through the Retail Item Card:



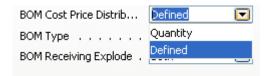
On the Attributes tab the item is marked as prepack by setting "BOM Type" to Prepack. The BOM Components table is used to store the prepacks components which means that the "Bill of Materials" check tells the user if any component is stored.

When creating a prepack the following fields must be considered and filled:

- BOM Cost Price Distribution
- BOM Type
- BOM Receiving Explode



The cost of each exploded prepack item is distributed according to method selected by "BOM Cost Price Distribution":



Quantity - Cost is distributed according to quantity (cost is 1000 and number of pieces is 10 and therefore each item will get 100)

Defined - The BOM Component records will hold the weight for each component line and cost will be distributed according to weight

When a BOM Component of type Prepack is created the field BOM Type must be set to Prepack. BOM type can have the following values:



Prepack - Item is a Prepack item.

Recipe - Item is a Recipe item.

<black> - Item is a normal item.

When a prepack is purchased it can determined if it should be exploded when received. This applies both to Retail Purchase Orders and Retail Transfer Orders.



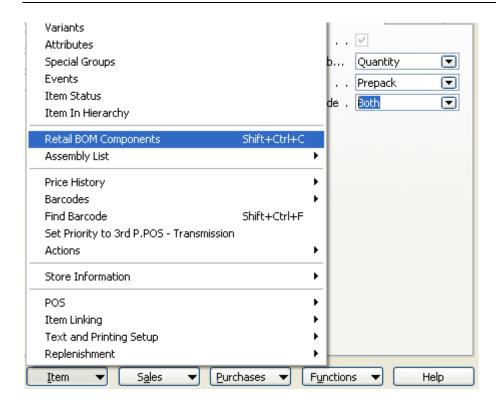
BOM Receiving Explode can have four different values:

- Blank BOM not exploded automatically
- Store BOM explodes when receiving at store
- Whse BOM explodes when receiving at warehouse
- Both BOM explodes when receiving at store and warehouse

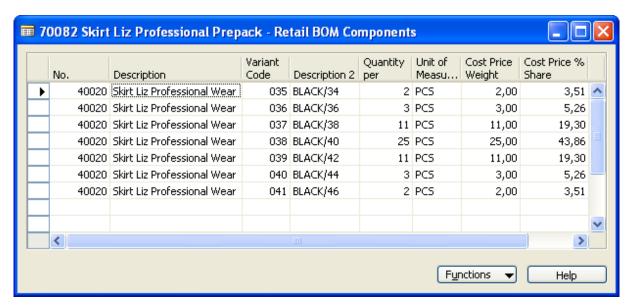
When a prepack is exploded the prepack inventory status is lowered and its corresponding components inventory status is elevated.

After creating a prepack item the next step is to enter prepacks components. Select Item / Retail BOM Components (or Shift+Ctrl+C):





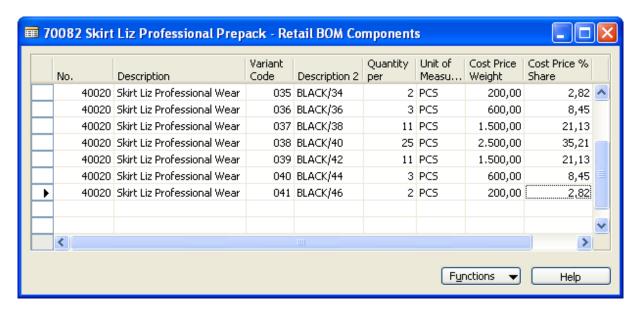
and you get the Retail BOM Components editing window:



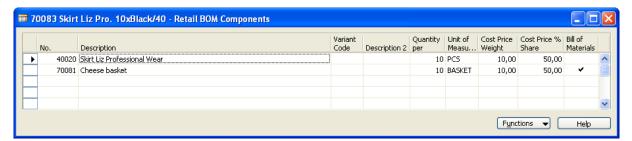
In this example the prepack items with variants have been entered with quantities. Since the selected cost price distribution for the prepack is Quantity the Cost Price Weight is the same as Quantity per and non-editable. Cost Price % Share is calculated automatically each time a Quantity per is changed.

In this example the Cost Price Distribution has been changed to Determined and the weights have been entered for all components:



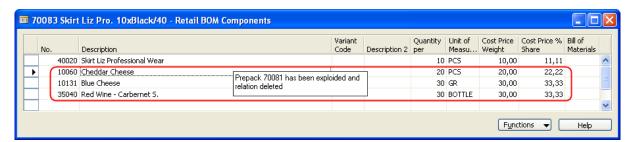


Note a component of a prepack A can be either an Item or a prepack B. In the following example prepack 70083 has component 40020 as a normal item and a prepack 70081 as a second component:



Prepack can not contain a chain of prepack components that leads to itself (Example: prepack A contains prepack B which contains prepack A). If this happens error messages are displayed.

BOM Component 70081 can be exploded (Functions / Explode BOM) and then the prepack is changed to the following:



When prepacks and their components have been entered they can be used as every other item in the system.

It is possible to check if an identical prepack has already been defined in the system.

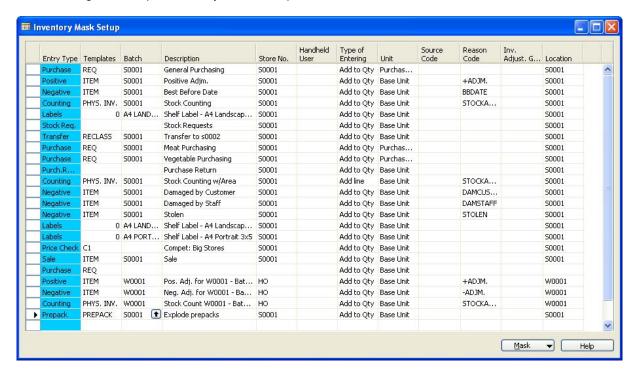


If the system finds identical prepack in the system the first item number (prepack number) is displayed. This check is just for information. No action is required it is up to the user to take a manual action.

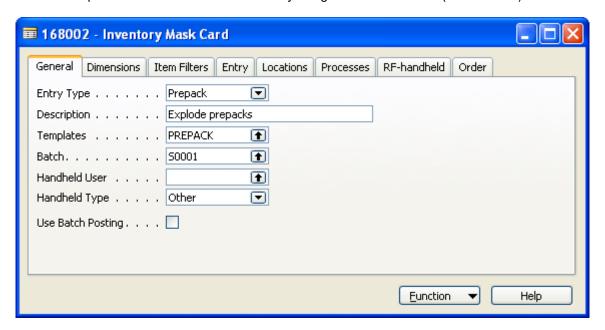


2.1.2 Inventory Mask Setup for prepacks.

A new worksheet for prepack exploding has been added. An Inventory Mask must be set up, LS Retail – InStore Mgmt / Setup / Inventory Mask Setup:



In this example a new mask has been made by filling out the mask card (Mask / Card) like this:



The following record is added to Item Journal Template (Table 82):

Field	Value
Name	PREPACK
Description	Prepack Journal
Test Report ID	702
Form ID	40
Posting Report ID	703
Force Posting Report	No
Туре	Item
Source Code	ITEMJNL
Reason Code	
Recurring	No



Test Report Name	Inventory Posting - Test	
Form Name	Item Journal	
Posting Report Name	Item Register - Quantity	
No. Series	IJNL-PRP	
Posting No. Series		
Whse. Register Report ID	7303	
Whse, Register Report Name	Warehouse Register - Quantity	

The following record is added to Item Journal Batch (Table 233):

Field	Value
Journal Template Name	PREPACK
Name	S0001
Description	Cronus Foodmarket South
Reason Code	
No. Series	IJNL-PRP
Posting No. Series	
Template Type	Item
Recurring	No

The following record is added to No. Series (Table 308):

Field	Value	
Code	IJNL-PRP	
Description	Prepack Journal	
Default Nos.	No	
Manual Nos.	No	
Date Order	No	
Dist. Location Prefix	No	

The following record is added to No. Series Line (Table 309):

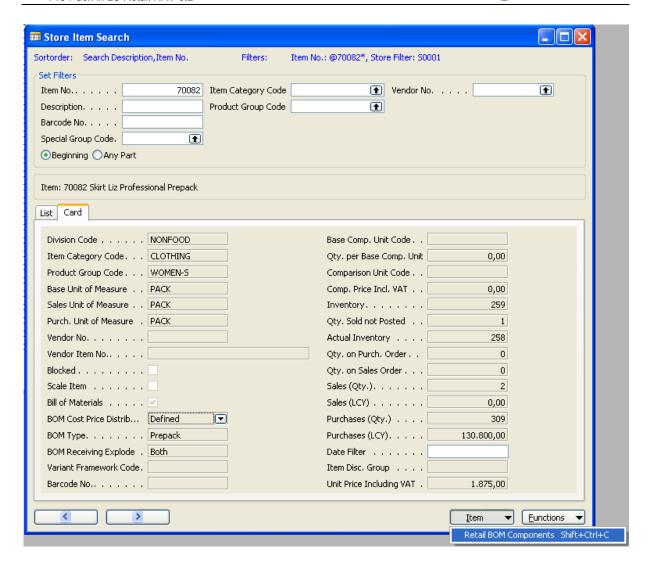
Field	Value
Series Code	IJNL-PRP
Line No.	10000
Starting Date	
Starting No.	PRP0000001
Ending No.	PRP9999999
Warning No.	
Increment-by No.	1
Last No. Used	PRP0000022
Open	Yes
Last Date Used	03.03.10

This setup will give us a number series for exploding prepacks on stock starting with PRP0000001.

2.2 Viewing and editing Prepacks

A store manager or users that have access to Retail Item Card have full access to create and edit prepacks. This full access is also granted to forms Retail Item Search and Retail Item List. Store associates have read only access to the prepack components from forms Store Item Card and Store Item Search.

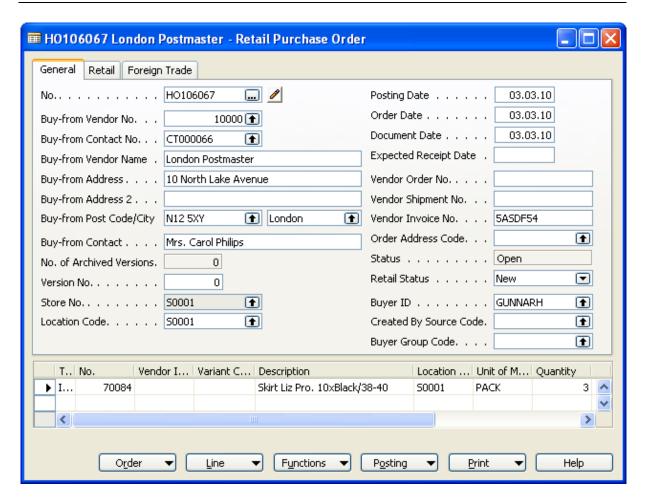




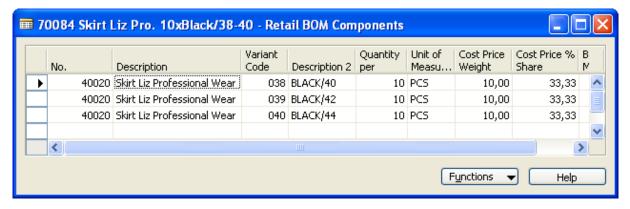
2.3 Purchasing prepacks

The Retail Purchase Order card has not been changed and the way it's used has not changed either. A post exploding process has been added to the receiving process. The receiving process explodes prepacks after a successful receiving process according to the BOM Explode type selected on the item card. If it's blank no exploding is done. If a store is receiving a prepack and BOM Explode is Store or Both then its BOM components are exploded. In the following example 3 units of prepack 70084 are purchased. The prepack has BOM Explode = 'Store' and we are receiving at store S0001.





Prepack 70084 has the following BOM Components:



When the order is received the following inventory adjustments are made:

Item 70084 (prepack)	+3 items
Item 70084	-3 items
Item 40020, variant 038	+30 items
Item 40020, variant 039	+30 items
Item 40020, variant 040	+30 items

The same document number is used for the exploding as is for the receiving documents.

NOTE: If a prepack contains another prepack as a component then only the first level is exploded which means that the component prepack is not exploded but added as a prepack to inventory.



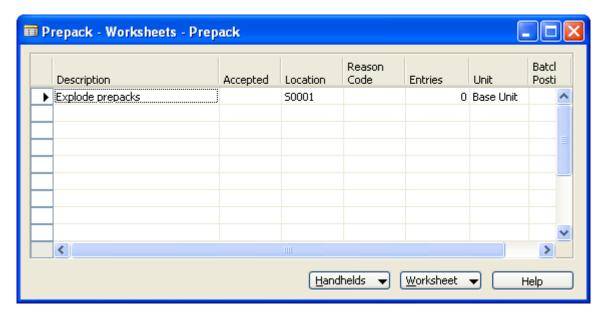
The same post process has been added both to the InStore management functionality and the Batch Posting Queue functionality. That means that when data is replicated from an offline store to HO (or vice versa) the post processing is done automatically at the other location.

2.4 Transferring prepacks

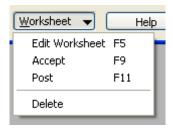
For receiving of transferred prepacks post process has been added like for purchase orders. The user interface in unchanged. The BOM Explode field on the prepacks item card decides in the same way as for purchase orders if and when to explode. InStore management takes into account exploding on opposite location for off line stores. (See previous chapter 3.3, for more details).

2.5 Exploding prepacks

A new worksheet for exploding prepacks has been added. LS Retail – InStore Mgmt / Worksheets / Prepack. For the setup example shown in chapter 3.1.2 it would look like this:

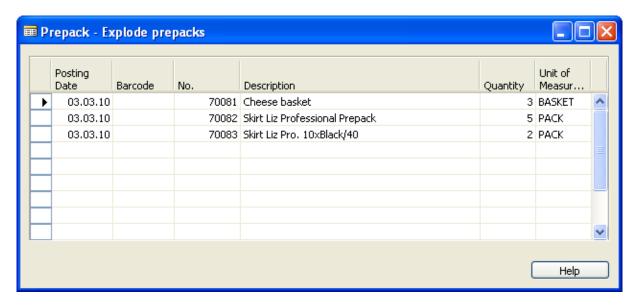


This worksheet has the same functionality as other worksheets from previous versions. For entering prepacks for exploding select Worksheet / Edit Worksheet or F5:



In this worksheet prepacks can be added with quantities. In this example 10 prepacks have been entered for exploding:





When this form is closed the batch can be accepted and posted (exploded).

NOTE: If a prepack contains another prepack as a component then only the first level is exploded which means that the component prepack is not exploded but added as a prepack to inventory.

2.6 Retail Item Availability

Three new information windows that are related to the new prepack functionality have been added to the system:

- 1. Retail Item Availability by Item Variant
- 2. Retail Item Availability by Item Variant and Location
- 3. Retail Item Availability by Item Variant and Prepack breakdown

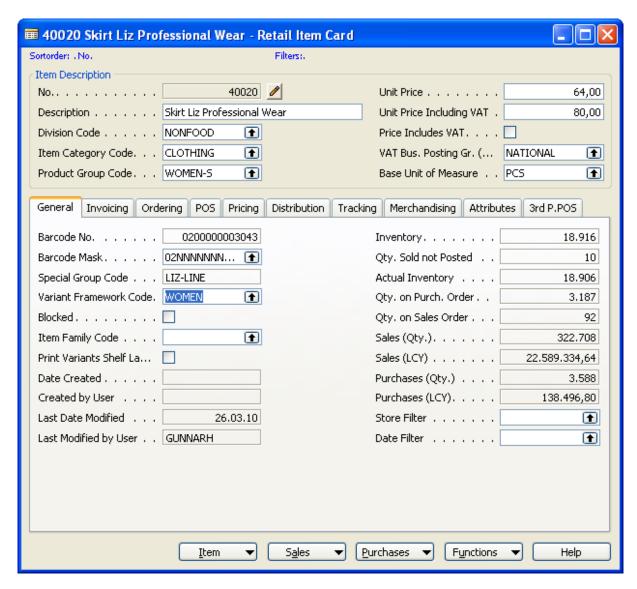
These windows can be accessed from four different locations:

- 1. Retail Item Card (Replenishment / Retail Item Card)
- 2. Retail Purchase Order (Replenishment / Retail Purchase Order)
- 3. Replen. Planned Crossed Docking (Replenishment / Retail Purchase Order / Functions / Warehouse / Planned Crossed Docking)
- 4. Buyer's Push (Replenishment / Buyer's Push)

2.6.1 Retail Item Variant Availability from Retail Item Card

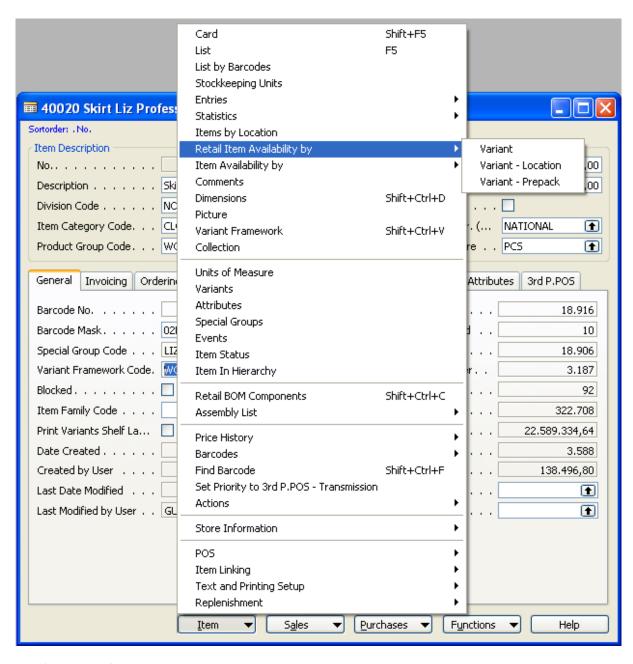
In the following windows, we have an Item with a Variant Framework Code (not a prepack item).





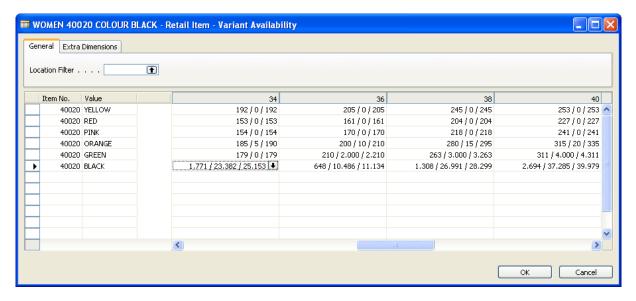
Select Item / Retail Item Availability by / Variant





The following information window appears:



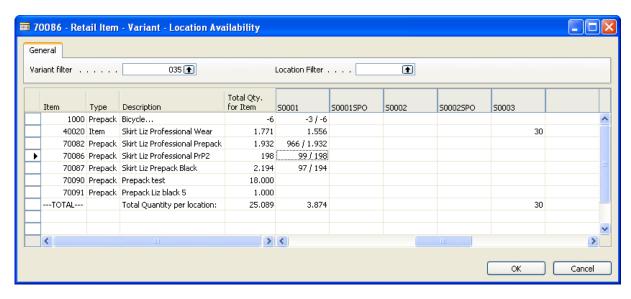


Here the inventory status is displayed. For each cell we have:

- 1. Items available on inventory (bin items)
- 2. Items within a prepack (can be exploded)
- 3. Total items on inventory (1+2).

A location filter can be entered. If a location filter has been set on the Retail Item Card it is copied.

Every cell can be further examined by drilling down. The following window shows the result when the cell for **Item 40020 – Black – 34** is opened:



The variant for **Item 40020 – Black – 34** is '035' and it has been added to the variant filter for the form. The variant filter can be changed and a location filter can also be added. If the variant filter is cleared then all variants for an Item are summed up.

This window can be accessed directly from the Retail Item Card by selecting availability by Variant – Location in the menu shown above. In that case the variant filter is empty.

For a cell of the type **Item** number of Items on Inventory is displayed. For a cell of the type **Prepack** two figures are displayed:

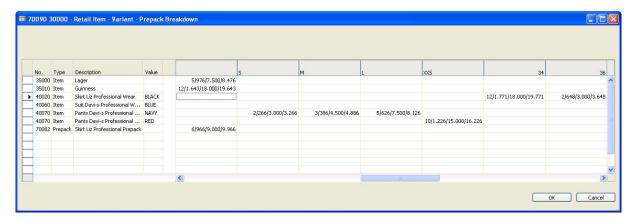
- 1. Prepack Items available on inventory (bin items)
- 2. Items within a prepack (can be exploded). (Bin Items * number of items in prepack).



For each Item / Prepack we have a total column and for each location we have a total line displaying total Items on Inventory (second figure for cells of type prepack).

2.6.2 Prepack breakdown from Retail Item Card

Prepacks can be explored by selecting **Retail Item Availability by / Variant – Prepack** from the Item menu button on the Retail Item Card. In the following example a prepack is explored that contain Items with different variant framework code. Furthermore, Item 40060 contains three dimensions (Color, Size and Style). In the following window, items on inventory with more than two dimensions are summed up for dimensions 3-6 (cell 40060 – Blue – 44 contain number of items for style 01 and 02).



Each cell contain the following information:

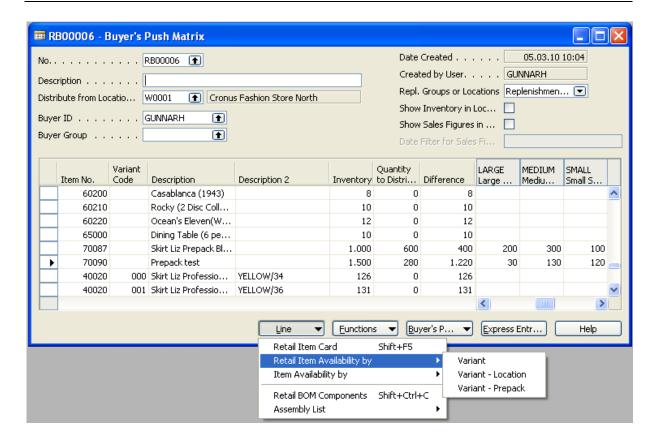
- 1. Number of item / variant in one prepack.
- 2. Number of available item / variant on inventory (summed for dimensions 3-6 if used).
- 3. Number of item / variant within the prepack explored.
- 4. Number of item / variant total (2+3).

The first column is for Items / prepacks without variants.

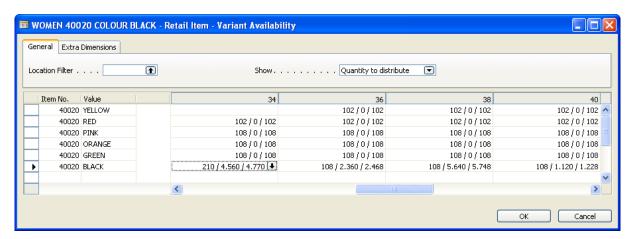
2.6.3 Retail Item Variant Availability from Buyer's Push Matrix

A Line menu button has been added to the Buyer's Push Matrix form. Standard query windows are accessible directly from the menu and the new Retail Item Availability windows too.





When Variant is selected for Item / Variant (e.g. 40020) the following window appears:



Here, quantities are calculated from the selected Buyer's Push list. The default is to base the calculation on Quantity to distribute, (see show option). The option can be changed to Inventory. Then the Inventory data is used (same as from the Retail Item Card).

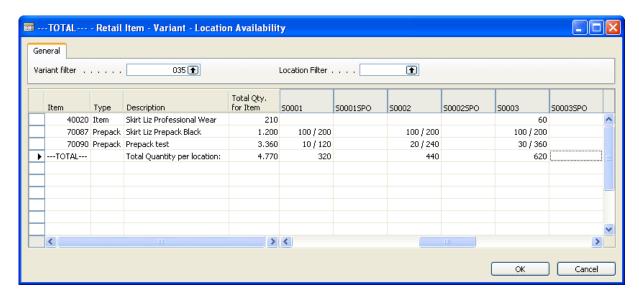
Each cell contain the following information (Quantity to distribute):

- 1. Number of Items / Variant in buyer's push distribution list (bin items)
- 2. Number of Items / Variant within a prepack in buyer's push distribution list
- 3. Total Items / Variant on inventory (1+2).

A location filter can be entered.

Every cell can be further examined by drilling down. In the next window is the result when the cell for Item 40020 – Black – 34 is opened:





If this window is entered from Buyer's Push with Quantity to Distribute selected then the information here are from the same source; that is Buyer's Push List.

The variant for item 40020 - Black - 34 is '035' and it has been added to the variant filter for the form. The variant filter can be changed and a location filter can be added too. If the variant filter is cleared then all variants for an Item are summed up.

This window can be accessed directly from the Buyer's Push Matrix card by selecting availability by Variant – Location in the menu shown above. In that case the variant filter is empty.

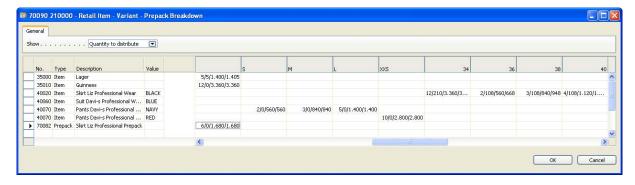
A cell for an Item of type Item shows number of Items entered for distribution in Buyer's Push Matrix. A cell for an Item of type Prepack shows two figures:

- 1. Prepack Items entered for distribution in Buyer's Push Matrix (bin items)
- 2. Items within a prepack in Buyer's Push Matrix. (Bin Items * number of items in prepack).

For each Item / Prepack we have a total column and for each location we have a total line displaying total Items in Buyer's Push Matrix (second figure for cells of type prepack).

2.6.4 Prepack breakdown from Buyer's Push Matrix

Prepacks can be explored by selecting **Retail Item Availability by / Variant – Prepack** from the Line menu button on the Buyer's Push Matrix card. In the following example a prepack is explored that contain Items with different variant framework code. Furthermore, Item 40060 contains three dimensions (Color, Size and Style). In the following window items on inventory with more than two dimensions are summed up for dimensions 3-6 (cell 40060 – Blue – 44 contain number of items for style 01 and 02).



Each cell contains the following information:

- 1. Number of Item / Variant in one prepack.
- 2. Number of Item / Variant in Buyer's Push List (summed for dimensions 3-6 if used).

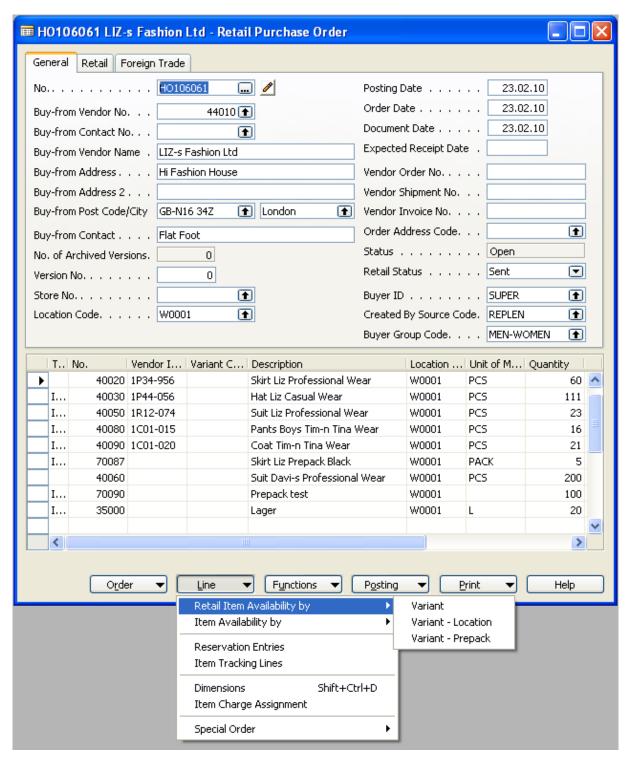


- 3. Number of Item / Variant within prepacks entered for distribution in Buyer's Push List.
- 4. Number of Item / Variant total (2+3).

The first column is for Items / Prepacks without variants.

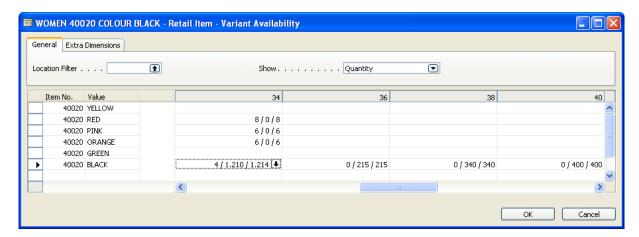
2.6.5 Retail Item Variant Availability from a Purchase Order / Planned Cross Docking

A Retail Item Availability menu has been added to the Line menu button in the Retail Purchase Order card and Replen. Planned cross Docking (selectable from the Functions menu button / Warehouse / Planned Cross Docking).





When availability by Variant is selected for a Variant item (e.g. 40020) the following window appear:



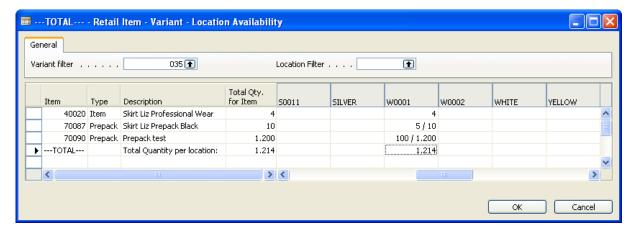
Here quantities are calculated from the purchase order lines. The default is to base the calculation on Quantity, (see show option). The option can be changed to Quantity to distribute. Then the quantities are read from the related Replenishment Planned Cross Docking data (Transfer Lines).

Each cell contain the following information (Quantity or Quantity to distribute):

- 1. Number of Items / Variant in the purchase order / transfer lines (bin items).
- 2. Number of Items / Variant within a prepack in the purchase order / transfer lines.
- 3. Total Items / Variant in the purchase order / transfer lines (1+2).

A location filter can be entered.

Every cell can be further examined by drilling down. In the next window is the result when the cell for Item 40020 – Black – 34 is opened:



When this form is entered from the Retail Item - Variant Availability window, the information is read from the same source (Quantity or Quantity to Distribute).

The variant for item 40020 - Black - 34 is '035' and it has been added to the variant filter for the form. The variant filter can be changed and a location filter can be added too. If the variant filter is cleared then all variants for an Item are summed up.

This window can be accessed directly from the Purchase Order / Planned Cross Docking by selecting availability by Variant – Location in the menu shown above. In that case the variant filter is empty.

A cell for an Item of type Item shows number of Items purchased or for distribution in planned cross docking. A cell for an Item of type Prepack shows two figures:

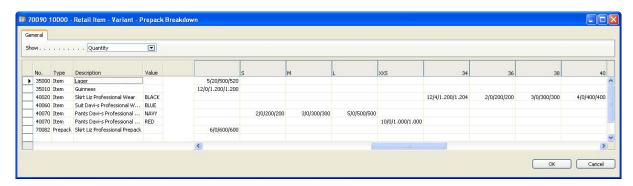


- Quantities purchased or quantities entered for distribution in planned cross docking. (bin items)
- Items within a purchased prepacks or within prepacks planned for cross docking. (Bin Items * number of items in prepack).

For each Item / Prepack we have a total column and for each location we have a total line displaying total Items in Purchase Order / Planned Cross Docking (second figure for cells of type prepack).

2.6.6 Prepack breakdown from Purchase Order Lines / Planned Cross Docking

Prepacks can be explored by selecting Retail Item Availability by / Variant – Prepack from the Line menu button on the Purchase Order card and Planned Cross Docking. In the following example, a prepack that contain Items with different variant framework code is explored. Furthermore, Item 40060 contains three dimensions (Color, Size and Style). In the following window items on inventory with more than two dimensions are summed up for dimensions 3-6 (cell 40060 – Blue – 44 contain number of items for style 01 and 02).



Each cell contains the following information:

- 1. Number of Items / Variants in one prepack.
- 2. Number of Items / Variants in Purchase Order Lines or Transfer Lines (Planned Cross Docking) (summed for dimensions 3-6 if used).
- 3. Number of Item / Variant within prepacks in Purchase Order Lines or Transfer Lines (Planned Cross Docking).
- 4. Number of Item / Variant total (2+3).

The first column is for Items / Prepacks without variants.

2.7 POS Functionality

Prepacks can be sold on the POS like any other item. Prepacks are not exploded at entry or posting. Prepacks can be exploded manually and on receiving (POs and TOs) at store, warehouse or both.