



Replenishment

Guide

LS Retail NAV 5.05

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MM/FpÓ

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1 LS Retail Replenishment – Overview

The LS Retail Replenishment System calculates the quantity needed at the stores or the central warehouse and suggests what needs to be purchased from the vendors. It will also help with the distribution of items from a central warehouse to stores, both when the order arrives at the central warehouse (Planned Cross Docking) and if it is decided to push items from the central warehouse to the stores (Buyer's Push).

LS Retail Replenishment offers you the option to replenish warehouses and/or stores by way of Purchase Order documents and/or Transfer Order documents.

The Replenishment processes are executed at the Head Office.

The system can suggest the quantity to replenish according to four different calculation types or methods. It is also possible to manually allocate quantities to be distributed to the stores.

The four different calculation types are:

- Average Use
- Manual Estimate
- Stock Levels
- Like-for-Like

These methods and their associated parameters are set up in the Retail Item Card but overrides for certain items and locations can be also be defined.

The purpose of the Replenishment Module is twofold:

- It can be used to assist the purchasing department with the distribution of new items to stores for the first time
- It can make Purchase Order or Transfer Order suggestions based on the four different calculation methods mentioned above.

The Replenishment Module is used to assist the purchasing department in making purchase orders and also to assist the warehouse with suggesting what needs to be transferred to the stores.

2 Introduction

2.1 Basic Information

This introduction contains prerequisites and useful information about the product training course.

This LS Retail course is mainly an instructor-led training course but can provide guidance for self-learning. The chapters contain instructional text, which introduces an area of the program and examples of how this area works.

2.2 Target Audience

The course is intended for people who are responsible for the replenishment process in a Purchase Department. It demonstrates how the LS Retail Replenishment system can be used to suggest which items are to be replenished for the stores and a central warehouse.

The Replenishment system inspects selected items and comes up with a suggestion of how much needs to be ordered, either from a vendor or from the central warehouse.

3 Reoccurring Items

3.1 Defining Stores and Items to Replenish Automatically

The solution needs to know which items and stores to replenish using which methods and parameters. It is essential that this information is properly organized and defined.

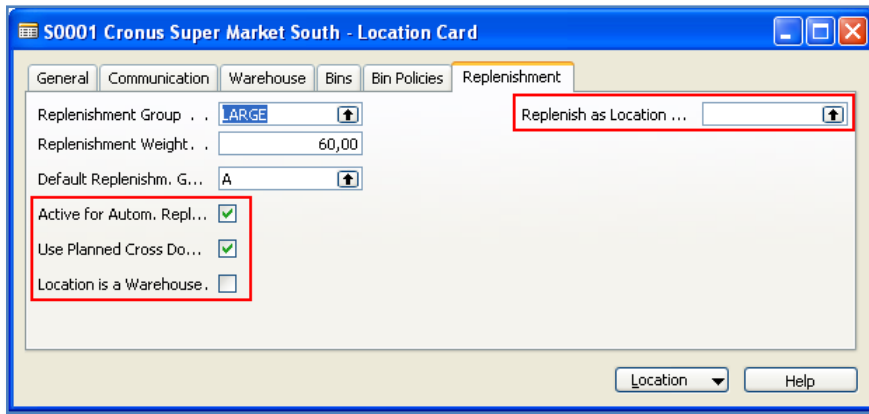
Firstly it is necessary to decide which stores are to be automatically replenished and then which items to replenish. Then you select replenishment calculation methods and parameters.

The combination of store and item determines whether the item is replenished.

3.1.1 Store

For each store record, at least one location is defined for the selling of goods. The replenishment information is defined on the location record. The fields are:

- **Active for Automatic Replenishment** - needs to be set so the location/store is valid for automatic replenishment.
- **Use Planned Cross Docking** – The field needs to be active to be visible in the Location list in the Cross Dock and Buyer's Push Matrix forms.
- **Location is a Warehouse** – should be set if the location record is for a warehouse and should be off if the location is for a store.
- **Replenish as Location** – the system will use the location code instead to find sales history information when calculating the average daily sale when the replenishment calculation method is *Average Usage*.
- **Purch. Order Delivery** – This field can have two values, *To Warehouse* and *To Store*. You can enter here whether the items being ordered will be delivered to a warehouse or directly to the store.

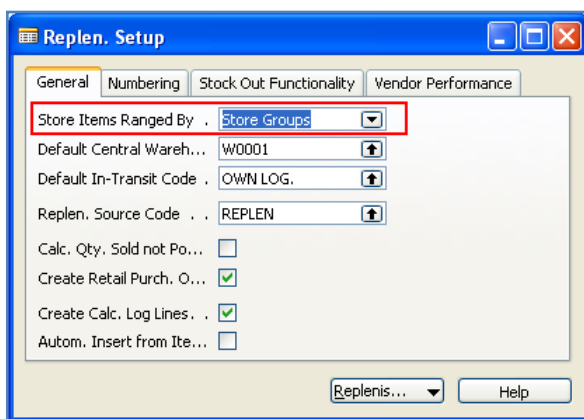


3.1.2 Item

There are two methods of defining which items should be automatically replenished; that is by:

- **Item Category/Grade**
- **Store Groups**

The system can only use one method at a time and this is defined in the Replenishment Setup.



3.1.2.1 Replenishment Grades

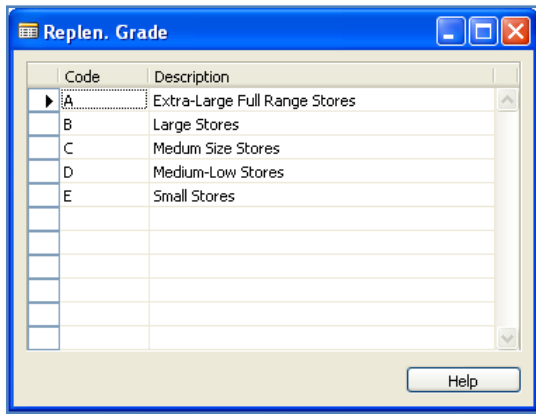
Replenishment Grades are used to determine if an item is to be automatically replenished for a given store or a location. A location has a field called **Default Replenishment Grade Code** and Items have a Replenishment Grade as well.

When the system determines whether an item is to be automatically replenished it needs to find the Replenishment Grade Code for the Item and the Replenishment Grade Code for the Location and compare them. If the Item Replenishment Grade Code is smaller than or equal to the Store Replenishment Grade Code, the Item will be automatically replenished.

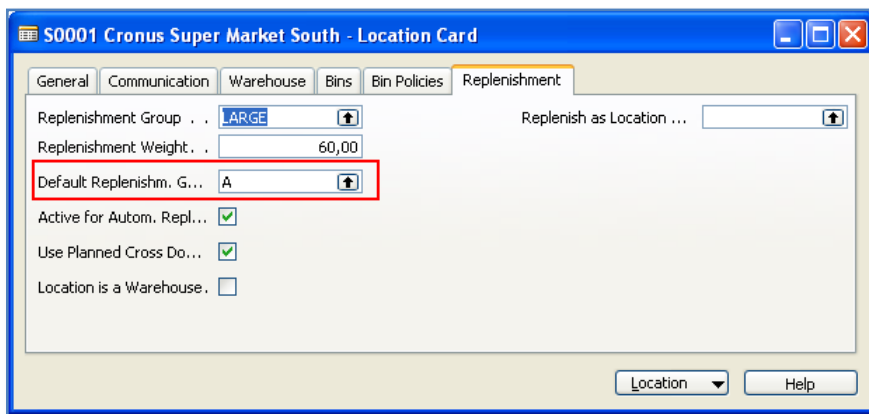
Example:

For an Item with the Replenishment Grade Code D and Store Replenishment Grade Code B, the Item will be automatically replenished in that particular store. Items with the Grade Code D should be replenished for all stores with the Grade Codes A, B, C and D.

In the Replenishment Grade form you can define the levels according to the way you want to grade your stores (or locations) and items:



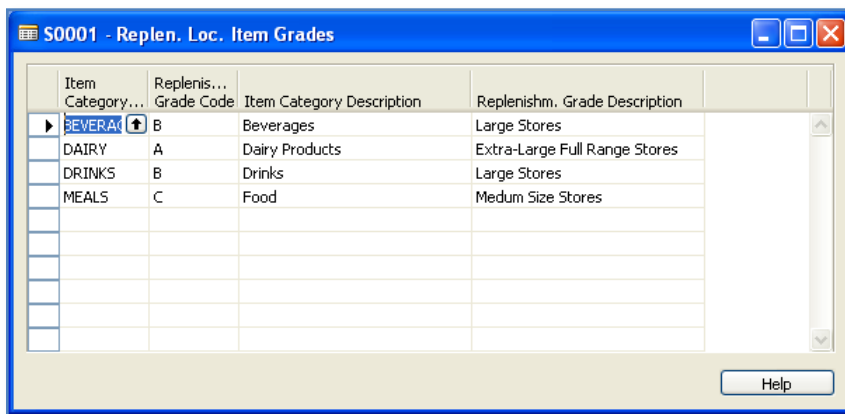
In the **Default Replenishment Grade Code** field you can set up the Replenishment Grade Code for the location.



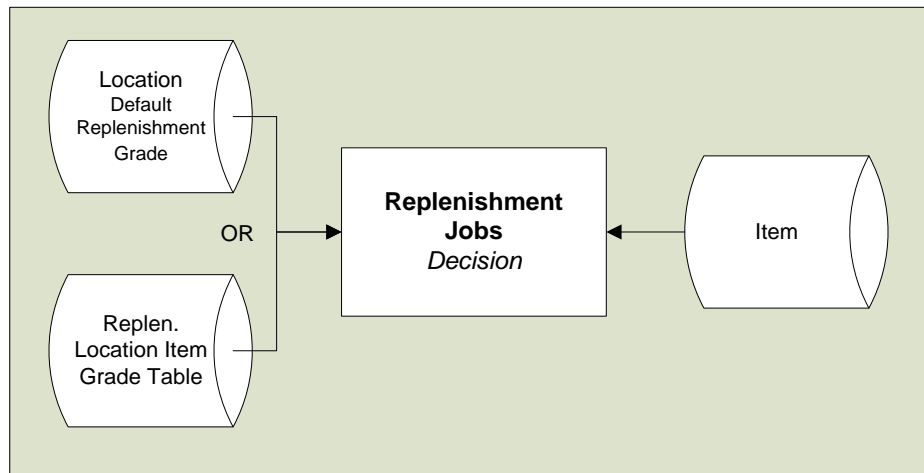
Note: The Default Replenishment Grade field is only shown if the **Store Items Ranged By** field is set to *Item Category/Grade*.

It is possible to override the Replenishment Grade Code for this location for selected item categories by pushing the **Location** button and selecting *Replenishment Item Category Grades*.

Note that Replenishment Grades only come into effect if the **Store Items Ranged By** field in the Replenishment Setup form has the value *Item Category/Grade* and not *Store Groups*.



This information is only relevant if you decide to use Item Category/Grade to select items for replenishment.

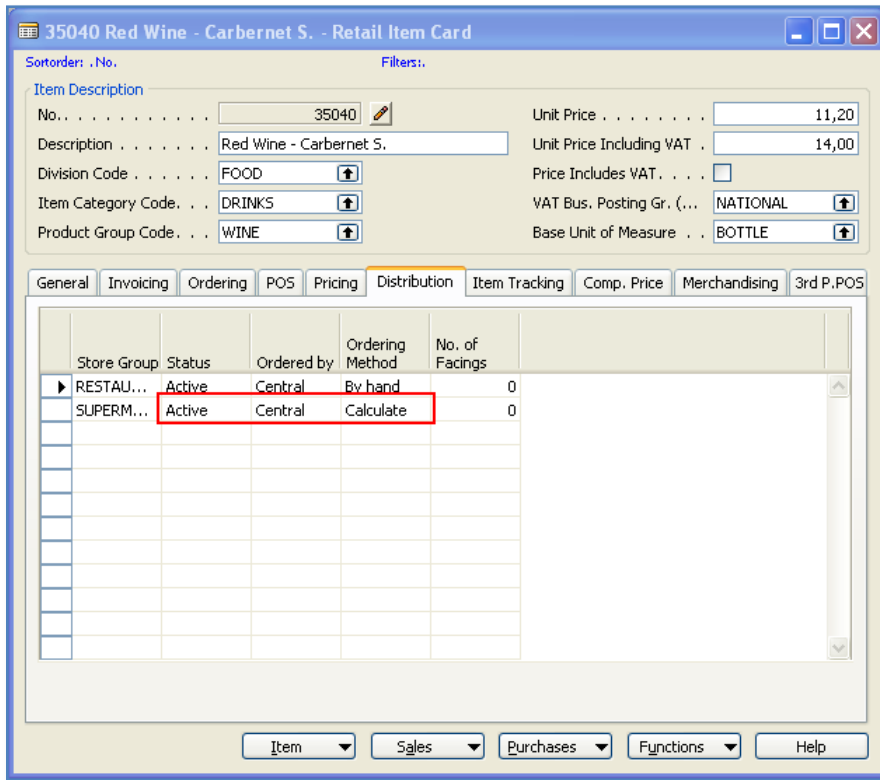


3.1.2.2 Store Groups

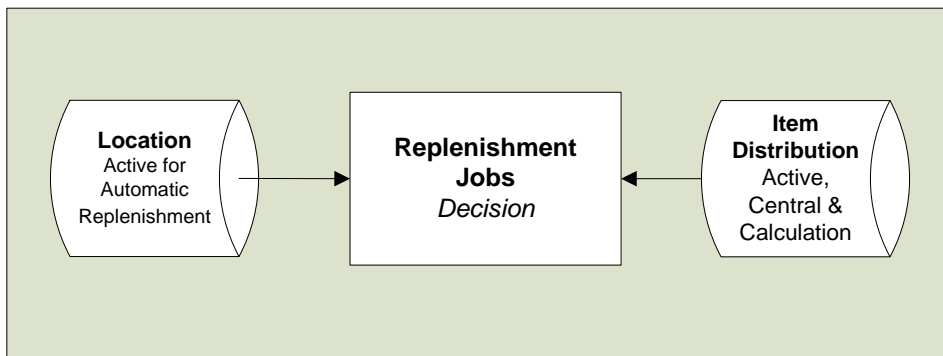
The *Replenishment Store Group – Item Distribution* definitions are used to determine if an item is to be automatically replenished for a given store or a location. The Item Distribution table controls the product range of stores. An Item Distribution line can be defined to one store, group of stores, or all stores.

The following values need to be set for the item for it to be valid for automatic replenishment:

- **Status** = Active
- **Order by** = Central
- **Ordering Method** = Calculate



If more than one Item Distribution record is valid for a specific store (all stores, group of store or one store), the system will select the record that is the most specific (*One Store* being the most specific and *All Stores* the least). The priority of store groups is defined in the Store Card.



Example:

The Retail Item Card above shows that the item is within range for the store groups RESTAURANT (S0005, S0006 and S0008) and SUPERMARK (S0001 and S0002). The item is to be ordered centrally and manually (By hand) by buyers for the RESTAURANT. The SUPERMARK stores are being automatically replenished through Replenishment Journal Jobs

HINT:

The Item Distribution table gives Buyers the chance to specify if the item is to be ordered at store or head office, and if the store staff or the buyer manually orders or the system automatically orders the goods.

Order by	Ordering Method	
Store	By Hand	Purchase Order Documents, Purchasing Worksheet and Handheld terminals are created / used at the store
Store	Calculated	The Purchasing Worksheets can execute the standard NAV Requisition Process
Centrally (Head Office)	By Hand	The Buyer uses the Allocation part of the Replenishment module (Purchase Order with Cross Docking and Buyers Push)
Centrally (Head Office)	Calculated	The Reoccurring part of the Replenishment module is used to replenish warehouses and stores.

3.1.2.1 Item Validity

There are some factors that can make an item invalid for automatic replenishment.

3.1.2.1.1 Item Blocked

If the field **Blocked** is active in the Item record, the item is not valid for automatic replenishment.

HINT: An item is made invalid in the Replenishment Item Quantity calculation batch job.

3.1.2.1.2 Item Status Purchase Orders / Transfer Orders (PO/TO)

The Item Status table defines the status of the item regarding blocking Purchase Orders and/or Transfer Order. If an item is blocked for an order type, it is invalid for that Replenishment Journal job.

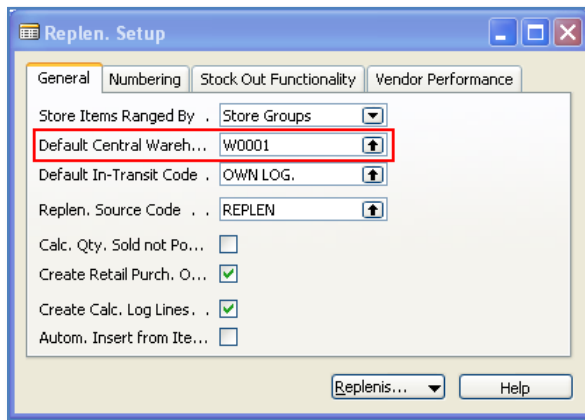
HINT: The Replenishment Item Quantity calculation batch job does not create a record in the Replen. Item Quantity table if the item is blocked for both Purchase and Transfer Orders. However a record is created if only one of the two is blocked. At the time of populating the Replenishing Journals the item that is blocked for the type of Replenishment Journal will not be added to the journal, for example if blocked for Transfer Order and the journal is a Transfer Order Journal.

3.1.2.1.3 Replenishment Data from Item, Item Store or Data Profile records

The fields **Not Active for Replenishment** and **Exclude from Autom. Replenishm.** can make an item invalid for replenishment. These fields can be set in Item, Item Store or Data Profile records.

3.1.3 Warehouse

The Replenishment Module supports Retail companies without a warehouse or multiple warehouses.



In the **Default Central Warehouse** field you specify the warehouse to be used for all items. If there is more than one warehouse in the system, the exceptions from the **Default Central Warehouse** are registered in the Replen. From Warehouse table.

Division ...	Item Cat...	Product ...	Item No.	Store Loc...	Warehou...	Division Description	Ib
				50002	W0002		
NONFOOD	AUDIO	ACC			W0002	Nonfood Items	At
NONFOOD	CLOTHING	WOMEN-5	40000	50004	W0002	Nonfood Items	Cl
NONFOOD	HOMEAPPL				W0002	Nonfood Items	Hc

It is possible to define the warehouse to a Division, Item Category, Product Group, Item No. and/or Store Location. If more than one record is valid for the Item and Location combination, the most specific record is selected where Division is the least and Store Location is the most specific.

Example:

All items for store S0002 will be replenished from the W0002 warehouse.

All Items in the Item Category HOMEAPPL will be replenished from W0002 warehouse.

Hint:

If the retailer does not have a warehouse, the head office can replenish the store by running Purchase Order Journals where the Purchase Order is delivered to the store.

A default warehouse must be defined in the Replenishment System.

The Multiple Warehouse functionality will allow the users to specify that selected stores can be replenished from certain warehouses. It will also be possible to specify that certain Divisions, Item Categories, Product Groups or even Items can be replenished from certain warehouses for selected stores.

3.2 Replenishment Data

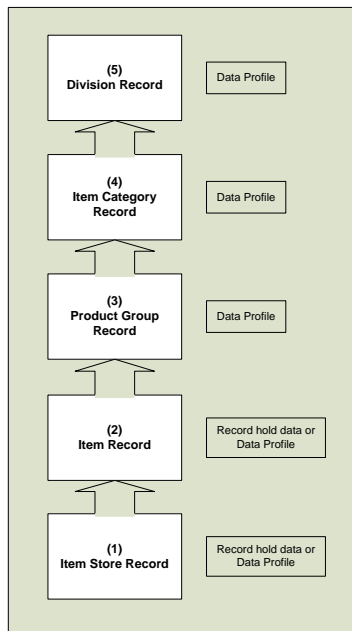
The Replenishment process uses Item Data to decide the quantity to replenish and which calculation methods and parameters are to be used.

The data can be kept in different places in the system and there is a certain Replenishment Data Hierarchy.

3.2.1 Replenishment Data Hierarchy

The Replenishment Data can be kept in five types of records: the Item Store, Item, Product Group, Item Category and Division.

The Item Store record has the highest priority and the Division record the lowest.



1. The system will first try to find a valid Item Store record and, if it finds one, it uses it for the replenishment calculation Type. The Item Store Record can hold specific data for the record or reference to a Data Profile.
2. Then the system looks for an Item record and if the Calculation type is *Automatic – From Data Profile* and the Data Profile Code is defined in the Item record, it will use the data from the Data Profile record, otherwise it will look up the hierarchy starting with the Product Group record. When the Calculation type is not *Automatic – From Data Profile* the system will use the data in the item record
3. Next the system will check if the Product Group record contains a Data Profile Code and uses it if specified. If the Data Profile Code is not specified it goes to the next level.
The Product Group record can only contain a pointer to a Data Profile Record.
4. Next the system will look if the Item Category record contains a Data Profile Code and uses it if specified. If the Data Profile Code is not specified, it goes to the next level.

The Item Category record can only contain a pointer to a Data Profile Record.

5. Next the system will look if the Division record contains a Data Profile Code and uses it if specified. If the Data Profile Code is not specified then it goes to the next level. The Division record can only contain a pointer to a Data Profile Record.

3.2.2 Item Record

The LS Retail Replenishment system has added a number of new fields to the Item Table.

There are three ways the Item record can contain or point to the Replenishment Data:

1. The Item record holds specific Replenishment Data.
2. If the Calculation Type is *Automatic – From Data Profile* and the **Replen. Data Profile** field is filled out and points to the Data Profile record.
3. If the Calculation Type is *Automatic – From Data Profile* and the **Replen. Data Profile** field is blank, the system uses the Item Hierarchy to supply the Data Profile.

There are many new fields in the Item record for Replenishment Data. Following is a list of the new fields. Their purpose and use will be described in this document as the functionality where they are relevant is explained:

Some of these fields are visible only for certain Replenishment Calculation Types.

- Replenishment Calculation Type
- Manual Estimated Daily Sale
- Store Stock Cover Req'd (Days)
- Wareh Stock Cover Req'd (Days)
- Replenishment Sales Profile
- Minimum Inventory
- Maximum Inventory (*standard NAV field*)
- Reorder Point (*standard NAV field*)
- Replenishment Grade Code
- Not Active for Replenishment
- Exclude from Autom. Replenishm
- Transfer Multiple
- std-Order Multiple
- Range in Location
- Store Forward Sales Profile
- Wareh. Forward Sales Profile
- Purch. Order Delivery
- Replenish as Item No.
- Replen. Data Profile
- Like4Like Replen. Method
- Like4Like Process Method
- Vendor No. (*standard NAV field*)

3.2.3 Item Store Record

In the Replenishment Item Store Record you can enter replenishment parameters for a certain item (and variant) and location. The information stored in this record overwrites the information in the Retail Item card.

The Item Store Record contains all the same Replenishment Data fields as the Item record.

The Item Store record is found under the Retail Item Card: Click on the **Item** button, select **Replenishment** and then **Replenishment Item Store**.

The screenshot shows a software window titled "40060 01.10.07 - Replen. Item Store Rec". It has two tabs: "General" and "Quantities". The "General" tab is selected and contains the following fields:

- Item No. 10060
- Variant Code
- Location Code.
- Active From Date 01.10.07
- Range in Location
- Not Active for Repleni...
- Automatic Replenishment
- Replenish as Location ...

On the right side of the "General" tab, there are two dropdown menus:

- Replenishment Calcula... Automatic - Fr...
- Replen. Data Profile . . .

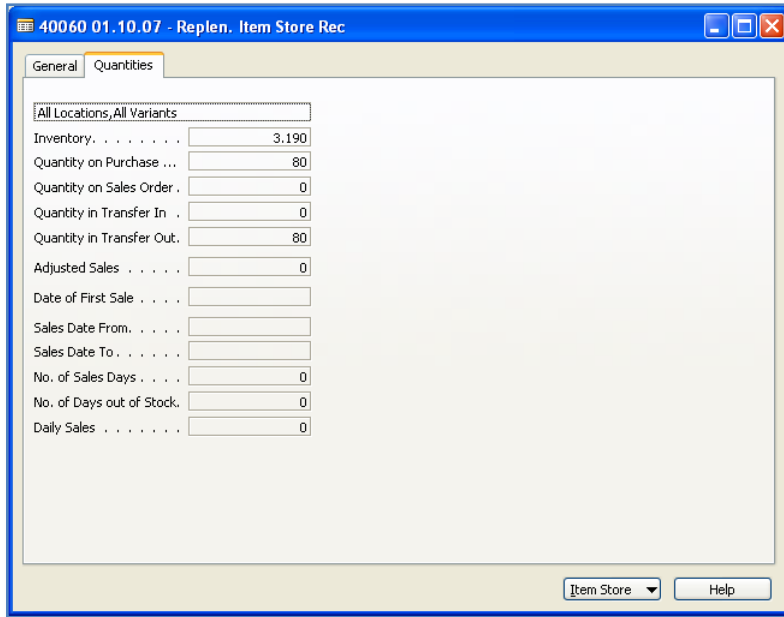
At the bottom right of the window, there are two buttons: "Item Store" and "Help".

The record only shows relevant fields according to the value of the **Replenishment Calculation Type** field.

On the *General* tab you can fill in the **Item No.**, the **Variant Code** for items with variants, the **Location Code** and the **Active From Date**. The **Item No.** is automatically filled in if you open the Replenishment Item Store Rec. form from the Retail Item card. You can only enter a valid variant code in the **Variant Code** field. Use the lookup functionality to select the **Location Code**.

You can have new parameters take effect on a certain date if you fill in the **Active From Date** field.

On the *Quantities* tab you can see the **Inventory**, **Quantity on Purchase Order**, **Quantity on Sales Order**, **Quantity in Transfer In**, **Quantity in Transfer Out** and the **Adjusted Sales** quantity.



On this tab you will find various information fields such as **Inventory** and **Quantity on Purchase Order**. This information is retrieved from Location Quantities described below.

The key for the Item Store record is **Item No. + Variant Code + Location Code + Active From Date** where **Item No.** needs to be filled in and one of the other fields also. This gives you the chance to create specific Replenishment Data for specific store or new data that will take effect in the future.

Examples:

Item No.	40060
Variant Code	
Location Code.	S0001
Active From Date	

This record would be valid for all Variants and Store/Location S0001

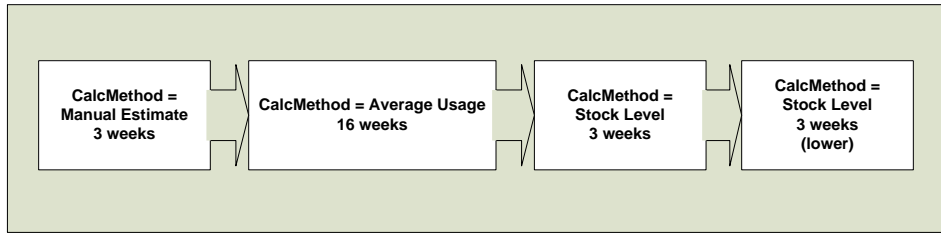
Item No.	40060
Variant Code	002
Location Code.	
Active From Date	

This record would be valid for all Stores/Locations and the Variant 002

Item No.	40060
Variant Code	
Location Code.	
Active From Date	01.10.07

This record would be valid for all Stores/Locations and all Variants but not until the 01.10.2007.

This way it is possible to plan replenishment when the item is created and all the way through its life cycle.



Example:

Following is an example of item lifecycle replenishment. First, there is an estimation of 5 pieces sold pr. day for 3 weeks and then the system will use the sales history of the item for the next 16 weeks and towards the end of the life cycle of the item, the Stock Levels method is used to phase out the item from the store.

3.2.4 Data Profile

The Data Profile record makes it possible to define Replenishment Data to an independent record. By filling in the **Active From Date** field it is possible to change the data and it will not be valid until on the date specified. Then the Data Profile can be connected to Item Store, Item and all levels of the Item Hierarchy.

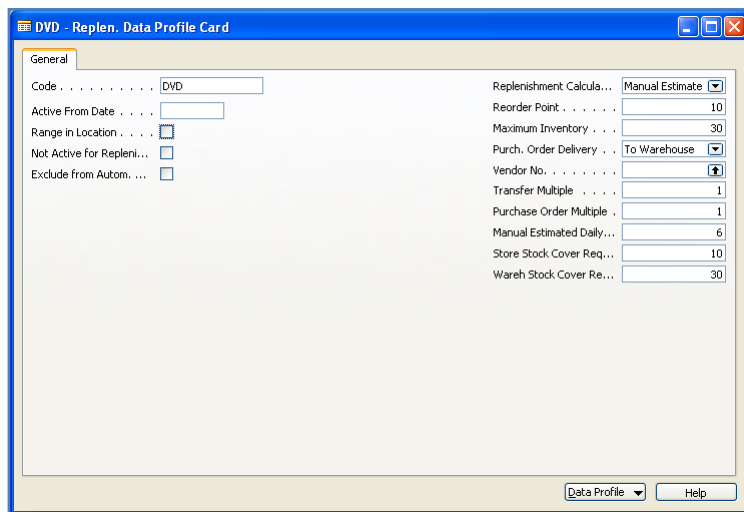
It is possible to maintain Replenishment Data for many items by changing the Data Profile record. When the replenishment job is run, the system finds the Data Profile records and uses the Replenishment Data when calculating the replenishment suggestion.

For customers that have relatively similar replenishment data for the majority of the items, the Data Profile will minimize the work in maintaining the replenishment data.

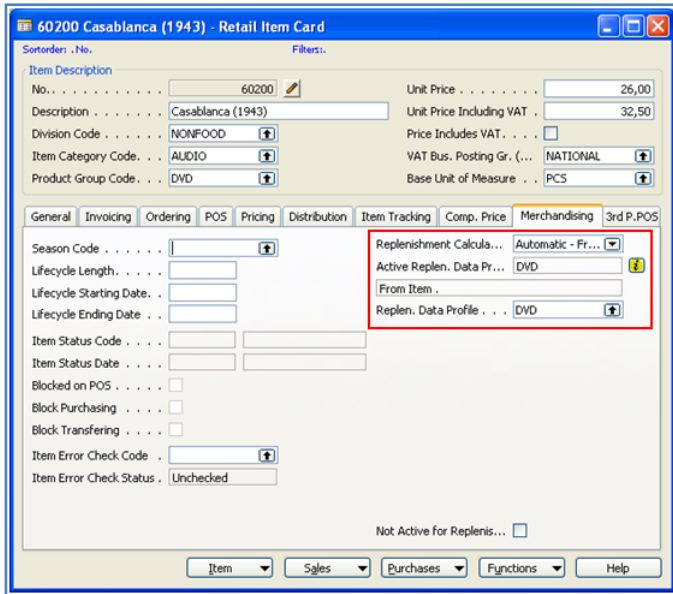
Hint:

It important to analyze the patterns of the replenishment data and use as many Data Profiles as possible and to connect them to the Item Hierarchy. Try to put specific data to the Item and Item Store records.

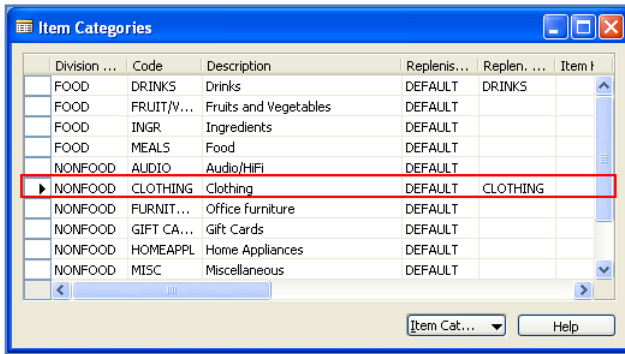
Example:



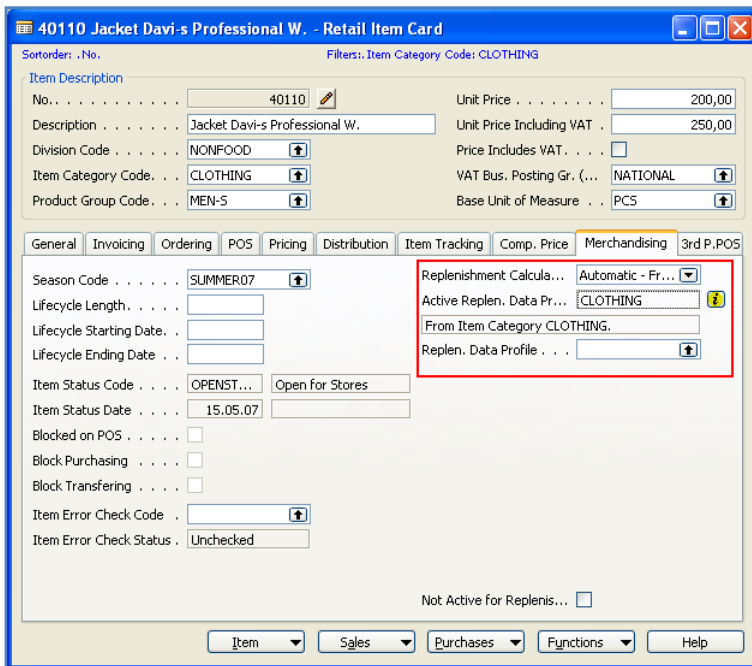
A Data Profile record for DVDs



The Data Profile is connected directly to the Item record.



The Data Profile is connected to an Item Category record.



The item record replenishment data is inherited from the Item Category record of the item.

3.2.5 Item Profile

You can use Replenishment Item Profiles to define Replenishment parameters for a set of items. You need to fill out filters for which items you want to apply the default values to. When you update the profile, the selected items will be updated with the values specified on the Default Values tab.

On the General tab you find the **Sort ID** and the **Description** fields. The **Sort ID** field is used when an update for more than one profile is applied. In the **Description** field you can enter a description of this profile.

On the Item Filters tab you can enter filters for the following fields:

- **Item Division Code**
- **Item Category Code**
- **Product Group Code**
- **Item No.**

If you enter FURNITURE in the **Item Category Code**, only items that belong to the Furniture Item Category will be selected when the default values from the profile are applied to the items.

In the **Replenish Where** field you can select one of these options:

- **All Locations**
- **All Stores**
- **All Warehouses**
- **Location**

If you select **All Locations**, the values on the Default Values tab are applied to all the stores and all the warehouses. The system deletes all existing Item Store Records belonging to the items selected and copies the values from the Default Values tab to the corresponding fields in the Merchandising tab of the items.

If you select **All Stores**, the values are applied to the stores only. By selecting **All Warehouses**, the values are applied to all the warehouses and if you select **Location**, you must also fill out the Location Code field and when you update the profile, the values are only applied to that location.

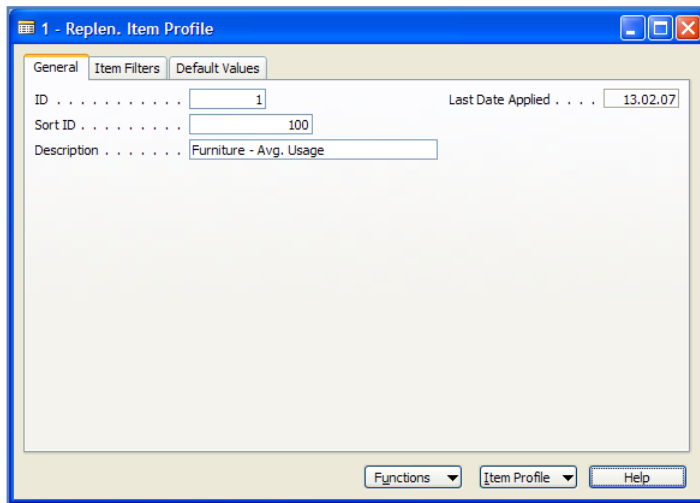
When one of the options **All Stores**, **All Warehouses** or **Location** is selected, the system creates entries in the Item Store Record table for the selected items. The **Active From Date** is set to *WORKDATE* and the values from the Default Value tab copied to the corresponding fields.

When you have filled in the item filters and the values you want to apply to the selected items, you should click on the Functions button and select the Update menu option. You will be asked if you want to update the values for the current profile only or for all profiles. If you select to do the update for all the profiles, the system processes the Replenishment Item Profiles in Sort ID order, so that the profile with the lowest Sort ID is processed first and the profile with the highest Sort ID last. This can be important because some items might be selected from two different profiles. If this is the case, only values from the profile with the higher Sort ID will be valid for these items after the update run.

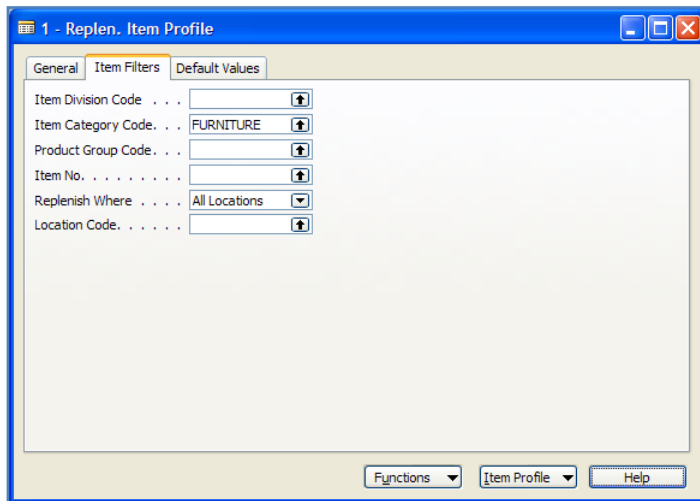
Hint:

The Item Profile functionality fits better if the system is set to use Replenishment Grades.

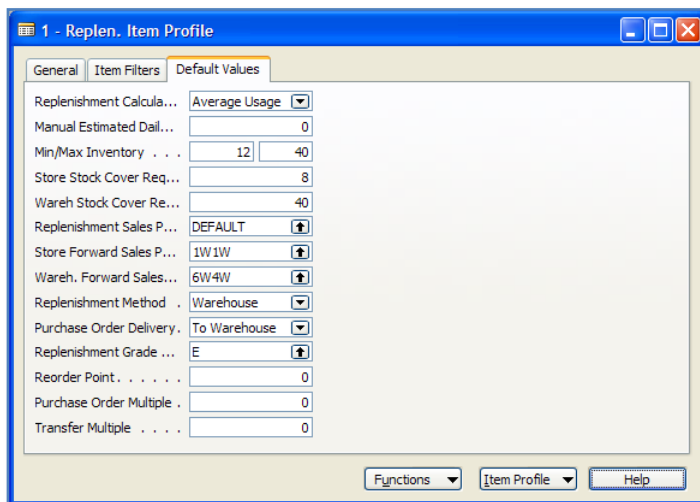
Example:



An Item Profile record with the ID 1 and the Sorting ID 100.



An Item Profile for all items in the Item Category *Furniture* and for all stores/locations.



The Default Values for this group of items will have the Replenishment Calculation Type *Average Usage*.

3.2.6 Common Replenishment Data Fields

The solution offers four Replenishment Calculation Types and this part of the document describes the Replenishment Data fields that are common to all the Replenishment Calculation Types. The rest of the Replenishment Date fields that are specific to a Replenishment Calculation Type will be described when each Type is described in more detail.

3.2.6.1 Replenishment Calculation Type

The Replenishment Calculation Type can have one of the following values:

- **Average Usage**
- **Manual Estimate**
- **Stock Levels**
- **Like-for-Like.**

3.2.6.2 Maximum Inventory

If the Maximum Inventory field is filled in the system orders the stock up to the Maximum Inventory if the stock on hand goes under the Reorder Point or the Minimum Inventory.

Example:

A) Replenishment Calculation Type is Stock Levels

The **Maximum Inventory** field is 20 and the **Minimum Inventory** field is set to 10 and the actual inventory is 8 then the system will reorder 12.

If the **Maximum Inventory** is 0 the system will order according to the **Minimum Inventory** and reorders 2.

B) Replenishment Calculation Type is Average Usage or Manual Estimate

The **Maximum Inventory** field is 20 and the **Minimum Inventory** field is set to 10 and the actual inventory is 8 and the system suggests 30 but then the system will reorder 12 as the inventory cannot be more than 20.

If the **Maximum Inventory** is 0 the system will order 22 (Suggested Qty – Inventory).

3.2.6.3 Replen. Data Profile

The Replen. Data Profile field contains the code of the Replen. Data Profile record to be used in the Replenishment process.

For further information see the [Replenishment Data Profile Record](#).

3.2.6.4 Vendor No.

The **Vendor No.** field contains the number of the vendor the item should be purchased from. If the Replenishment Data record found for the item has the **Vendor No.** field filled in, that vendor will be used. However, if the field is blank, the system first looks at the Stock Unit record and finally the Item record.

Example:

If the **Vendor No.** field in the Item Store record that was selected is blank, the system uses the Vendor No. from the Item record as a Stock Keeping record is not found for the Item No and Location Code.

3.2.6.5 Purch. Order Delivery

The **Purchase Order Delivery** field can have two values, *To Warehouse* or *To Store*. The value in this field determines whether the purchase orders are to be delivered to a warehouse or the stores. It is used by the process that adds items to a replenishment journal to select the items for the journal.

The field is used when the function *Adding Items to a Purchase Replenishment Journal* is executed.

The table shows which conditions need to be met if the item is to be selected:

Purchaser Order Type field of the Replen. Template	Purch. Order Delivery Field of the Replenishment Data
One Purchase Order per Vendor One Purchase Order per Vendor with Cross Docking	To Warehouse
Purchase Orders for Receiving Location	To Store

3.2.6.6 Reorder Point

If the LS Replenishment System has calculated a need to replenish an item, where the **Reorder Point** has been filled in and the suggested quantity is less than the **Reorder Point**, it increases the quantity up to the Reorder Point.

Example:

The system suggests reordering 8 pieces and the field **Reorder Point** is 10, the System Suggested Quantity is changed to 10.

3.2.6.7 Transfer Multiple

Transfer Multiple is used by the process that creates transfer orders from the replenishment journals. If the **Transfer Multiple** field is filled in for an item, the quantity in the transfer order line for that item is always a multiple of the Transfer Multiple. The system always uses the round up command on the quantity in the replenishment journal line if the Transfer Multiple is filled in.

3.2.6.8 Purchase Order Multiple

Purchase Order Multiple is used by the process that creates the purchase orders from the replenishment journals. If the **Order Multiple** field is filled in for an item, the Quantity in the purchase order line for that item is always a multiple of the Order Multiple. The system always uses the round up command on the quantity in the replenishment journal line if the Order Multiple is filled in.

3.2.6.9 Not Active for Replenishment.

If you want to temporarily exclude an item from Replenishment, you can place a check mark in this field. The replenishment process will not replenish this item.

3.3 Replenishment Item Quantity

The Replenishment Item Quantity table contains data used by the replenishment module. The table displays the Inventory for each item and variant at each location, in addition to what is expected to be received at the location (Quantity on Purchase Order and Quantity in Transfer In) and what is to be shipped from out from the location (Quantity on Sales Order and Quantity in Transfer Out). It also contains information about average daily sales and the no. of days out of stock if the *Stock Out* functionality is in use.

The Replenishment Item Quantity table supplies the input to the function to Add Items to the Purchase and Transfer Replenishment Journals. The Replenishment Item Quantity records can be calculated as a pre-process to adding lines to the journals but would most likely calculated as an automatic Scheduler job during overnight processes.

The Replenishment Item Quantity calculation process only creates records for valid items and valid locations for the replenishment process.

3.3.1 Fields

Field Name	Description
Item No.	The Item Number
Variant Code	The Variant Code
Location Code	The Location Code of a Store that is valid for replenishment and location code of a warehouse that is the default warehouse as defined in the Replenishment From Warehouse table.
Inventory	The inventory status of records Location Code If the field Calc. Qty. Sold not Posted in the Replenishment Setup record is set, the value of the field Qty. Sold not Posted has been subtracted from the Inventory status.
Quantity on Purchase Order	The sum of the field Outstanding Qty. (Base) in all Purchase Order Lines
Quantity on Sales Order	The sum of the field Outstanding Qty. (Base) in all Sales Order Lines
Quantity in Transfer In	The sum Outstanding Qty. (Base) and Qty. in Transit (Base) of all Transfer Order Lines where the Location Code is filtered to the field Transfer-to Code .
Quantity in Transfer Out	The sum Outstanding Qty. (Base) of all Transfer Order Lines where the Location Code is filtered to the field Transfer-from Code .
Date Modified	The date when the record was last modified
Time Modified	The time when the record was last modified
Daily Sales	Calculated average daily sales
Sales Date From	
Sales Date To	
No. of Sales Dates	The number of days in the calculation of the Daily Sale
No. of Days Out of Stock	The number of days of zero stock days
Date of First Sale	
Adjusted Sales	The quantity the sales quantity was adjusted by, according to entries in the Replenishment Sales History Adjustments
Qty. Sold not Posted	The quantity of Transaction records that have not been posted in a Statement. This field is only calculated if the field Calc. Qty. Sold not Posted is set in the Replenishment Setup record

Replenish From Warehouse	The Location Code of the Warehouse the record will be replenished from
Item Division Code	The Division Code of the Item No. It is used for filtering when adding items to journals
Item Category Code	The Item Category Code of the Item No. Used for filtering when adding items to journals
Item Product Group Code	The Product Group Code of the Item No. Used for filtering when adding items to journals
Vendor No.	The Vendor No. that is going to be used when creating a Purchase Order.
Replenishment Calculation Type	The Replenishment Calculation Type to be used in the replenishment process
Replenish as Location Code	
Store Group Filter	
Season Code	The Season Code of the Item No.
Replenish as Item No.	Filled in if the sales history is to be used from another Item No.
Planned Sales Demand	The quantity from the Replenishment Planned Sales Demand records to overwrite the calculated daily sales amount from sales history
PO Blocked	Set if the Item No. is blocked for Purchase Orders from the Item Status table
TO Blocked	Set if the Item No. is blocked for Transfer Orders from the Item Status table
Is a Whse	The Location Code of the record is a warehouse
Replen. Whse Data Exists	An Item Store record exists for the warehouse
Replen. Source	Specifies if the Replenishment Data is from the Item, Item Store or Data Profile record
Replen. Code	Contains the Item No. or the Data Profile Code
Replen. Variant	The Variant Code
Replen. Location	The Location Code of the Item Store record
Replen. Valid	Contains the Valid from date for the Item Store or the Data Profile record
In Distribution	Set if the Item No is in distribution for the Location

The calculation of the Replenishment Item Quantity table can be run overnight by the Scheduler:

REPLEN-QTY Replenishment - Calc. Item Qty - Scheduler Job

General Object Setup Schedule Details

Job ID REPLEN-QTY Job Type Data Replication

Description Replenishment - Calc. Item Qty Distribution Restrictions No

Scheduler Job Type Code MISC Include/Exclude List E...

Subjobs Defined by Job . REPLEN-QTY Distribution Sublocations . Excluded from...

Use Current Location . . . Error Handling Skip To Next ...

From-Location Code To-Location Code

From-Location Descrip... To-Location Description

Data Replication Object Replication

Subjob ID	Subjob Description	Enabled	Subjob T...	Subjob T...
1		<input checked="" type="checkbox"/>	Normal	0

Run Now Actions Line Job Help

REPLEN-QTY Replenishment - Calc. Item Qty - Scheduler Job

General Object Setup Schedule Details

Object Type Codeunit Text

Object No. 10012200 Code

Object Name Replen. - Calc. Qtys Integer 0

Uses Scheduler Job Re... Decimal 0,00

Use Job ID REPLEN-QTY Date

Last Batch ID Time

Boolean

Data Replication Object Replication

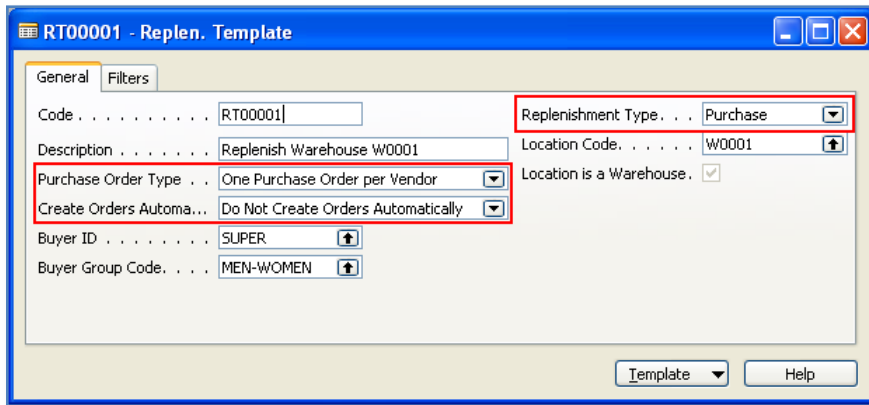
Subjob ID	Subjob Description	Enabled	Subjob T...	Subjob T...
1		<input checked="" type="checkbox"/>	Normal	0

Run Now Actions Line Job Help

3.4 Replenishment Template

In order to use the replenishment system, you need to set up one or more replenishment templates. In the replenishment template you to specify whether you want to use it to create purchase orders or transfer orders from a warehouse to the stores. The replenishment system can have many replenishment templates of both types.

In the **Replenishment Type** field, you can select whether the replenishment template is to be used for creating purchase orders or transfer orders. In the **Purchase Order Type** field, you can select one of these options:



- *One Purchase Order per Vendor* (replenish warehouse)
- *One Purchase Order per Vendor with Cross Docking* (replenish warehouse and store)
- *Purchase Orders for Receiving Locations* (replenish store)

Purchase Journal - One Purchase Order per Vendor

By selecting *One Purchase Order per Vendor*, the system will create one purchase order for the lines in the linked replenishment journals.

Purchase Journal - One Purchase Order per Vendor with Cross Docking

If you select *One Purchase Order per Vendor with Cross Docking*, the system will also create one purchase per vendor like when the previous option was selected, but it will also create planned cross docking transfer orders, so that when the purchase order arrives at the warehouse, some of the items can be cross docked and sent directly to the stores that are waiting for them.

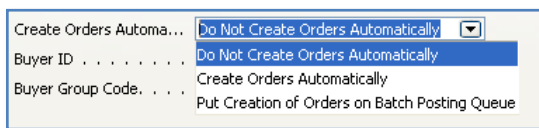
Purchase Journal - Purchase Orders for Receiving Locations

If you select *Purchase Orders for Receiving Locations*, the system will create purchase orders for the stores instead of the warehouse.

Transfer Journal

If you enter *Transfer* in the **Replenishment Type** field, the Purchase Order Type will not be visible.

The **Location Code** field must always be filled in unless *Purchase Orders for Receiving Locations* was selected as the Purchase Order Type.



Do Not Create Order Automatically

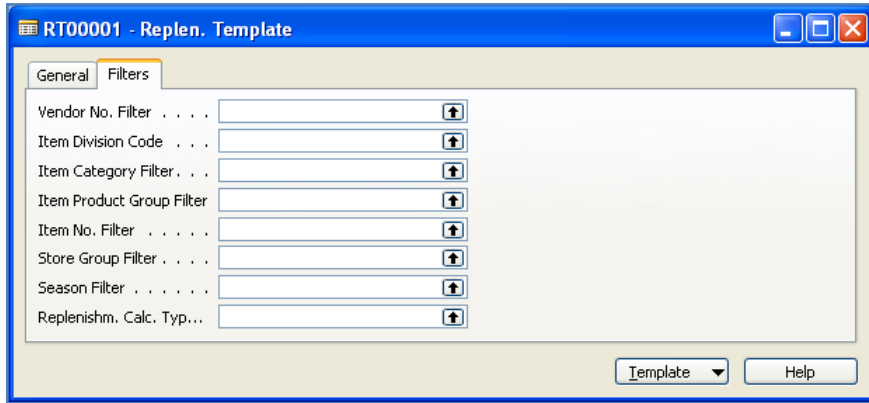
The system leaves the journal lines after the Replenishment Journal has been populated / calculated and the buyer can then modify and manually create the Order.

Create Orders Automatically

The system automatically creates the order once the journal has been populated. This might be done when populating / calculating the journal by a Scheduler Job over night.

Put Creation of Orders on Batch Posting Queue

Acts the same as *Create Order Automatically* but the system creates a request in the *Batch Posting Queue* which will then create the order when it has reached the record in the queue. This would most likely be used if there are locking problems with the *Create Orders Automatically* method.



In the Replen. Template form you can set the filters you want to apply to the Item table when you add items to the Replenishment Journals.

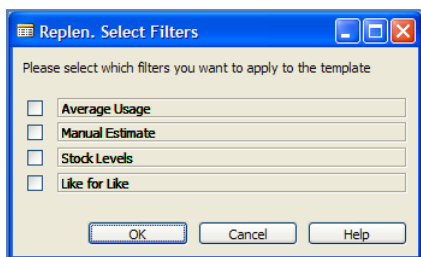
In the **Vendor No. Filter** you can enter a filter for the **Vendor No.** field of the items. An example is 1000 if you only want to select items from vendor number 1000. If you enter 1000..2000 the system will select all items from vendors number 1000 to 2000.

In the Item **Category Filter** field you can enter a filter for the **Category Code** field of the item.

In the Item **Product Group Filter** field you can enter a filter for the **Product Group Code** field of the item.

In the **Item No. Filter** you can enter a filter for the item number of the item.

In the **Replenism. Calc. Type Filter** you can enter a filter for the **Replenishment Calculation Type**. If you press the *UpArrow* or *F6* key, this form will open:



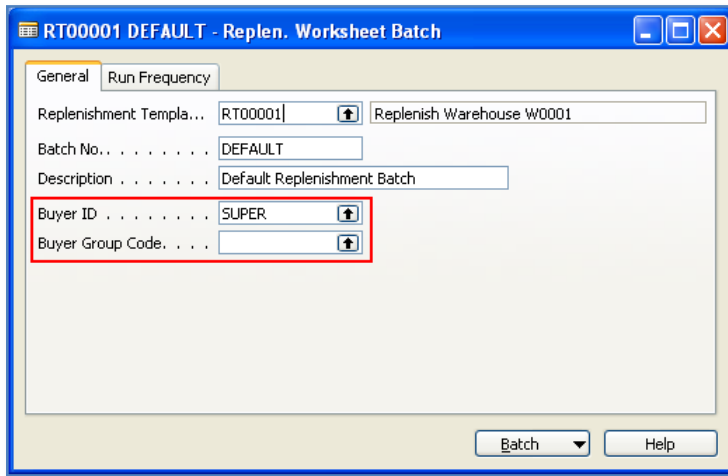
Here you can place a check mark in one or more fields you want to filter on. If you want to select items with the Replenishment Calculation Type = **Average Use** and **Manual Estimate**, you need to check mark the boxes next to these options.

3.5 Replenishment Batch

In the *Replenishment Journal Batch* form you can specify whether the replenishment is to be run automatically or manually. The default run frequency is set to be run manually, but it is possible to specify a certain date if it is to be run only once or you can specify that the replenishment run is to be run daily or on weekdays only.

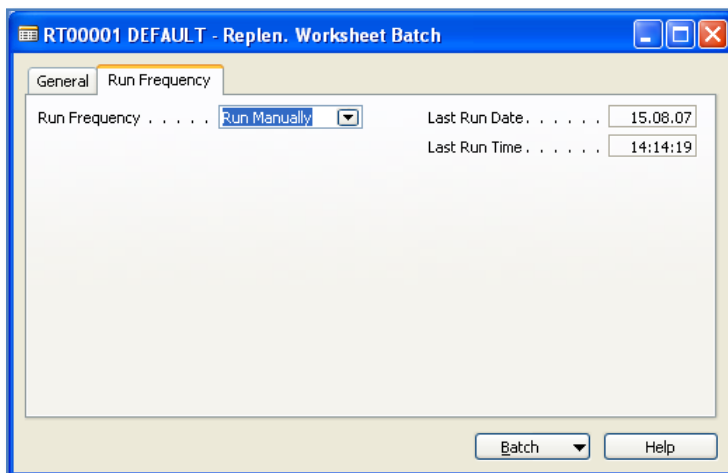
To run the replenishment automatically, you can either select *Replenishment Automatic Run* in the LS Retail – Replenishment menu or create a Scheduler Job in the LS Retail – Scheduler menu.

The *Replenishment Batch* record is always connected to a Replenishment Template. One Replenishment Template can have multiple Replenishment Batch records.

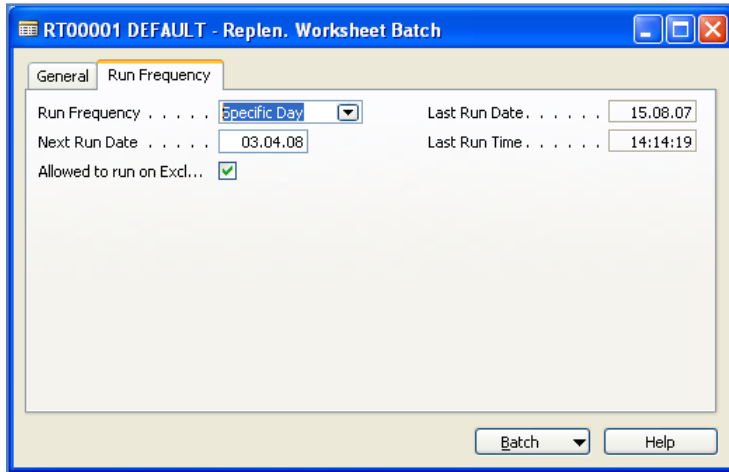


It is important to specify the **Buyer ID** and/or **Buyer Group Code** if the customer wants to be able use the Buyer's Workbench.

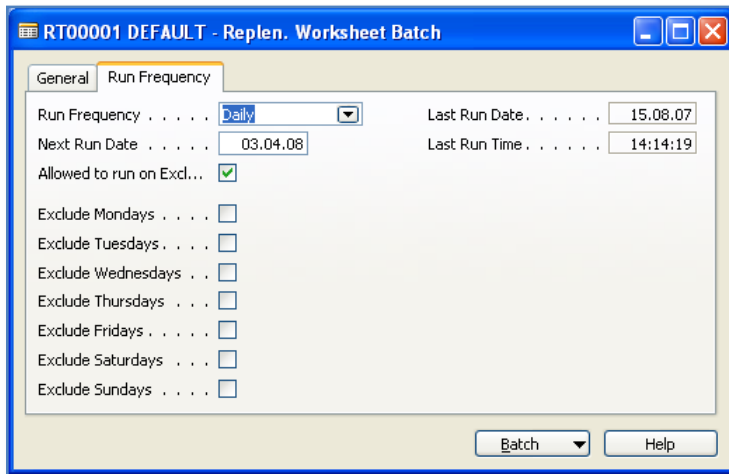
The Run Frequency tab specifies the frequency of execution of *Replenishment Batch* records.



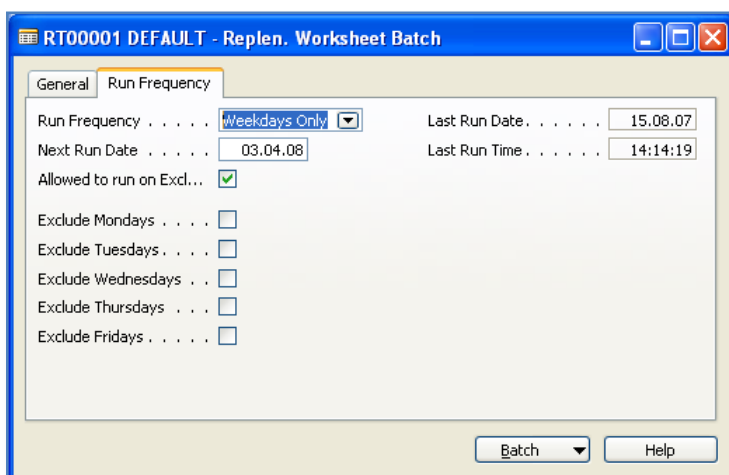
Run Manually: a batch the buyer executes as needed and is not executed in a Scheduler Job.



Specific Day: the Batch is executed only once on the specified date or after the date.



Daily: the Batch will be executed daily. It is also possible to specify weekdays the system should exclude.



Weekdays Only: the Batch will be executed on weekdays. It is also possible to specify weekdays the system should exclude.

Scheduler Executes Batch Jobs automatically.

Batch Jobs can be executed by a Scheduler Job. In the Demo Data there is an example of a Scheduler Job (REPLEN-RUN) that can be used to execute Batch Jobs.

The screenshot shows the 'REPLEN-RUN Replenishment - Automatic Run - Scheduler Job' window with the 'General' tab selected. The 'Job ID' is 'REPLEN-RUN' and the 'Job Type' is 'Data Replication'. The 'Description' is 'Replenishment - Automatic Run'. The 'Scheduler Job Type Code' is 'MISC' and 'Subjobs Defined by Job' is 'REPLEN-RUN'. The 'Distribution Restrictions' are set to 'No'. The 'Error Handling' is set to 'Skip To Next ...'. The 'From-Location Code' and 'To-Location Code' are empty. The 'From-Location Description' and 'To-Location Description' are also empty.

Subjob ID	Subjob Description	Enabled	Subjob T...	Subjob T...
1		<input checked="" type="checkbox"/>	Normal	0

The screenshot shows the 'REPLEN-RUN Replenishment - Automatic Run - Scheduler Job' window with the 'Object Setup' tab selected. The 'Object Type' is 'Report' and the 'Object No.' is '10012207'. The 'Object Name' is 'Replen. Automatic Run'. The 'Uses Scheduler Job Re...' checkbox is checked. The 'Integer' value is '0' and the 'Decimal' value is '0,00'. The 'Date' and 'Time' fields are empty. The 'Boolean' checkbox is unchecked.

Subjob ID	Subjob Description	Enabled	Subjob T...	Subjob T...
1		<input checked="" type="checkbox"/>	Normal	0

3.6 Calculation Type – Average Usage

The Average Usage Calculation Type is the only type that uses sales history, the average sales per day, to predict the future sales of the item.

The Average Usage method calculates the average daily sales for an item in each location based on the period defined in a Sales Profile. The sales history can be adjusted and the predicted sales data can be overwritten by definition. Days with stock on hand are only valid for daily sales calculation.

3.6.1 Fields

3.6.1.1 Common Fields for all Calculation Types

Common Replenishment Data fields are described above in the [Common Replenishment Data Fields](#) chapter.

3.6.1.1 Store Stock Cover Days

The **Store Stock Cover Days** field tells the system how many days of sale the inventory at the store is suppose to cover.

The field is used for the Replenishment Calculation Type *Average Usage* and *Manual Estimate*.

Example:

The system calculates that the average daily sales quantity is 5 and the Store Stock Cover Days is 10 – then the System Suggested quantity will be 50.

3.6.1.2 Warehouse Stock Cover Days

Warehouse Stock Cover Days works the same way as **Store Stock Cover Days**, but this field tells the system how many days of sale the inventory at warehouse is suppose to cover.

3.6.1.3 Replenishment Sales Profile

The System uses the Replenishment Sales Profile to calculate average daily sales)

3.6.1.4 Store Forward Sales Profile

If you want to use last year's sales to find the sales trend in the store, you can enter the code for the Forward Sales Profile here.

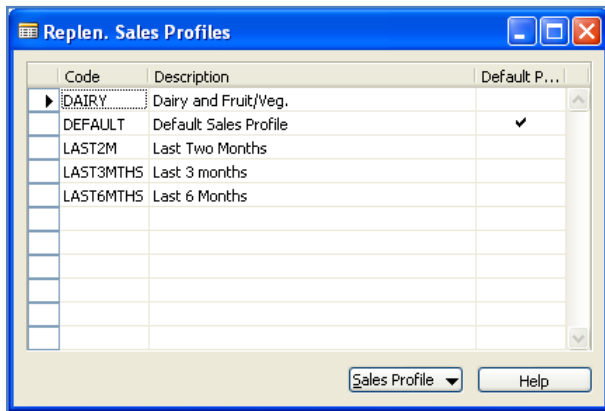
3.6.1.5 Warehouse Forward Sales Profile

If you want to use last year's sales to find the sales trend in the warehouse, you can enter the code for the Forward Sales Profile here.

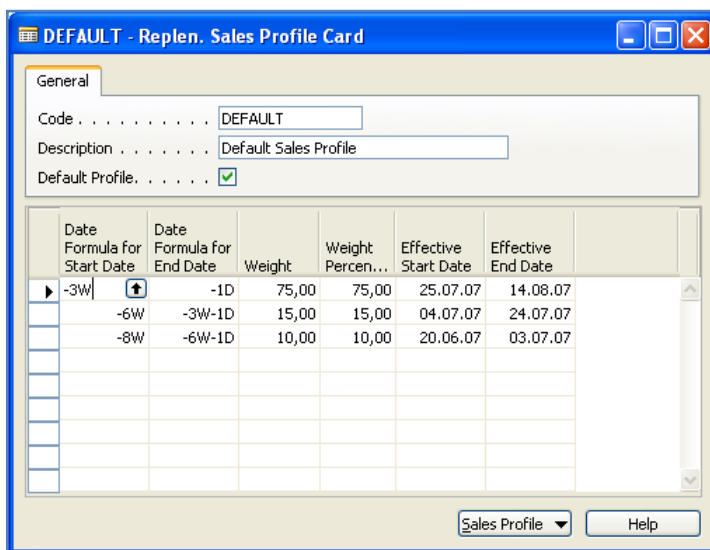
3.6.1.1 Replenish as Item No.

If you have a new item that does not have any sales history and you want to use the sales history of a different item to use for the replenishment run, you can enter the other item number here. The replenishment system will calculate average daily sales for the other item and use the outcome for the new item.

3.6.2 Replenishment Sales Profile



The Replenishment Sales Profile is used when Average Daily Sales is calculated and the *Replenishment Calculation Type* is *Average Usage*. The system calculates the average daily sales by finding out the quantity sold for an item at each location (store) during one or more periods. The periods have a starting date and an ending date. The importance or weight of each period can differ. You can decide what weight you assign to each period by filling out the **Weight** field. If you want the period closest to today's period to have more importance than a period one month ago, you can enter a higher value in the Weight field for the more recent period. If no weight is entered, all periods have the same importance.



Hint:

The form shows the Effective Start Date and the Effective End Date according to the Date Formulas and working date of the NAV client.

Hint:

It is not necessary to define the Replenishment Sales Profile of an item with the Replenishment Calculation Type *Average Usage*. In such cases, the system uses the Replenishment Sales Profile that is marked as the Default Profile.

When you open the Replenishment Sales Profile from the Setup menu, the Replenishment Sales Profile list is displayed. Click on the **Sales Profile** button and select **Card Shift+F5** menu option to open the Replenishment Sales Profile card.

The card form has a subform where you can enter one or more lines. Each line has the following fields:

- **Date Formula for Start Date**
- **Date Formula for End Date**
- **Weight**
- **Weight Percentage**
- **Effective Start Date**
- **Effective End Date**

In the **Date Formula for Start Date** field you must fill out a Date Formula that will represent the starting date for the period for which you want the system to calculate the quantity sold. In the **Date Formula for End Date** field you must fill out the Date Formula for the end date of the period. In the **Weight** field you can fill out the weight or importance of this period.

The **Weight Percentage** field is calculated automatically. If the weight has been filled in in at least one line, the total sum of the Weight Percentage in all the lines will be 100.

The **Effective Start Date** and the **Effective End Date** are calculated automatically based on the Date Formula for Start Date and Date Formula for Ending Date and today's date.

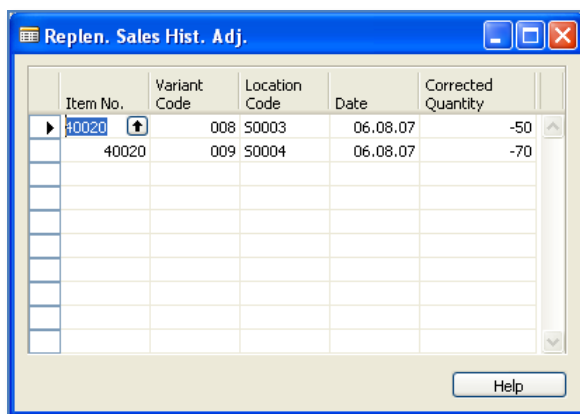
3.6.3 Replenishment Sales History Adjustment

Replenishment Sales History Adjustment records are used to increase or decrease the Sales History quantity of a specific Item No. + Variant Code and Store / Location.

The system calculates the sales quantity for a specific period and calculates Sales History Adjustment Quantity and the sum of the two quantities is the adjusted total quantity.

The Replenishment Sales History Adjustment applies only to items that have the Replenishment Calculation Type *Average Usage*.

Total Sales Quantity = Total Sales Quantity + Total Sales History Adjusted Quantity.

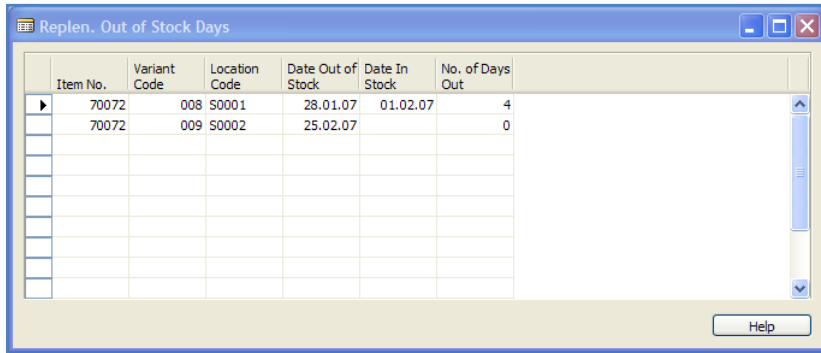


The Buyer maintains the Sales History Adjustment record under the Retail Item Card. Click on the Item Button, select Replenishment and finally Sales History Adjustment.

Hint:

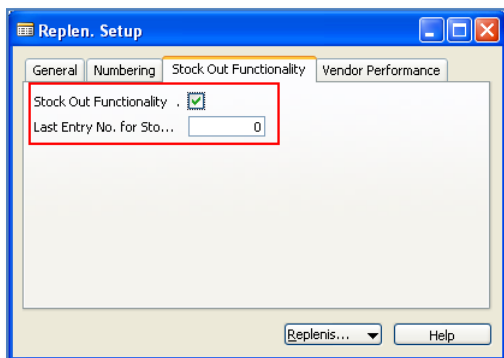
It is essential to enter a negative value if you want to lower the sales history figure and a positive value if you want to increase it.

3.6.4 Out of Stock Days



Item No.	Variant Code	Location Code	Date Out of Stock	Date In Stock	No. of Days Out
70072	008	S0001	28.01.07	01.02.07	4
70072	009	S0002	25.02.07		0

This form shows when an item has gone out of stock in a location and if it has been purchased again, the form shows the date it came back in stock and how many days it was out of stock. If the location still does not have it in stock, then the Date in Stock and No. Of Days Out columns are empty.



Replen. Setup

General | Numbering | **Stock Out Functionality** | Vendor Performance

Stock Out Functionality

Last Entry No. for Sto...

Replenis... Help

This form only has values if the **Stock out Functionality** field in the Replenishment Setup form is check marked and the Update out of Stock batch run has been run from the Periodic Activity or the Job Scheduler.

Hint:

If you want the system to recalculate the out of stock data, you need to set the field **Last Entry No. for Stock Out** in the Replenishment Setup to 0, delete all records in the table **Replen. Out of Stock Log** (10012209) and run LS Retail Replenishment Menu -> Periodic Activities -> Replen. Upd Out of Stock.

The calculation of the Replenishment Stock Out Days can be run overnight by the Scheduler.

REPLEN-STKOUT Replen. Stock Out - Scheduler Job

General Object Setup Schedule Details

Job ID REPLEN-STKOUT Job Type Data Replication

Description Replen. Stock Out Distribution Restrictions No

Scheduler Job Type Code MISC Include/Exclude List E...

Subjobs Defined by Job REPLEN-STKOUT Distribution Sublocations. Excluded from...

Use Current Location . . . Error Handling. Skip To Next ...

From-Location Code . . . To-Location Code . . .

From-Location Descrip... To-Location Description . . .

Data Replication Object Replication

Subjob ID	Subjob Description	Enabled	Subjob T...	Subjob T...
*→		✓	Normal	0

Run Now Actions Line Job Help

REPLEN-STKOUT Replen. Stock Out - Scheduler Job

General Object Setup Schedule Details

Object Type Codeunit Text

Object No. 10012203 Code

Object Name Replen. Out of Stock Mgt. Integer 0

Uses Scheduler Job Re... Decimal 0,00

Use Job ID REPLEN-STKOUT Date

Last Batch ID Time

Boolean

Data Replication Object Replication

Subjob ID	Subjob Description	Enabled	Subjob T...	Subjob T...
*→		✓	Normal	0

Run Now Actions Line Job Help

3.6.5 Planned Sales Demand

When the LS Retail Replenishment System calculates Item Quantities, it needs to take into account any Planned Sales Demand data, if it exists. This is only valid for items that have the Replenishment Calculation Types *Average Usage* or *Manual Estimate*.

Hint:

Planned Sales Demand records give the Buyer the chance to increase the sales demand, for example before special events, as these events might not be seasonal and the Replenishment Forward Sales Profile takes them into effect (Facto).

If the **Store Stock Cover (Days)** is filled in for an item and the Replenishment Calculation Type is *Average Usage*, the system tries to find Planned Sales Demand records for a period starting today and ending by the number of days defined by the Store Stock Cover (Days). This means for example that if the Store Stock Cover (Days) is 10, the period the system looks for Planned Sales Demand records starts today and ends 10 days later.

If the system finds Planned Demand records during this period for the item and the store, it uses this information to update Average Daily Sales.

Replenishment Planned Sales Demand is used when calculating the average sales quantity when the data in the Replenishment Item Quantity table is calculated.

Example:

Item Tracking Comp. Price Merchandising 3rd P

Replenishment Calcula... Manual Estimate

Reorder Point 0

Maximum Inventory . . . 0

Purch. Order Delivery . . . To Warehouse

Vendor No. 44010

Transfer Multiple 0

Order Multiple 0

Manual Estimated Daily... 5

Store Stock Cover Req... 10

Wareh Stock Cover Re... 20

Today is 15.08.07

Item 40000 has the Store Stock Cover Days of 10.

The Manual Estimated Daily Sale is 5 per day.

Item No.	Variant Code	Location Code	Date	Planned Demand (Qty.)
40000		50003	15.08.07	20
40000		50003	16.08.07	20
40000		50003	17.08.07	20
40000		50003	18.08.07	20
40000		50003	19.08.07	20

Entry Form Help

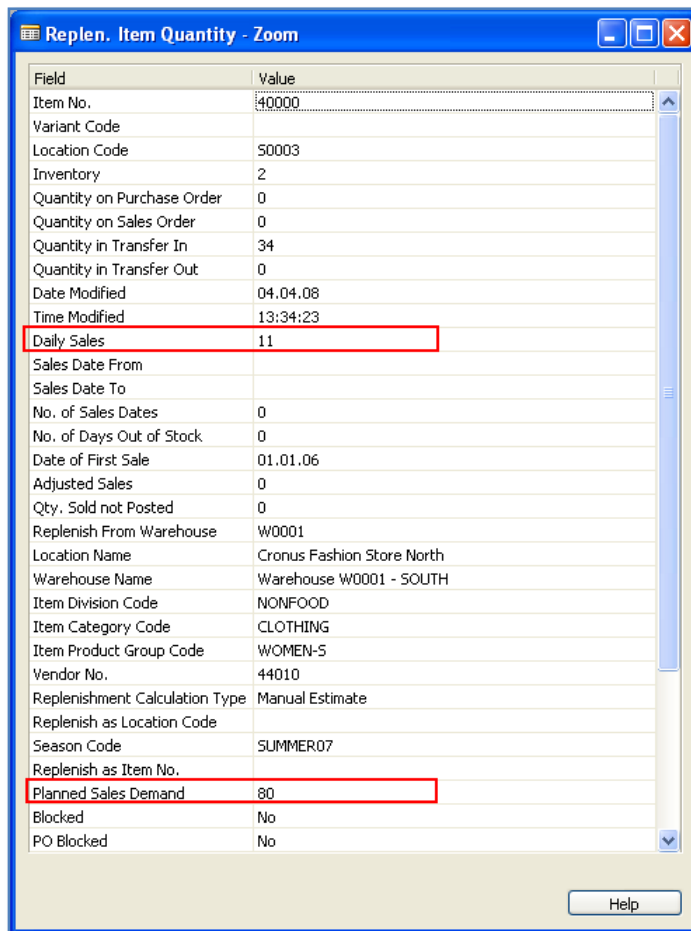
Item 40000 has 5 Replenishment Planned Sales Demand records with the quantity of 20 per day.

The result of the replenishment system calculations:

	Result without Planned Sales Demand	Result with Planned Sales Demand
16.08.07	5	20
17.08.07	5	20
18.08.07	5	20
19.08.07	5	20
20.08.07	5	5
21.08.07	5	5

22.08.07	5	5
23.08.07	5	5
24.08.07	5	5
25.08.07	5	5
Total	50	110
Average	5	11

The Planned Sales Demand has changed the Average Sale per day from 5 to 11 per day and therefore the system suggested sale will be 11 instead of 50,



This picture shows how the data is presented in the system

3.6.6 Forward Sales Profile (Store / Warehouse)

The current calculation of Average Daily Sales uses the Sales Period defined for the item. The Forward Sales Profile can be used to forecast what the future demand may be when calculating how much stock is required. The forecast is simply based on previous sales.

This feature attempts to forecast what the future sales of an item for a given period might be, based on a historical trend from the previous year and then uses this to suggest a forecast Average Daily Sale value based on this year's sales period.

Using today's date as a reference point, the objective of the Forward Sales Profile is to define a period of historic sales back from today's date, but for last year and a second period, forward from today's comparable date last year.

Example:

Today's date is 23.10.2006.

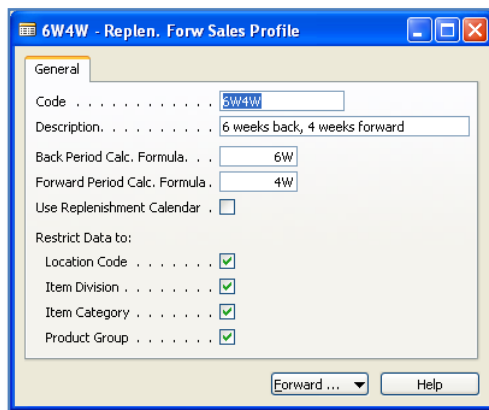
In the Forward Sales Profile form, enter the code 6W4W, the back period **Back Period Calc. Formula** is set to 6W (six weeks).

The **Forward Period Calc. Formula** is 4W (four weeks).

The first period defined is therefore from 23.10.2005 and going back to a date 6 weeks prior to this, to 11.09.2005.

The second period is from 23.10.2005 and going forward to a date 4 weeks in advance of this date or to 20.11.2005.

The replenishment process calculates the Average Daily Sales for the first (back) and second (forward) periods.



A Factor is then calculated as follows:

$$\text{Factor} = \text{Average Daily Sales Forward Period} / \text{Average Daily Sales Back Period.}$$

The Average Daily Sales value calculated, based on the standard Replenishment Profile period is multiplied by the resultant factor to return a new Average Daily Sales value.

The example below uses the '6W4W' profile (that is, 6 weeks pre and 4 weeks post the comparable date last year):

Weeks from today's date	Unit Sales Last Year	Unit Sales This Year
-6	20	30
-5	30	35
-4	30	35
-3	50	55
-2	50	36
-1	30	40
+1	60	

+2	100	
+3	50	
+4	70	

Average sales for the 6 previous weeks $20+30+30+50+50+30 / 6 = 35$

Average sales for the 4 forward weeks $60+100+50+70 / 4 = 70$

Calculated Forward Factor: $70 / 35 = 2.0$

In the replenishment calculation the Average Daily Sale value that is calculated is then multiplied by this factor to get an updated Average Daily Sale figure.

For example: Normal Average Daily Sale = 0.76

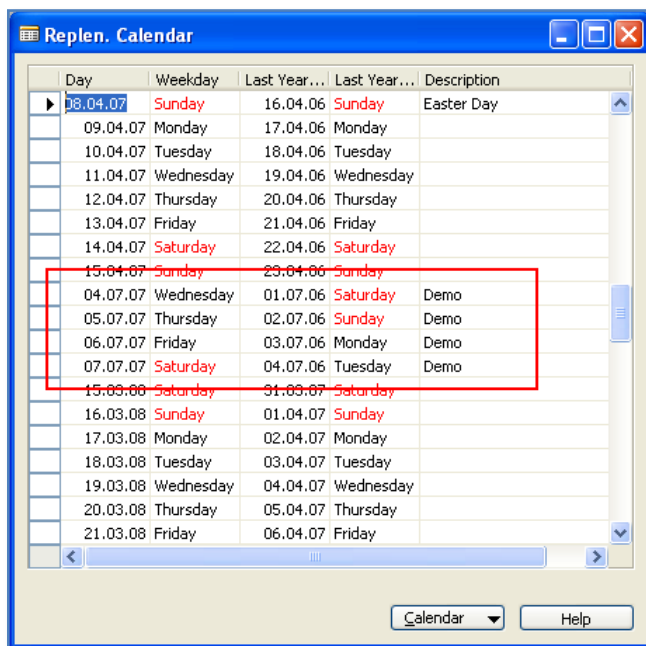
If we choose to use the Forward Factor for the item, the Average Daily Sale value used becomes:

Calculated Average Daily Sale * Calculated Forward Factor = New Average Daily Sale

$0.76 * 2.0 = 1.52$.

This is the value taken forward in the calculation.

3.6.7 Replenishment Calendar



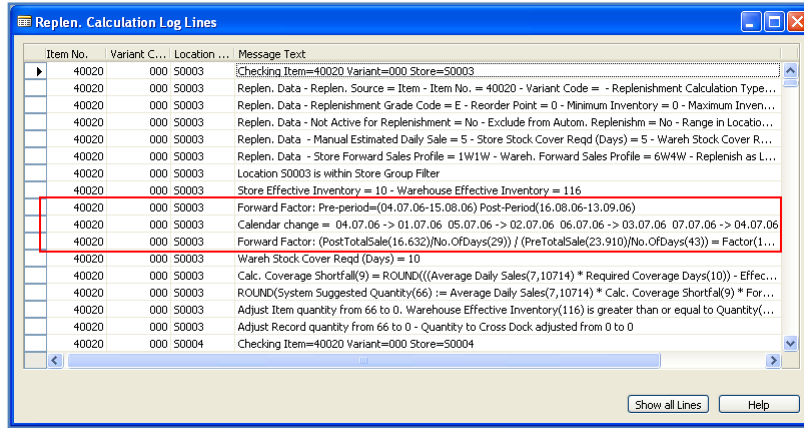
Here you can set up the projection of days between years. When the field **Use Replenishment Calendar** in the active Forward Sales Profile is check marked, the system applies the Back Period Calc. Formula from today's date and if the date is found in the Day column of the Replenishment Calendar, the date from Last Year's Day will be used to calculate the sold quantity that goes into the average daily sales.

Example:

The system needs to calculate the sales trend of item number 40020, which has been set to use the 6W4W Replen. Forw Sales Profile. The 6W4W Forward Sales Profile uses the Replenishment Calendar.

Today's date is 15.08.2007.

The system applies the Back Period Calc. Formula, which is 6W, to 04.07.2007 to find the dates it needs to inspect to find the sales of last year. This gives as the result the dates from 04.07.2007 to 15.08.2007. The first 4 days from 04.07.2007 to 30.03.2007 are represented in the Replenishment Calendar so they will be subedited with the dates in the Replenishment Calendar but for the rest of the dates will be subtract exactly one year from those dates and calculate the sale those days.



Above is a screenshot from the Replenishment Calculation Log form.

Line 1 – shows the forward sales period used

Forward Factor: Pre-period = (04.07.06-15.08.06) Post-Period (16.08.06-13.09.06)

Line 2 – shows where the dates were changed by the Replenishment Calendar

Calendar change = 04.07.06 -> 01.07.06
 05.07.06 -> 02.07.06
 06.07.06 -> 03.07.06
 07.07.06 -> 04.07.06

Line 3 – shows how the result of the sales history and forward sales factor

Forward Factor:

$$\frac{\text{PostTotalSale}(16.632)/\text{No.OfDays}(29)}{\text{PreTotalSale}(23.910)/\text{No.OfDays}(43)} = \text{Factor}(1,03141954744083416)$$

$$\frac{\text{PostDailySale}(573,517241379310345)}{\text{PreDailySale}(556,046511627906977)} = \text{Factor}(1,03141954744083416)$$

As you can see, the sales for the period prior to the date 15.08.06 is 23.910 and the sale after the date 15.08.06 is 16.632 which gives the forward sales factor of 1,0314

3.6.8 Calculation Process for Average Daily Sale

3.6.8.1 Effective Inventory

The system calculates the inventory that is going to be used in the rest of the calculations.

Effective Inventory =

Inventory +
Quantity on Purchase Order -
Quantity on Sales Order +
Quantity in Transfer In -
Quantity in Transfer Out

3.6.8.2 Average Daily Sale

The calculation method needs the Average Daily Sale and is the data taken from the Replenishment Item Quantity record.

This calculation of the Average Daily Sale process is executed in the calculation of the Replenishment Item Quantity record.

The system finds the Sales Profile for the Item – Variant – Location.

The calculation process below is applied to EVERY Sales Profile Line:

- Calculates the sum of the Quantity (CALCSUMS(Quantity)) from the Item Ledger Entries according to the Date Period
- Calculates the sum of the Correction Quantity (CALCSUMS("Corrected Quantity")) from the Sales History Adjustments according to the Date Period
- Corrects the Quantity with Correction Quantity.
(Quantity = Quantity - Corrected Quantity)

Hint:

The Quantity field is a negative number.

Hint:

To lower the sale then Corrected Quantity value needs to be negative.

The field **Adjusted Sales** in Replenishment Item Quantity record:

Adjusted Sales = Corrected Quantity

- If the field **Stock Out Functionality** is set, the system calculates the number of Out of Stock Days for the Date Period
- The system calculates the Average Daily Sales as follows:
Average Daily Sale = -Quantity / (No of Days – No of Out of Stock Days)

Field of Replenishment Item Quantity record:

No. of Days Out of Stock = No of Out of Stock Days

No. of Sales Dates = No of Days

- Calculate the Average Daily Sale according to the Sales Profile Line Weight

Average Daily Sale = Average Daily Sales * Weight / Total Weight

- or -

Average Daily Sale = Average Daily Sales * 1 / No of Sales Profile Lines

The system has now found the Average Daily Sale for all the Sales Profile Lines.

If there are Planned Sales Demand records for the cover period:
The system sums the quantity of the Planned Sales Demand records

Average Daily Sale =
Average Daily Sale * (No of Days – No of Planned Sales Demand Days) + Total
Planned Sales Demand Quantity

Field of Replenishment Item Quantity record:

Planned Sales Demand = Total Planned Sales Demand Quantity

Field of Replenishment Item Quantity record:

"Sales Date From" = the earliest date of the sales history period

"Sales Date To" = the last date of the sales history period

For further information see chapters:

[Replenishment Sales Profile](#)
[Replenishment Sales History Adjustment](#)
[Out of Stock Days](#)
[Planned Sales Demand](#)

After the above process is completed, you have the Average Daily Sale Quantity.

3.6.8.3 Stock Cover Days

The system uses the **Store Stock Cover Reqd. (Days)** field unless the Replenishment Journal is to replenish a warehouse, in which case it uses the **Warehouse Stock Cover Reqd.(Days)** field. If the **Warehouse Stock Cover Reqd.(Days)** field is empty, the **Store Stock Cover Reqd.(Days)** field is used.

Stock Cover Days = Store Stock Cover Reqd.(Days)

-or-

Stock Cover Days = Warehouse Stock Cover Reqd.(Days)

3.6.8.4 Coverage Shortfall

The system calculates the shortfall of stock to ensure that there is enough stock for the number of sales days that need to be covered.

"Calc. Coverage Shortfall" :=

ROUND(((“Average Daily Sale” * “Stock Cover Days”) –
“Effective Inventory”) / “Average Daily Sale”,1,>);

3.6.8.5 Forward Sales Profile

The system uses the Store Forward Sales Profile field unless the Replenishment Journal is to replenish a warehouse in which case it uses the **Warehouse Forward Sales Profile** field.

The Forward Sales Ratio is not calculated unless the corresponding field is filled out.

The system calculates the pre and post date periods specified in the Forward Sales Profile according to the system date (WORKDATE).

If the field **Use Replenishment Calendar** in the Forward Sales Profile is set, the system will substitute the dates if they are found in the Replenishment Calendar with the days not found in the calendar subtracted by one year (-1Y).

The system sums up the quantity (CALCSUMS("Valued Quantity")) for the periods with filters specified in the *Forward Sales Profile* record (Division, Item Category, Product Group and/or Location).

The Forward Sales Forecast Factor is found in the following way:

$$\text{"Forward Sales Forecast Factor"} := \frac{\text{Total Post Period Sale}}{\text{Total Pre Period Sale}}$$

For further information see the chapters [Forward Sales Profile](#) (Store / Warehouse) and [Replenishment Calendar](#).

3.6.8.6 Cross Docking

If the Journal is to replenish the warehouse with cross docking to the stores it is necessary to calculate how much should be cross docked to the stores.

The regular Journal process calculates the Calc. Coverage Shortfall according to the **Warehouse Stock Cover Req.(Days)** field as the Journal replenishes the warehouse.

This additional process calculates the Calc. Coverage Shortfall for the store using the field **Store Stock Cover Req.(Days)**.

$$\text{Quantity to Cross Dock} = \text{ROUND}(\text{Average Daily Sales} * \text{Calc. Coverage Shortfall}, 1, '>')$$

Example:

The warehouse has 10 days as Stock Coverage but the store has 5. The system calculates how much the store needs for 10 days.

Average Daily Sale = 10

Store – Calc. Coverage Shortfall = 3

Warehouse – Calc. Coverage Shortfall = 8

Forward Sale Forecast Factor = 1,1

Quantity to Cross Dock = $10 * 3 = 30$

System Suggested Quantity = $10 * 8 * 1,1 = 88$

The Quantity in the Purchase Order for the warehouse is 88 but when the Purchase Order is received into the warehouse, the staff cross docks (pick) the 30 to be delivered by a Transfer Order to the store.

3.6.8.7 Suggested Quantity

Now the system can suggest the quantity the warehouse or the store needs according to the following formula:

System Suggested Quantity =

$$\text{ROUND}(\text{Average Daily Sale} * \text{Calc. Coverage Shortfall} * \text{Forward Sales Forecast Factor}, 1, '>')$$

If the *System Suggested Quantity* is less than zero, the System Suggested Quantity is set to zero.

Condition:

System Suggested Quantity < 0

Result:

System Suggested Quantity = 0

If the Effective Inventory is greater or equal to the System Suggested Quantity, the System Suggested Quantity is set to Zero.

Condition:

Effective Inventory > System Suggested Quantity

Result:

System Suggested Quantity = 0

3.6.8.8 Reorder Point

If the field **Reorder Point** is greater than zero and **System Suggested Quantity** is less than the Reorder Point, the System Suggested Quantity is set to Reorder Point and Decision is set to *Brought up to Reorder Point*.

Condition:

System Suggested Quantity < Reorder Point

Result:

System Suggested Quantity = Reorder Point

3.6.8.9 Maximum Inventory

If the field **Maximum Inventory** is greater than zero and sum of **System Suggested Quantity** and **Effective Inventory** does not equal Maximum Inventory, the System Suggested Quantity equals Effective Inventory subtracted from the Maximum Inventory. The field **Decision** is set to *Brought to Maximum Inventory*.

Condition:

System Suggested Quantity + Effective Inventory <> (not equal to) Maximum Inventory

Result:

System Suggested Quantity = Maximum Inventory – Effective Inventory.

3.6.8.10 Cross Dock

If the Journal is to replenish the warehouse with cross docking to the stores and the Quantity to Cross Dock is higher than System Suggested Quantity, the **Quantity to Cross Dock** is set to *System Suggested Quantity*.

Condition:

Purchase Order for warehouse with cross docking

Quantity to Cross Dock > System Suggested Quantity

Result:

Quantity to Cross Dock = System Suggested Quantity

3.7 Calculation Type – Manual Estimate

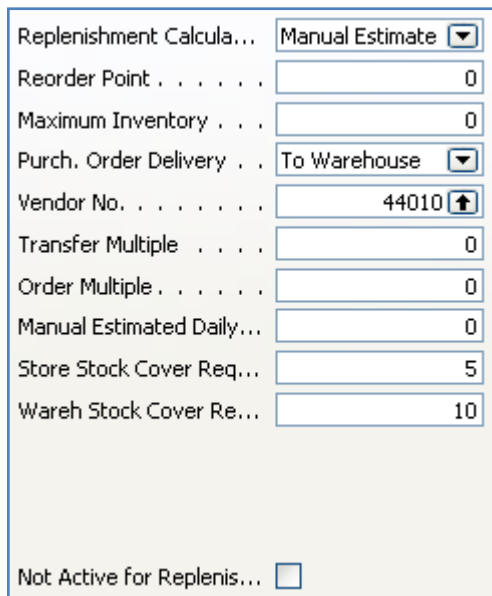
The Manual Estimate method is similar to the Average Usage method except the average daily sales is not calculated but specified. The specified average daily sales is used to predict the inventory need of the warehouse / store.

3.7.1 Fields

3.7.1.1 Common fields for all Calculation Types

The Replenishment Data is stored in the Item, Item Store or Data Profile record. The screenshot below shows the Replenishment Data fields on the data source forms for records with the Calculation Method *Manual Estimate*.

See [Replenishment Data Hierarchy](#) for further information about Replenishment Data.



The screenshot shows a form with the following fields and values:

Replenishment Calcula...	Manual Estimate
Reorder Point	0
Maximum Inventory . . .	0
Purch. Order Delivery . .	To Warehouse
Vendor No.	44010
Transfer Multiple	0
Order Multiple	0
Manual Estimated Daily...	0
Store Stock Cover Req...	5
Wareh Stock Cover Re...	10
Not Active for Replenis...	<input type="checkbox"/>

3.7.1.2 Common fields for all Calculation Types

Following is a list of common Replenishment Data fields that are described above in [Common Replenishment Data Fields](#).

- **Maximum Inventory**
- **Vendor No.**
- **Purch. Order Delivery**
- **Reorder Point**
- **Transfer Multiple**
- **Purchase Order Multiple**
- **Not Active for Replenishment**

3.7.1.3 Manual Estimated Daily Sale

The Manual Estimate method uses the Manual Estimated Daily Sale and the Store Stock Cover Reqd (Days) parameters to calculate the quantity needed. If the quantity on hand in the store does not cover the estimated daily sale for the period, the system makes a suggestion.

3.7.1.4 Store Stock Cover Days

The **Store Stock Cover Days** field tells the system how many days of sale the inventory at the store is supposed to cover.

The field is used for the Replenishment Calculation Type Average Usage and Manual Estimate.

Example:

The system calculates that the average daily sales quantity is 5 and the Store Stock Cover Days is 10. Then the System Suggested quantity will be 50.

3.7.1.5 Warehouse Stock Cover Days

The **Warehouse Stock Cover Days** works the same way as Store Stock Cover Days but this field tells the system how many days of sale the inventory at warehouse is suppose to cover.

3.7.2 Planned Sales Demand

When the LS Retail Replenishment System calculates Item Quantities, it needs to take into account any Planned Sales Demand data, if it exists. This is only valid for items that have a Replenishment Calculation Type = *Average Usage* or *Manual Estimate*.

See a further description of the Planned Sales Demand field in the [Average Usage](#) chapter.

3.7.3 Calculation Process for Manual Estimate

3.7.3.1 Effective Inventory

The system calculates the inventory that is going to be used in the rest of the calculations in the following way:

Effective Inventory:

Inventory +
Quantity on Purchase Order -
Quantity on Sales Order +
Quantity in Transfer In -
Quantity in Transfer Out

3.7.3.2 Average Daily Sale

The calculation method needs the Average Daily Sale and this data is taken from the Replenishment Item Quantity record

The calculation of the Average Daily Sales is executed in the calculation of the Replenishment Item Quantity record.

The Average Daily Sale is to the value of the field **Manual Estimated Daily Sales**.

If there are Planned Sales Demand records for the cover period:

- The system sums the quantity of the Planned Sales Demand records in the following way:

Average Daily Sale =
Average Daily Sale * (No of Days – No of Planned Sales Demand Days) + Total
Planned Sales Demand Quantity

Field of Replenishment Item Quantity record:

"Planned Sales Demand" = Total Planned Sales Demand Quantity

The field **Adjusted Sales** in Replenishment Item Quantity record:

Adjusted Sales = Corrected Quantity

The result of the above process is the Average Daily Sale

3.7.3.3 Stock Cover Days

The system uses the **Store Stock Cover Req.(Days)** field unless the Replenishment Journal is to replenish a warehouse then it uses the **Warehouse Stock Cover Req.(Days)** field. If the **Warehouse Stock Cover Req.(Days)** field is empty, the **Store Stock Cover Req.(Days)** field is used.

Stock Cover Days = Store Stock Cover Req.(Days)

-or-

Stock Cover Days = Warehouse Stock Cover Req.(Days)

3.7.3.4 Coverage Shortfall

The system calculates the shortfall of stock to be able to have enough stock for the number of days the sale needs to cover.

"Calc. Coverage Shortfall" :=

ROUND(((“Average Daily Sale” * “Stock Cover Days”) –
“Effective Inventory”) / “Average Daily Sale”,1,>);

3.7.3.5 Cross Docking

If the Journal is to replenish the warehouse with cross docking to the stores it is necessary to calculate how much should be cross docked to the stores.

The regular Journal process calculates the Calc. Coverage Shortfall according to the **Warehouse Stock Cover Req.(Days)** field as the Journal is replenishing the warehouse.

This additional process calculates the Calc. Coverage Shortfall for the store using the field **Store Stock Cover Req.(Days)**.

$$\text{Quantity to Cross Dock} = \text{ROUND}(\text{Average Daily Sales} * \text{Calc. Coverage Shortfall}, 1, '>')$$

Example:

The warehouse has 10 days as Stock Coverage but the store has 5. Then system calculates how much the store needs for 10 days.

Average Daily Sale = 10

Store – Calc. Coverage Shortfall = 3

Warehouse – Calc. Coverage Shortfall = 8

"Quantity to Cross Dock" = $10 * 3 = 30$

"System Suggested Quantity" = $10 * 8 = 80$

The Quantity in the Purchase Order for the warehouse will be 88 but when the Purchase Order is received into the warehouse, the staff cross-docks (picks) the quantity (30) to be delivered by a Transfer Order to the store.

3.7.3.6 Suggested Quantity

Now the system can suggest the quantity the warehouse or the store needs.

The same formula is used as for the Calculation Method *Average Usage* but the value of the **Forward Sales Forecast Factor** field is always 1.

System Suggested Quantity =

$$\text{ROUND}(\text{Average Daily Sale} * \text{Calc. Coverage Shortfall} * \text{Forward Sales Forecast Factor}, 1, '>')$$

If the System Suggested Quantity is less than zero, the System Suggested Quantity is set to zero.

Condition:

System Suggested Quantity < 0

Result:

System Suggested Quantity = 0

If Effective Inventory is greater or equal than System Suggested Quantity, the System Suggested Quantity is set to Zero.

Condition:

Effective Inventory > System Suggested Quantity

Result:

System Suggested Quantity = 0

3.7.3.7 Reorder Point

If the value in the field **Reorder Point** is greater than zero and System Suggested Quantity is less than the Reorder Point, the **System Suggested Quantity** is set to *Reorder Point* and **Decision** is set to *Brought up to Reorder Point*.

Condition:

System Suggested Quantity < Reorder Point

Result:

System Suggested Quantity = Reorder Point

3.7.3.8 Maximum Inventory

If the field **Maximum Inventory** is greater than zero and the sum of **System Suggested Quantity** and **Effective Inventory** does not equal Maximum Inventory, the System Suggested Quantity equals Effective Inventory subtracted from Maximum Inventory. The field **Decision** is set to *Brought to Maximum Inventory*.

Condition:

System Suggested Quantity + Effective Inventory <> (not equal to) Maximum Inventory

Result:

System Suggested Quantity = Maximum Inventory – Effective Inventory.

3.7.3.9 Cross Dock

If the Journal is to replenish the warehouse with cross docking to then stores and Quantity to Cross Dock is higher than System Suggested Quantity, the Quantity to Cross Dock is set to System Suggested Quantity.

Condition:

Purchase Order for warehouse with cross docking

Quantity to Cross Dock > System Suggested Quantity

Result:

Quantity to Cross Dock = System Suggested Quantity

3.8 Calculation Type – Stock Levels

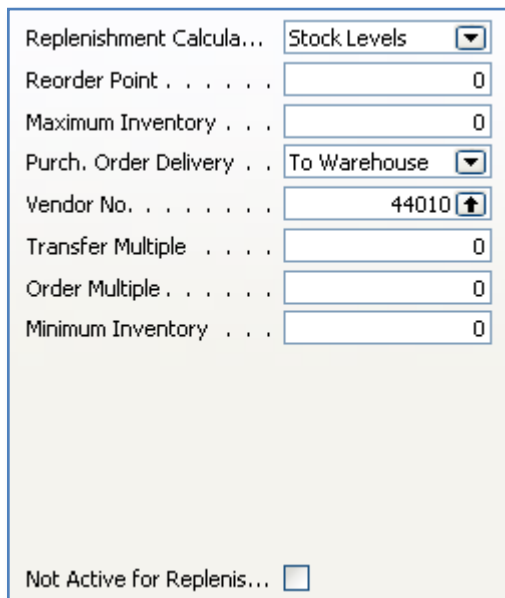
It is possible to use the Replenishment module to suggest what to replenish based on Stock Levels.

3.8.1 Fields

3.8.1.1 Common fields for all Calculation Types

The Replenishment Data is stored in the Item, Item Store or Data Profile Record. The screenshot below shows the **Replenishment Data** fields on the data source forms for a record with the Calculation Method *Stock Level*.

See the [Replenishment Data Hierarchy](#) for a review of the storage and hierarchy of Replenishment Data.



The screenshot shows a form with the following fields:

Replenishment Calcula...	Stock Levels	▼
Reorder Point		0
Maximum Inventory . . .		0
Purch. Order Delivery . .	To Warehouse	▼
Vendor No.	44010	↑
Transfer Multiple		0
Order Multiple		0
Minimum Inventory . . .		0

Not Active for Replenis...

3.8.1.2 Common fields for all Calculation Types

Below is a list of common Replenishment Data fields that are described above, in [Common Replenishment Data Fields](#).

- **Maximum Inventory**
- **Vendor No.**
- **Purch. Order Delivery**
- **Reorder Point**
- **Transfer Multiple**
- **Purchase Order Multiple**
- **Not Active for Replenishment**

3.8.1.3 Minimum Inventory

If the stock levels go below the Minimum Inventory, the system will suggest a quantity that will raise it to the Maximum Inventory if the Maximum Inventory is filled in otherwise the inventory is raised to Minimum Inventory.

Example:

If you enter 10 in the minimum inventory and 20 in the maximum inventory, the replenishment system will not suggest anything until the inventory drops below 10. If the inventory drops to 8, the system will suggest a quantity of 12 (Maximum Inventory – current inventory) to be ordered. If the value in the Maximum Inventory field is zero, the system will suggest a quantity of 2 to be ordered.

3.8.2 Calculation Process for Stock Levels - STORES

This method applies where the Journal calculates quantity for transfer orders or purchase orders where the stock level need is arrived from the stores and not the warehouse itself. If a Replenishment Data record exists of the type stock level for the warehouse, and the journal is creating a purchase order for the warehouse, the system would use the process described in [Calculation Process for Stock Levels – WAREHOUSE](#).

3.8.2.1 Effective Inventory

The system calculates the inventory that is going to be used in the rest of the calculations.

Effective Inventory :=

Inventory +
Quantity on Purchase Order -
Quantity on Sales Order +
Quantity in Transfer In -
Quantity in Transfer Out

3.8.2.2 Minimum Inventory

If the Effective Inventory is less than or equal to the Minimum Inventory, the system suggests ordering enough stock to get the inventory to the Maximum Inventory field value.

Condition:

Effective Inventory <= Minimum Inventory

Result:

Condition:

Maximum Inventory > Minimum Inventory

Result:

System Suggested Quantity = Maximum Inventory – Effective Inventory

Condition:

Maximum Inventory <= Minimum Inventory

Result:

System Suggested Quantity = Minimum Inventory – Effective Inventory

3.8.2.3 Cross Docking

If the Journal is to replenish the warehouse with cross docking to the stores, it is necessary to calculate how much should be cross docked to the stores.

The Cross Docking Quantity is calculated if either the field **Maximum Inventory** or the field **Minimum Inventory** is greater than zero.

Condition:

Effective Inventory < Minimum Inventory

Result:

Condition:

Maximum Inventory > Minimum Inventory

Result:

Quantity to Cross Dock = Maximum Inventory – Effective Inventory

Condition:

Maximum Inventory <= Minimum Inventory

Result:

Quantity to Cross Dock = Minimum Inventory – Effective Inventory

Hint:

Same as if Quantity to Cross Dock = System Suggested Quantity

3.8.2.4 Reorder Point

If the field **Reorder Point** is greater than zero and **System Suggested Quantity** is less than the Reorder Point, the System Suggested Quantity is set to *Reorder Point* and **Decision** is set to *Brought up to Reorder Point*.

Condition:

System Suggested Quantity < Reorder Point

Result:

System Suggested Quantity = Reorder Point

3.8.2.5 Maximum Inventory

If the field **Maximum Inventory** is greater than zero and sum of **System Suggested Quantity** and **Effective Inventory** does not equal Maximum Inventory, the System Suggested Quantity equals Effective Inventory subtracted from the Maximum Inventory. The field **Decision** is set to *Brought to Maximum Inventory*.

Condition:

System Suggested Quantity + Effective Inventory <> (not equal to) Maximum Inventory

Result:

System Suggested Quantity = Maximum Inventory – Effective Inventory.

3.8.2.6 Cross Dock

If the Journal is to replenish the warehouse with cross docking to the stores and Quantity to Cross Dock is higher than System Suggested Quantity, the Quantity to Cross Dock is set to *System Suggested Quantity*.

Condition:

Purchase Order for warehouse with cross docking
Quantity to Cross Dock > System Suggested Quantity

Result:

Quantity to Cross Dock = System Suggested Quantity

3.8.3 Calculation Process for Stock Levels – WAREHOUSE

This process is only used where a Replenishment Journal is creating a Purchase Order for the warehouse and a Replenishment Data record exists for the warehouse and the Replenishment Calculation Type is *Stock Levels*.

3.8.3.1 Effective Inventory

The system calculates the inventory of the warehouse that is going to be used in the rest of the calculations.

Effective Inventory :=

Inventory +
Quantity on Purchase Order -
Quantity on Sales Order +
Quantity in Transfer In -
Quantity in Transfer Out

3.8.3.2 Minimum Inventory

If the Effective Inventory is less or equal to the Minimum Inventory, the system will suggest ordering enough stock to get the inventory up to the Maximum Inventory field value.

Note that zero is NOT a valid number in the Minimum Inventory field.
--

Condition:

Effective Inventory <= Minimum Inventory

Result:

Condition:

Maximum Inventory > Minimum Inventory

Result:

System Suggested Quantity = Maximum Inventory – Effective Inventory

Condition:

Maximum Inventory <= Minimum Inventory

Result:

System Suggested Quantity = Minimum Inventory – Effective Inventory

3.8.3.3 Reorder Point

If the field **Reorder Point** is greater than zero and **System Suggested Quantity** is less than the Reorder Point, the **System Suggested Quantity** is set to *Reorder Point* and **Decision** is set to *Brought up to Reorder Point*.

Condition:

System Suggested Quantity < Reorder Point

Result:

System Suggested Quantity = Reorder Point

3.9 Calculation Type – Like for Like

It is possible to use the Replenishment module to suggest what to replenish based on what is sold at the store. If one piece is sold then one piece is ordered.

3.9.1 Fields

3.9.1.1 Common fields for all Calculation Types

The Replenishment Data is stored in the Item, Item Store or Data Profile Record. The screenshot below shows the Replenishment Data fields on the data source forms for a record with the Calculation Method *Like for Like*.

See [Replenishment Data Hierarchy](#) to review the storage and hierarchy of Replenishment Data.

The screenshot shows a software form titled "Replenishment Calcula...". At the top right, there is a dropdown menu set to "Like for Like". Below this, there are several input fields: "Vendor No." with the value "44010" and an up/down arrow; "Transfer Multiple" with the value "0"; "Order Multiple" with the value "0"; "Like4Like Replen. Method" with a dropdown arrow; and "Like4Like Process Method" with a dropdown arrow. At the bottom left, there is a checkbox labeled "Not Active for Replenis..." which is currently unchecked.

3.9.1.2 Common fields for all Calculation Types

Following is a list of common Replenishment Data fields that are described in [Common Replenishment Data Fields](#).

- **Vendor No.**
- **Transfer Multiple**
- **Purchase Order Multiple**
- **Not Active for Replenishment**

3.9.2 Fields

3.9.2.1 Like4Like Replen. Method

The field shows the value that is going to be filled in the **Replen. Method** field in the Replen. Planned Stock Demand table (10012372) when the Statement is posted and the Replen. Calculation Method of the Item is *Like for Like*.

The values are as follows:

- **[empty]** – Not Selected
- **Transfer** - Transfer Order will be created
- **PO to Store** – Purchase Order will be created and delivered to the store
- **PO w/XDock** – Purchase Order will be created and cross docked at time of receiving at warehouse.

3.9.2.2 Like4Like Process Method

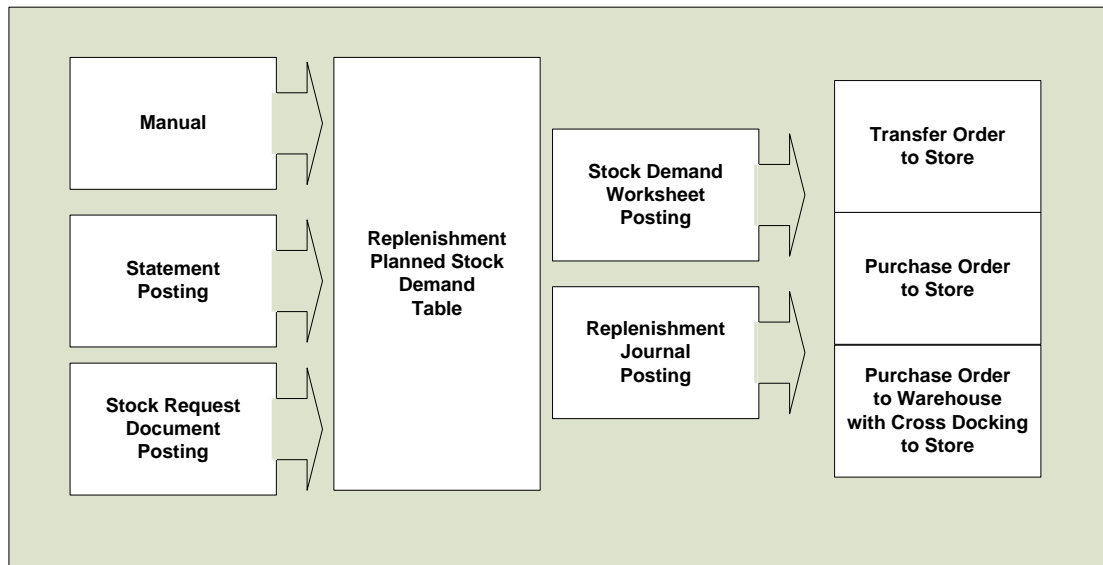
The field shows the value that is going to be filled in the field **Process Method** field in the Replen. Planned Stock Demand table (10012372) when the Statement is posted and the Replen. Calculation Method of the Item is *Like for Like*.

The values are as follows:

- **[empty]** – Not Selected
- **Replen. Job** – The record will be processed in a Replen. Journal Batch job
- **Manual** –The record is to be processed in the Planned Stock Demand Form where the user can create a Purchase Order or Transfer Order Documents

3.9.3 Replenishment Planned Stock Demand Table

The Replenishment Planned Stock Demand table contains stock demand records for the stores. It is possible to apply **Active From Date** to the record and it will then not be valid for replenishment jobs until the date has been reached.



Replenishment Planned Stock Demand records can be created:

- Manually in the Replen. Stock Demand Worksheet or in the Planned Stock Demand under the Item Card.
- As products of Statement posting where the item has the Replenishment Calculation Method *Like for Like*
- As products of Stock Request Documents

There are two ways of changing Replenishment Planned Stock Demand records to Purchase or Transfer Orders:

- By posting the record in the Replenishment Stock Demand Worksheet form.
- As input into the Replenishment Journal Batch job.

3.9.4 Statement Posting

When a Statement is posted the system creates a Replenishment Planned Stock Demand record for all items with the Replenishment Calculation Method *Like for Like* in the Statement Lines. The record gets the default value from the Replenishment Data for the fields **Like4Like Replen. Method** and **Like4Like Process Method**.

Example:

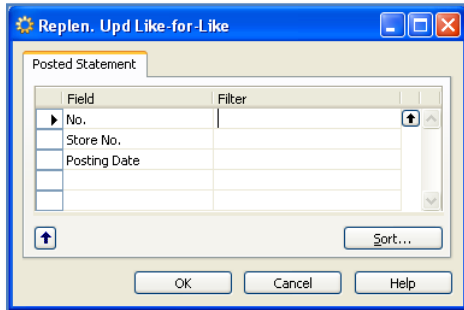
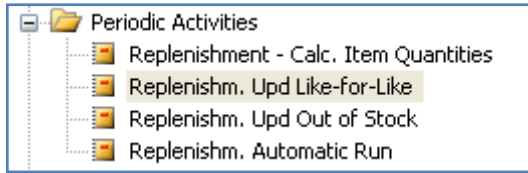
If the Replenishment Data fields contain:

Like4Like Replen. Method = PO to Store

Like4Like Process Method. = Replen. Job.

This means that records with these values are created in the Replenishment Planned Stock Demand table. The next step is when the buyer runs a Replenishment Journal of the type *Purchase Order to Store*. The records are included in the process and the item is ordered from the vendor and delivered to the store directly.

There is a report process that looks through all posted Statements and processes Statements that have not been processed.



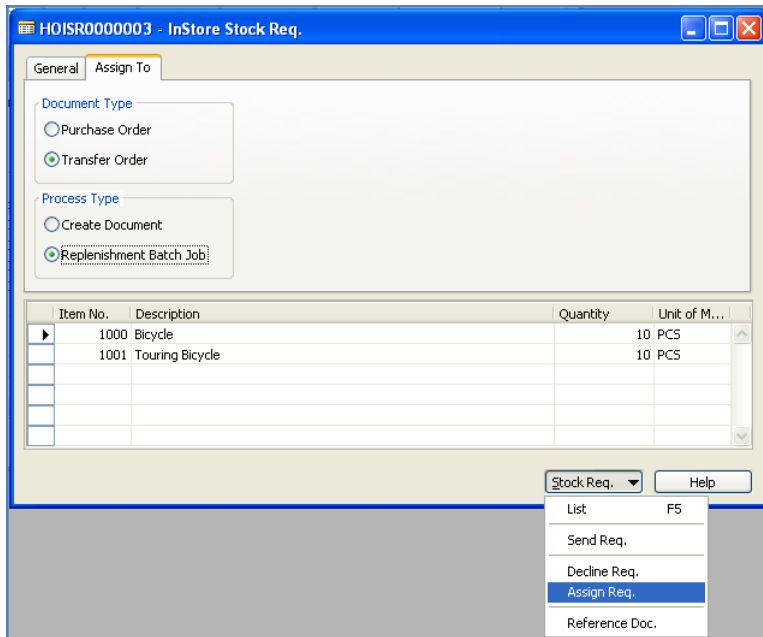
The report can be filtered by **Store No.** or/and **Posting Date** if needed.

Report 10012205 Replen. Upd. Like-for-Like goes through all Posted Statements and checks if the Statement has been processed (is a record in table 10012309), and if not, it creates Replenishment Planned Stock Demand records for the items with the Replenishment Calculation Method *Like for Like*.

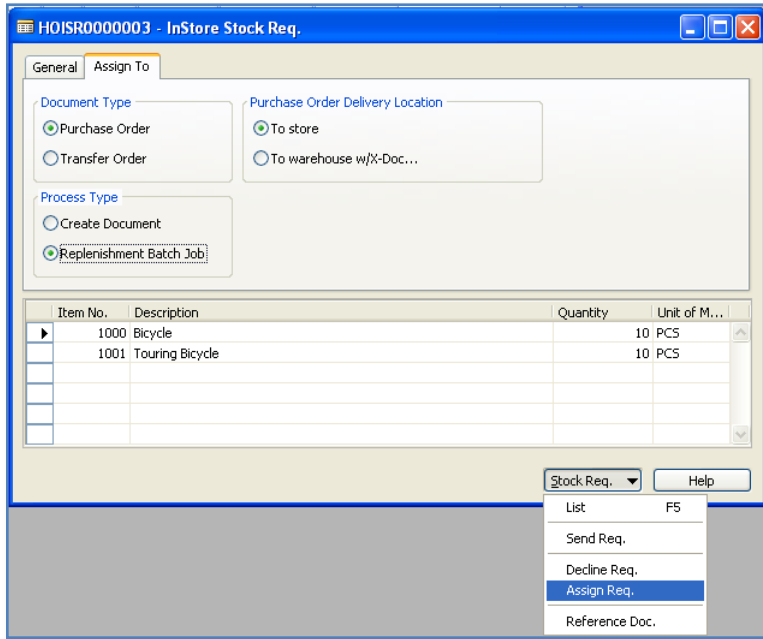
3.9.5 Stock Request Document Posting

The posting of a Stock Request Documents can create Replenishment Planned Stock Demand records.

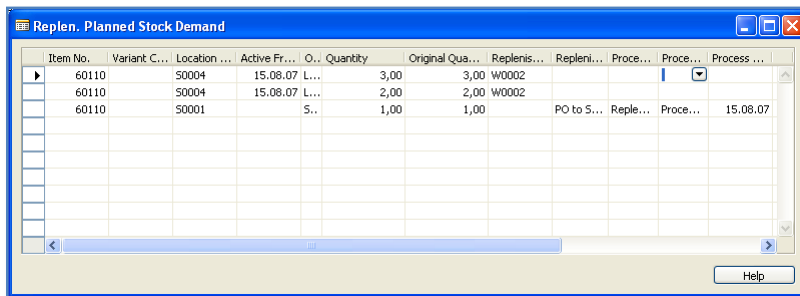
By selecting the Replenishment Batch Job option, the buyer creates Replenishment Planned Stock Demand records that become an input in the next Replenishment Journal run of the document type selected.



To include the lines in the next Replenishment Journal of the type *Transfer Order* for the store select the Transfer Order and the Replenishment Batch Job radio buttons.



When selecting the Purchase Order button the buyer can select between having the Purchase Order delivered directly to the store or to have it delivered to the warehouse and then cross docked by a Transfer Order to the store.



The above screenshot shows a processed Replenishment Planned Stock Demand record.

3.9.6 Replenishment Stock Demand Worksheet

The Replenishment Stock Demand Worksheet form gives the buyer the possibility to add, modify or create Replenishment Planned Stock Demand records.

Item No.	Item Description	Variant Code	Variant Description	Location Code	Active From Date	Quantity	Process Method
60110	ACE Dishwasher			S0004	15.08.07	3,00	
60110	ACE Dishwasher			S0004	15.08.07	2,00	
60120	ACE Refrigerator			S0004	15.08.07	5,00	
60120	ACE Refrigerator			S0004	15.08.07	4,00	

The above form shows all unprocessed Replenishment Planned Stock Demand records.

The buyer uses filters to select the records he is going to work with and then selects the function *Create Transfer* or *Create Purchase Orders* under the Posting button.

All records that have a blank **Vendor No.** field when the buyer is creating a Purchase Order will not be processed and left behind. The same behavior applies to the **Replenish. From Warehouse** field and the creation of Transfer Orders.

3.9.7 Replenishment Journal – Add Item to Journal

The *Add Item to Journal* function in the Replenishment Journal form inserts a line in the Replenishment Journal lines according to the Replenishment Journal Template. The job will first go through all valid Replenishment Planned Stock Demand records and add them to the journal if there is enough stock. The process will then go through the rest of the Replenishment Calculation Method, for example Average Usage, Manual Estimate and Stock Levels.

3.10 Replenishment Journal Detail Line Adjustments

At this time the Replenishment Journal Process has created all the Replenishment Journal Lines and the Replenishment Journal Detail with the suggested quantity to replenish. Now the system will go through each Replenishment Journal Lines and compare the system suggested quantity to the warehouse Effective Inventory and makes adjustments.

For each Replenishment Journal Line it compares the Quantity to the Effective Inventory of the warehouse.

The conditions and adjustments performed:

A Purchase Replenishment Journal to replenish the warehouse:

Condition:

Warehouse Effective Inventory > Replenishment Journal Line.Quantity

Result:

Replenishment Journal Line Quantity and the Replenishment Journal Detail Quantity are adjusted to 0

Condition:

Warehouse Effective Inventory < Replenishment Journal Line Quantity and

Warehouse Effective Inventory > 0

Result:

Replenishment Journal Line Quantity is adjusted to warehouse Effective Inventory subtracted from the Quantity and the Replenishment Journal Detail Quantity are adjusted proportionally according to the prior quantity

Example:

Quantity(30) – warehouse Effective Inventory(10) = Quantity(20)

Condition:

Warehouse Effective Inventory < 0

Result:

Replenishment Journal Line Quantity is adjusted to warehouse Effective Inventory subtracted from the Quantity and the Replenishment Journal Detail Quantity are adjusted proportionally according to the prior quantity

Example:

Quantity(30) – warehouse Effective Inventory(-10) = Quantity(40)

A Transfer Replenishment Journal

Condition:

Warehouse Effective Inventory <= 0

Result:

Replenishment Journal Line Quantity and the Replenishment Journal Detail Quantity are adjusted to 0

Condition:

Warehouse Effective Inventory < Replenishment Journal Line Quantity

Result:

Replenishment Journal Line Quantity is adjusted to warehouse Effective Inventory and the Replenishment Journal Detail Quantity is adjusted proportionally according to the prior quantity

3.11 Replenishment Process

The Replenishment Process for Reoccurring Items is carried out through Replenishment Journals. There are two types of Replenishment Journals:

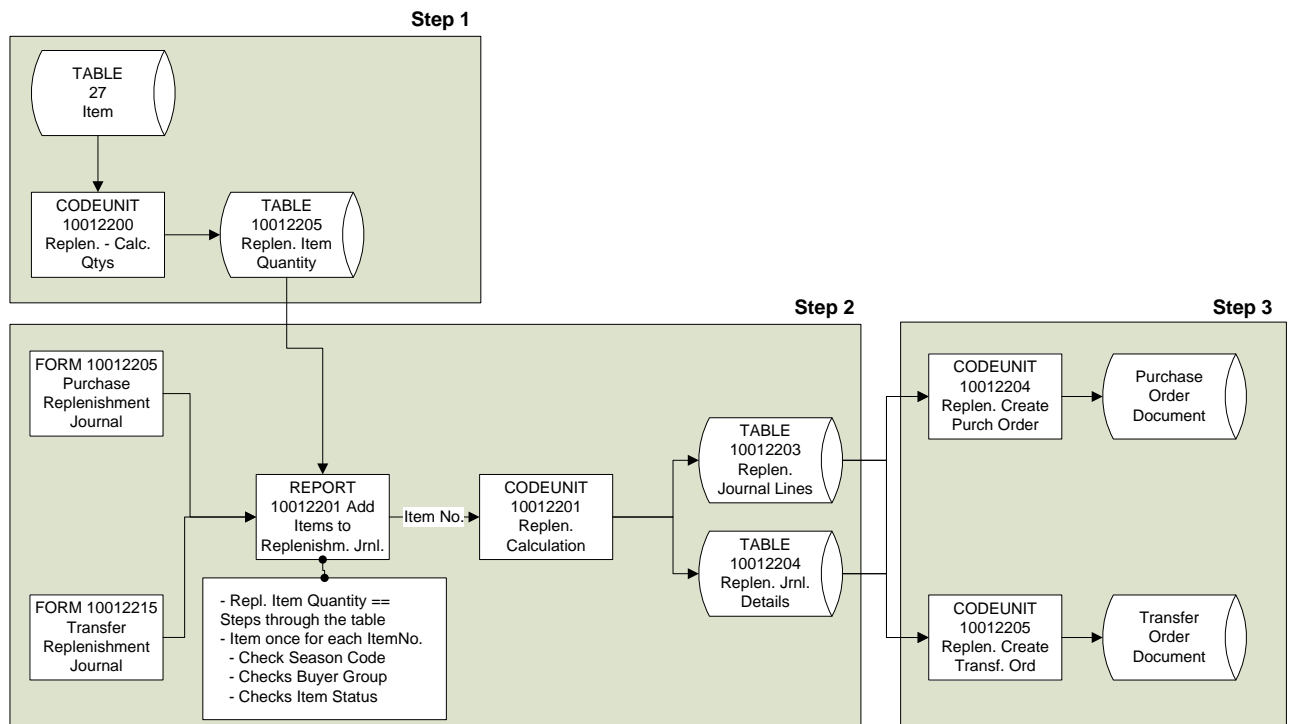
Purchase Replenishment Journal: The journal creates Purchase Order Documents both to replenish stores and warehouses.

Transfer Replenishment Journal: The journal creates Transfer Order Document to replenish the stores by transferring goods from the warehouses.

The Replenishment Process for Reoccurring Items includes three steps:

1. Creating records in the Replenishment Item Quantity table which is then the input data for the next step.
2. Adding and Calculating replenishment quantity to the lines of the Replenishment Journal Lines.
3. Posting the Replenishment Journal to create Purchase or Transfer Orders.

Replenishment Process for Reoccurring Items



The figure shows all the three steps

3.12 Calculation of the Replenishment Item Quantity

This chapter describes how the Replenishment Item Quantity table is created but to get better description of the fields in the table see [Replenishment Item Quantity](#).

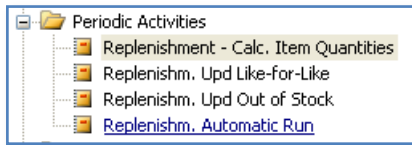
The methods of calculating the table are:

- **Item Card**

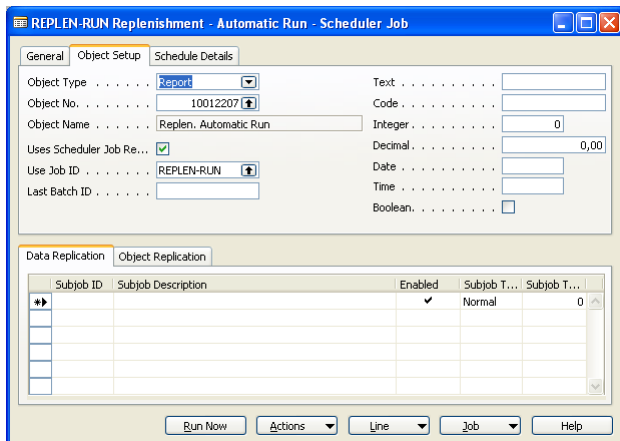
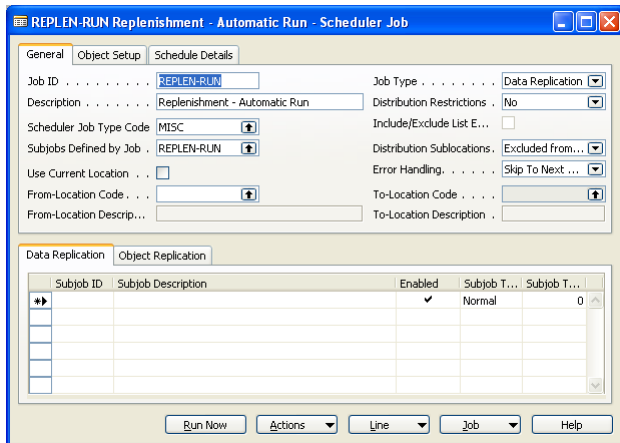
It is possible to have the system calculate the Replenishment Item Quantity records for a specific Item by calling the function *Recalculate Quantity for Item* under the Item Quantity button in the Replen. Item Quantity card under the Retail Item Card.

Item No.	Variant Code	Location Code	Replenish From Ws...	Inventory	Qty. Sold not Posted	Quantity on Purchase Order	Quantity on Sales Order
40000		S0003	W0001		2		0
40000		S0004	W0002		1		0
40000		W0001	W0001		20		200
40000		W0002	W0002		18		0

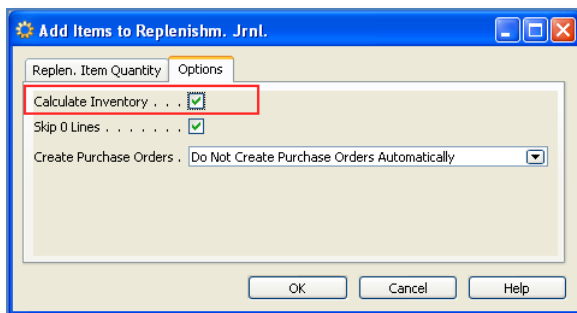
- Run the **Replenishment – Calc. Item Quantities** report in the Periodic Activities folder.



- It is possible to **Schedule the execution of the Replenishment – Calc. Item Quantities** report.



- Run the **Replenishment Item Quantity** calculation as part of adding lines to the Replenishment Journal Lines. The system will run the Replenishment – Calc. Item Quantities report as when running it directly in the Periodic Activities folder



3.13 Replenishment Journals

This chapter describes how stores and warehouses are replenished using Replenishment Journals. You can go back to chapter [Replenishment Templates](#) and [Replenishment Batch](#) to get a better description of the fields in these tables.

3.13.1 Add Items to Journal

The buyer does most of his work within the system in the Purchase and Transfer Replenishment Journal forms. The journal can be populated by manually adding lines to the journal by executing the function *Add Items to Journal*.

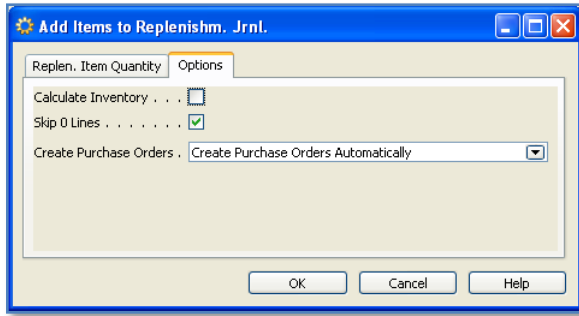
Item No.	Description	Quantity	Unit of Measure	System Suggested Q...	Warehouse Effective Inv...	Orig. Unit of Measu...	Calc Typ
					0		

The Replenishment Journal can also be populated by Scheduling the execution during off hours. It is convenient for companies to have the Replenishment Item Quantity calculation and population of the Replenishment Journals to be Scheduled overnight so that everything is ready for the Buyer when he shows up for work.

The Replenishment Batch record is used to control when the Replenishment Journal should be populated by the Scheduler Job. Irregular Replenishment Journals are set to Manual and the Buyer executes them as he needs.

Field	Filter
Item No.	
Item Division Code	
Item Category Code	
Item Product Group C...	
Vendor No.	

The process steps through the Replenishment Item Quantity table according to the filtering in the Replenishment Template / Add Items to Journal function. The report inherits the filtering from the Replenishment Template record but the buyer alters the filtering for that specific execution of the Replenishment Journal.



If *Calculate Inventory* is check marked, the system recalculates the Replenishment Item Quantity table before executing the Replenishing Process of adding items to the Replenishment Journal.

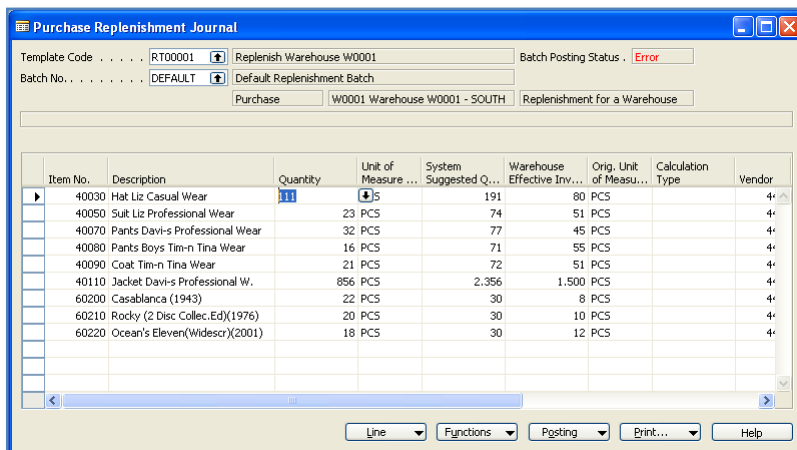
If *Skip 0 Lines* is check marked, the Replenishment Process will not insert lines if the result of the calculation is 0. It is advisable not to skip 0 lines when logging the replenishment result as it is not possible to look at the Replenishment Log unless the record exists in the journal.

3.13.2 Replenishment Journal Lines

The Replenishment Journal Lines show the items that the *Add Items to Journal* function created and each line is a total line for the item number. The Replenishment Journal Detail records are the records down to an individual store/location and variants.

If the user changes the value of the **Quantity** field the system changes the quantity of the Replenishment Journal Detail records according to the proportion of the previous quantity in the records.

If the user creates a record manually to the journal he must also create the Replenishment Journal Detail lines for each store/location and variant. The total quantity of the detail lines will update the quantity of the journal line when the user exits the detail lines.



3.13.3 Replenishment Journal Detail

Replenishment Journal Detail lines show the quantity to replenish down to an individual store/location and variants.

The *Add Items to Journal* function creates one line for each Item No., Variant Code and Location Code where it calculates System Suggested Quantity and then takes into account the stock on hand in the store or/and warehouse to decide the quantity to be ordered. The system uses the Replenishment Journal Detail lines to create the Purchase and Transfer Order Lines.

Item No.	V...	Description	Location ...	Location Name	Quantity	System Sugg...	Quantity t...	Calculation T...	Replenis...
40030		Hat Liz Casual Wear	S0003	Cronus Fashion Stor...	54	92	0	Manual Estim...	
40030		Hat Liz Casual Wear	S0004	Cronus Fashion Stor...	57	99	0	Manual Estim...	

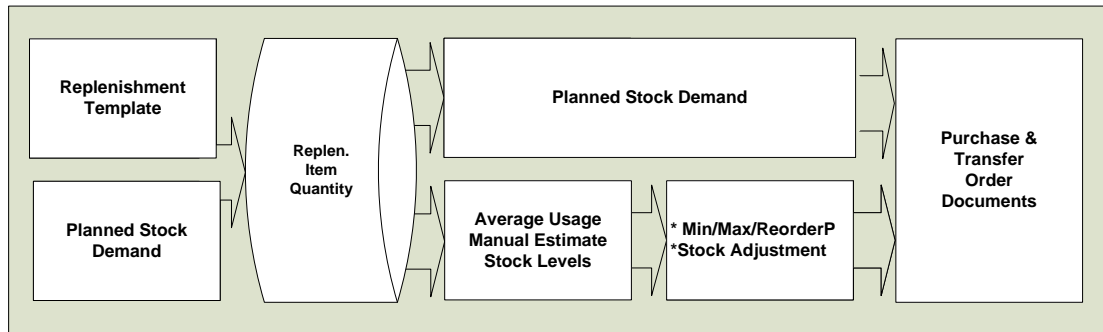
The Replenishment Journal Detail record contains information that is used to determine the quantity to be ordered.

Field	Value
Replenishment Template Code	RT00001
Batch No.	DEFAULT
Line No.	40000
Detail Line No.	10000
Item No.	40030
Variant Code	
Description	Hat Liz Casual Wear
System Suggested Quantity	92
Calculation Type	Manual Estimate
Quantity	54
Location Code	S0003
Replenishment Location Code	
Effective Inventory	8
Average Daily Sales	8
Required Coverage Days	25
Calc. Coverage Shortfall	24
Decision	Brought to Maximum Inventory
Vendor No.	44010
Vendor Name	LIZ-s Fashion Ltd
Forward Sales Forecast Factor	0
Quantity to Cross Dock	0
Replenished as Item No.	
Warehouse Effective Inventory	80
Replenished as Location Code	
Location Name	Cronus Fashion Store North

The above figure shows the Replenishment Journal Detail line for Item 40030 and store S003 - zoom view (F8). It includes for example the Replenishment Calculation Method, Decision, Effective Inventory of the store/location and the Effective Inventory of the warehouse.

3.13.3.1 Planned Stock Demand Lines

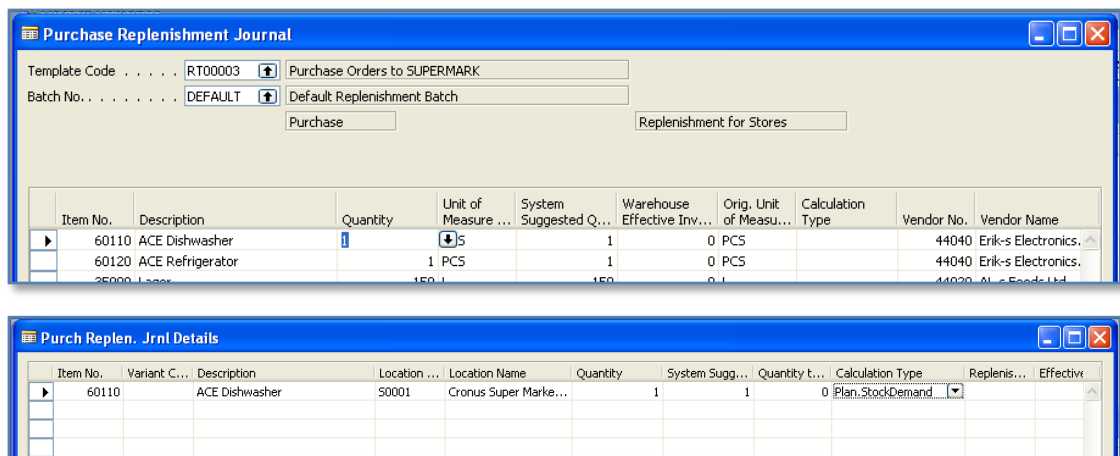
Replenishment Planned Stock Demand records with the Replenishment Method field *Replen. Job* are waiting to be replenished by the Replenishment Journal. The Replenishment Planned Stock Demand record can have an **Active From Date** which dictates when the record is valid for replenishment. The **Active From Date** makes it possible to plan future stock distribution.



The above figure shows the Replenishment Journal Process.

The Replenishment Journal Process runs first through the Planned Stock Demand Records. Therefore the Planned Stock Demand record might take all the available stock before the other Replenishment Calculation Methods have a chance to run.

Example:



In this case there is only one Planned Stock Demand record but the system will create as many lines in the Replenishment Journal Detail lines as the number Planned Stock Demand records are processed.

If the total quantity for an Item No. and Location is not a multiple of the document type, for example transfer Multiples, the last record will be split.

Example:

Planned Stock Demand Records

Quantity = 11

Quantity = 11

Quantity = 10

The Transfer Multiple = 10

Then the last record of 10 is split into 8, which goes into the Journal, and a new record with the quantity 2.

The Planned Stock Demand record contains both the origin of the record and its destination.

Planned Stock Demand - Table														
Proce...	Process Me...	Origin...	Reple...	Replenishi...	Create D...	Create Time	Vendor No.	Replen. J...	Replen. J...	Replen. J...	Replen. J...	Stock Request ...	Stock Re...	State
4:07:57	Replen. Job		0	PO to Store	15.08.07	13:59:24	44040	RT00003	DEFAULT	10000	10000	HOISR0000002	10000	
4:07:57	Replen. Job		0	PO to Store	15.08.07	13:59:24	44040	RT00003	DEFAULT	20000	10000	HOISR0000002	20000	

The Origins of the Record

The creation date and time of the record:

- Create Date
- Create Time

Filled in if the origin of the record is from the posting of a Stock Request Document:

- Stock Request Document No.
- Stock Request Line No.

Filled in if the origin of the record is from the posting of a Statement of an item with the Replenishment Calculation Method *Like for Like*:

- Statement No.

Destination of the record

Process fields:

- **Process Status** – status is either processed or not
- **Process Date**
- **Process Time**

The method in which the record is to be processed

The value can be inherited from the Replenishment Data at the time of creation or manually assigned in the Stock Demand Worksheet.

- **Process Method**
 - BLANK – No decision has been made
 - Replen. Job – The record is to be an input in the Replenishment Journal Process
 - Manual – The record is to be processed in the Stock Demand Worksheet

The Replenishment Method field determines which type of the document to create. The value can be inherited from the Replenishment Data at the creation time or manually assigned in the Stock Demand Worksheet.

- **Replenishing Method**
 - BLANK – No decision has been made
 - Transfer – Create a Transfer Order
 - PO to Store – Create a Purchase Order to be delivered directly to the store
 - PO w/XDock – Create a Purchase Order to be delivered to the warehouse and picked to Transfer Order when the goods are received at the warehouse

If the record destination is a Replenishment Journal, these fields are filled out:

- **Replen. Journal Template Code**
- **Replen. Journal Batch No.**
- **Replen. Journal Line No.**
- **Replen. Jrnl Detail Line No.**

If the record destination is a Purchase Order created in the Stock Demand Worksheet, these fields are filled out:

- **Purchase Order Document Type**
- **Purchase Order Document No.**
- **Purchase Oder Line No.**

If the record destination is a Transfer Order created in the Stock Demand Worksheet, these fields are filled out:

- **Transfer Order Document No.**
- **Transfer Order Line No.**

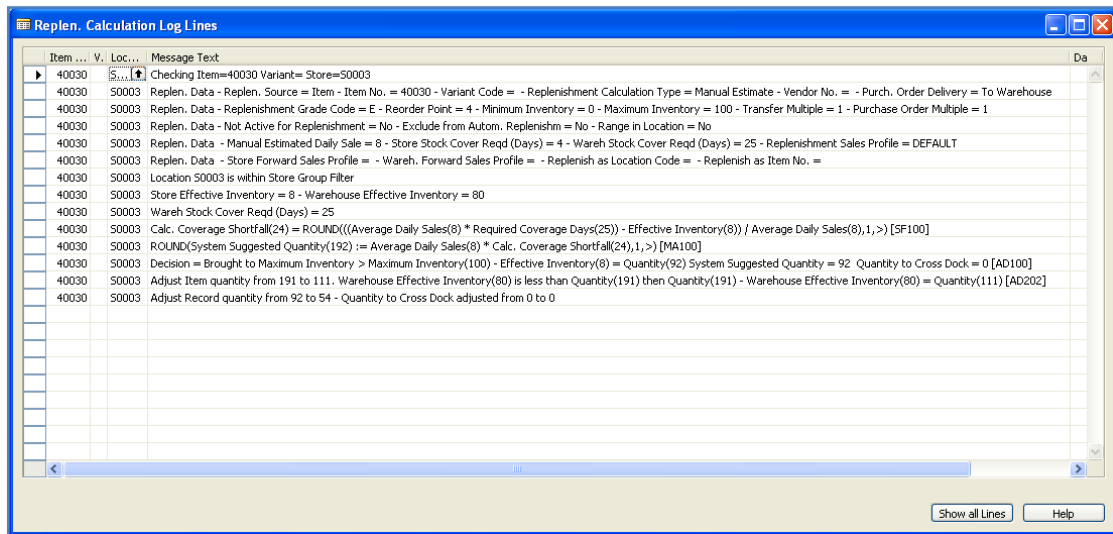
Hint:

When deleting a record in a Replenishment Journal where the Calculation Type field is **Plan. Stock Demand**, the system will un-process the Planned Stock Demand record and it is again available for replenishment.

3.13.4 Calculation Log Lines

The system supports a logging functionality showing the Replenishment Data, Inventory, Sales information and which decision and formulas were used to arrive at the quantity to order.

The logging is set up in the Replenishment Setup record. The logging functionality should only be used to occasionally to investigate data and decisions in the replenishment quantity.



The above figure show the Replenishment Log for the item 40030 and store S0003.

Example:

Checking Item=40030 Variant= Store=S0003

Identifies the Item No., Variant Code and Store

Replen. Data - **Replen. Source = Item** - Item No. = 40030 - Variant Code = -
 - Replenishment Calculation Type = Manual Estimate - Vendor No. = -

Purch. Order Delivery = To Warehouse

Replen. Data - Replenishment Grade Code = E - Reorder Point = 4 -

Minimum Inventory = 0 - Maximum Inventory = 100 - Transfer Multiple = 1 -
Purchase Order Multiple = 1

Replen. Data - Not Active for Replenishment = No - Exclude from Autom.
Replenishm = No - Range in Location = No

Replen. Data - Manual Estimated Daily Sale = 8 - Store Stock Cover Reqd
(Days) = 4 - Wareh Stock Cover Reqd (Days) = 25 - Replenishment Sales
Profile = DEFAULT

Replen. Data - Store Forward Sales Profile = - Wareh. Forward Sales
Profile = - Replenish as Location Code = - Replenish as Item No. =

The lines starting with the text *Replen. Data* are the result of the Replenishment Data search.

The text Replen. Source = informs about the Replenishment Data source (Item Store, Item or Data Profile record). In this example is from the item record.

If the Replen. Source = Data Profile, the next line will be to inform which Data Profile record is being used.

Data Profile - Code = CLOTHING - Active From Date = 01.01.07

Calc. Coverage Shortfall(24) = ROUND(((Average Daily Sales(8) * Required Coverage Days(25)) - Effective Inventory(8)) / Average Daily Sales(8),1,>) [SF100]

The calculation formula and values to calculate the Coverage Shortfall

ROUND(System Suggested Quantity(192) := Average Daily Sales(8) * Calc. Coverage Shortfall(24),1,>) [MA100]

The calculation formula and values to calculate the System Suggested Quantity.

Decision = Brought to Maximum Inventory >

Maximum Inventory(100) - Effective Inventory(8) = Quantity(92)

System Suggested Quantity = 92 Quantity to Cross Dock = 0 [AD100]

The system brings the System Suggested Quantity to the Maximum Inventory value minus the Effective Inventory

Adjust Item quantity from 191 to 111.

Warehouse Effective Inventory(80) is less than Quantity(191) then

Quantity(191) - Warehouse Effective Inventory(80) = Quantity(111) [AD202]

The Purchase Replenishment Journal is to re-stock the warehouse.

The System Suggested Quantity is 191 and the Effective Inventory for the warehouse is 80 and therefore the system will replenish the difference of the two numbers or 111.

Adjust Record quantity from 92 to 54 - Quantity to Cross Dock adjusted from 0 to 0

The system then adjusts the record for item=40030 and store=S0003.

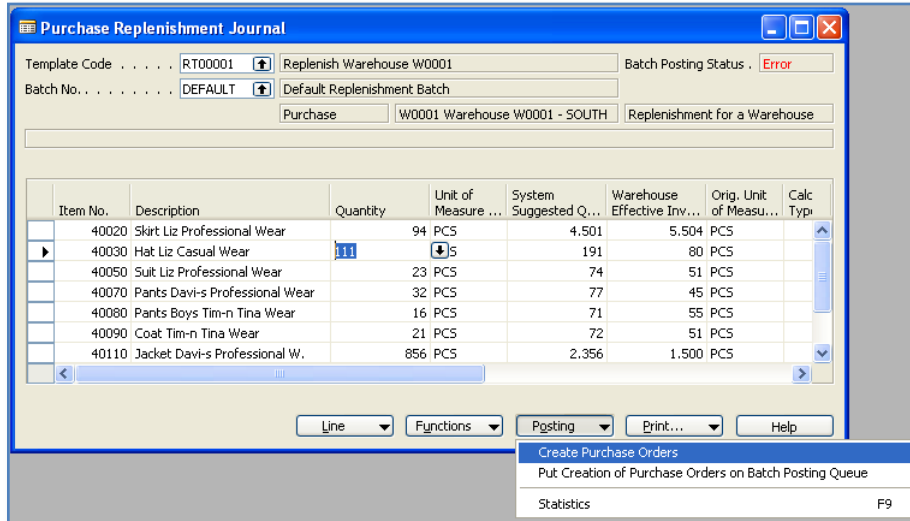
The record has 92 of 191 ($92/191 = 0,481$) and therefore it will be $111 * 0,481 = 54$

The quantity in the record has then been adjusted according to proportionally from the older quantity.

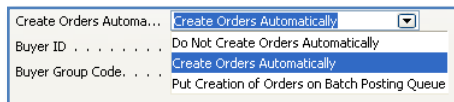
3.13.5 Create Purchase/Transfer Orders

When the buyer is satisfied with the Replenishment Journal, the buyer executes the *Create Purchase Orders* or *Create Transfer Orders* function under the Posting button.

If there are more than one Replenishment Journal Detail line with the same Item No., Variant Code and Location Code then quantity is summed up in one line.



It is possible to have the system automatically create the document by setting the field *Create Orders Automatically* to *Create Order Automatically* on the Replenishment Template record for the Journal. This is used when executing the Replenishment Journal process as a Scheduled Job overnight. The replenishment process of replenishing stores by Transfer Documents automatically without the buyers changing the result.



3.13.6 Put Creation of Purchase/Transfer Orders on Batch Posting Queue

The function of *Creation of Purchase/Transfer Orders on Batch Posting Queue* is to locate the document creation request to the Batch Posting Queue to be created by the Batch Posting Queue process (NAS).

3.13.7 Statistics (F9)

The Statistics form gives the buyer a good overview of the total quantity and direct cost of the Replenishment Journal. The detail lines show the quantity and direct Cost down to each vendor in the Replenishment Journal.

Replenishment Template: RT00001 Replenish Warehouse: W0001
 Replenishment Template: DEFAULT Default Replenishment Batch:
 No. of Vendors: 3
 Total No. of Journal Lines: 16
 Total Quantity: 1,213
 Total Direct Cost Amount: 149,648,40

No.	Name	No. of Jnl. Lines	Total Quantity	Direct Cost Amount
44000	DAVI-s Fashion Ltd	3	888	139,040,00
44010	LIZ-s Fashion Ltd	8	265	9,708,40
44040	Erik-s Electronics Ltd	5	60	900,00

4 Allocation of One Time Items

4.1 Replenishment Setup

There is some setup in the Replenishment Setup Form for Allocation of One Time Items.

General Numbering Stock Out Functionality Vendor Performance

Template No. Series: REPLENTE
 Buyer's Push No. Series: REPLENBP
 Purchase Contract No.: PURCHCONTR
 Recall No. Series: RECALL

The Buyer's Push No. Series contains the number series that is used when creating a new Buyer's Push worksheet.

4.2 Location Record

S0001 Cronus Super Market South - Location Card

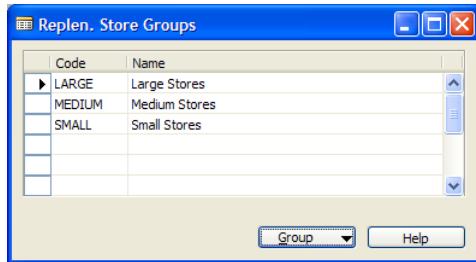
General Communication Warehouse Bins Bin Policies Replenishment

Replenishment Group: LARGE
 Replenishment Weight: 60,00
 Default Replenishment Group: A
 Active for Autom. Repl.:
 Use Planned Cross Docking:
 Location is a Warehouse:

A few new fields have been added to the Location Card. The Replenishment Group is used by Planned Cross Docking and the Buyer's Push functions. It allows the user to group locations together.

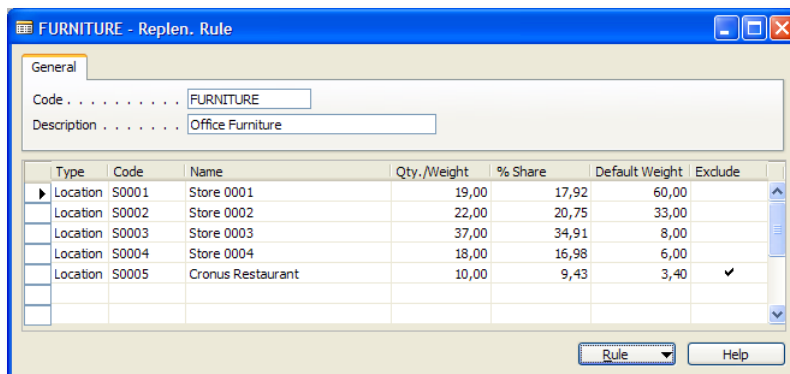
In the Replenishment Weight field you can set up a default weight (importance) for the location. It can be based on last year's sales, floor area or other factors. The Planned Cross Docking and the Buyer's Push functions can distribute items to locations based on the Replenishment Weight. See also [Planned Cross Docking](#) and [Buyer's Push](#).

4.3 Replenishment Store Groups



In the Replenishment Store Groups form you can define how you want to group the stores for Planned Cross Docking and Buyer's Push forms. [Planned Cross Docking](#) and [Buyer's Push](#) functionality are covered in more detail in chapters below.

4.4 Replenishment Rule



The Replenishment Rule is used by Planned Cross Docking and the Buyer's Push functions.

In the Replenishment Rule form you can create your own rule by inserting a new record and giving it a new code. Fill in your code in the **Code** field and put a description in the **Description** field.

In the **Type** field you can enter either Replenishment Group or Location. If you enter Replenishment Group, the value in the **Code** field will be selected from the Replenishment Groups. If you enter Location in the **Type** field, the value in the **Code** field will be a Location. The **Name** field will be automatically filled in according to the value in the **Code** field, but it can be changed manually.

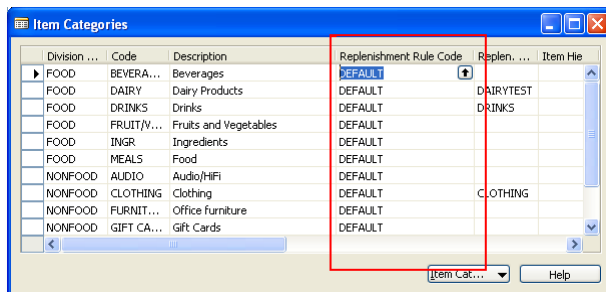
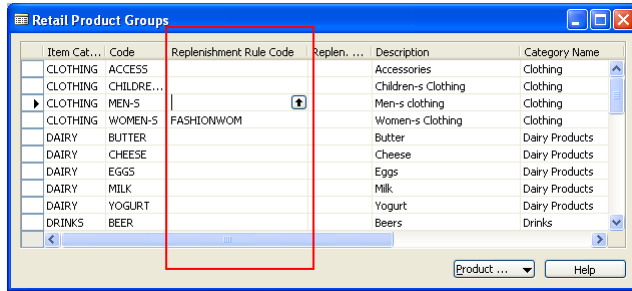
In the **Qty./Weight** field you can enter a value and the **%Share** field will be calculated using the formula: $Qty./Weight / \text{SUM}(Qty./Weight) * 100$. In Figure 3-9 the $\text{SUM}(Qty./Weight)$ is $19 + 22 + 37 + 18 + 10 = 106$. The %Share for the first line is therefore $19 / 106 * 100 = 17,92$.

The Planned Cross Docking functionality uses the %Share to distribute a purchase order quantity between locations. If no Qty./Weight is filled in for a Replenishment Rule, the quantity will be distributed evenly between the stores.

The **Default Weight** field shows the Replenishment Weight of the location or the Replenishment Group.

If the field **Exclude** is check marked, no quantity will be distributed to that location or Replenishment Group.

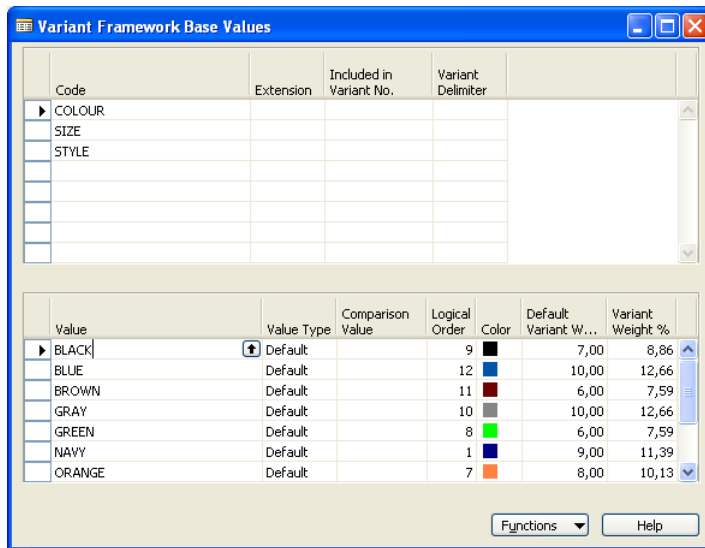
It is possible to define the default Replenishment Rule code for an item by specifying the Replenishment Rule for the Product Groups and the Item Categories.



4.5 Variant Weights

4.5.1 Variant Weights of Base Variant Values

The system supports the definition of all values of Variant Dimension, also known as Base Variant Values. The simplest way is to define the weight for each value of the Base Variant Dimension. The weights will be inherited to the dimension values of the Variant Framework.



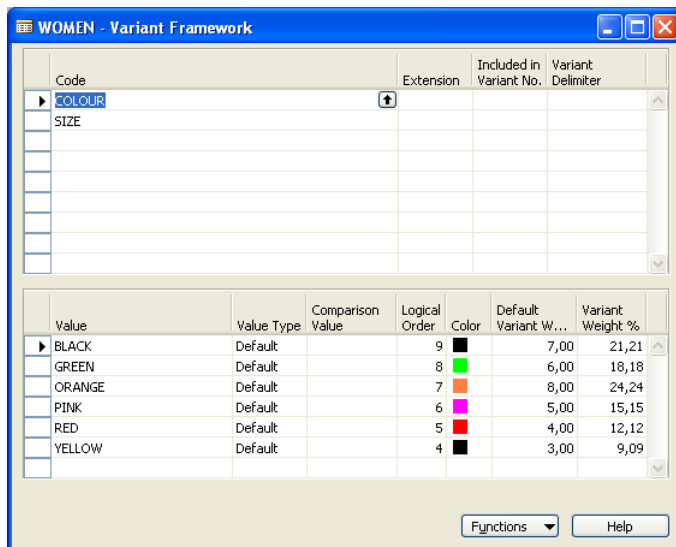
The screenshot shows a window titled "Variant Framework Base Values". It contains a table with columns: Code, Extension, Included in Variant No., and Variant Delimiter. Below this is a list of values for the "COLOUR" dimension. The table below has columns: Value, Value Type, Comparison Value, Logical Order, Color, Default Variant W..., and Variant Weight %.

Code	Extension	Included in Variant No.	Variant Delimiter
▶ COLOUR			
SIZE			
STYLE			

Value	Value Type	Comparison Value	Logical Order	Color	Default Variant W...	Variant Weight %
▶ BLACK	Default		9	■	7,00	8,86
BLUE	Default		12	■	10,00	12,66
BROWN	Default		11	■	6,00	7,59
GRAY	Default		10	■	10,00	12,66
GREEN	Default		8	■	6,00	7,59
NAVY	Default		1	■	9,00	11,39
ORANGE	Default		7	■	8,00	10,13

4.5.2 Variant Weights of Variant Frameworks Dimension Values

Variant combinations are defined in a Variant Framework. The buyer defines the dimension types (Color, Size or Style) and selects the values of the dimension (Black, Orange, Green....). The weight of the dimension values are inherited from the Base Variant Values.



The screenshot shows a window titled "WOMEN - Variant Framework". It contains a table with columns: Code, Extension, Included in Variant No., and Variant Delimiter. Below this is a list of values for the "COLOUR" dimension. The table below has columns: Value, Value Type, Comparison Value, Logical Order, Color, Default Variant W..., and Variant Weight %.

Code	Extension	Included in Variant No.	Variant Delimiter
▶ COLOUR			
SIZE			

Value	Value Type	Comparison Value	Logical Order	Color	Default Variant W...	Variant Weight %
▶ BLACK	Default		9	■	7,00	21,21
GREEN	Default		8	■	6,00	18,18
ORANGE	Default		7	■	8,00	24,24
PINK	Default		6	■	5,00	15,15
RED	Default		5	■	4,00	12,12
YELLOW	Default		4	■	3,00	9,09

4.5.3 Item Variant Weights

The buyer specifies the Variant Framework Code for the item and the system creates the Item Variant Record according to the configuration of the Variant Framework setup. The weight field of the dimension values is inherited from the Variant Framework setup. The user does not need to select all the dimension values of the Variant Framework and he can also change the weight of the variant in order for it to fit better for the specific item.

Variant	Barcode	Dimension 1 Weight	Dimension 2 Weight	Variant Weight	Variant Weight %	COLOUR	SIZE
000	0200000003043	3	15	45	0,62	YELLOW	34
001	0200000003050	3	20	60	0,83	YELLOW	36
002	0200000003067	3	40	120	1,65	YELLOW	38
003	0200000003074	3	50	150	2,07	YELLOW	40
004	0200000003081	3	45	135	1,86	YELLOW	42
005	0200000003098	3	30	90	1,24	YELLOW	44
006	0200000003104	3	20	60	0,83	YELLOW	46
007	0200000003111	4	15	60	0,83	RED	34
008	0200000003128	4	20	80	1,10	RED	36

The Variant Weight of the Variant record is automatically calculated by multiplying the values of the dimensions.

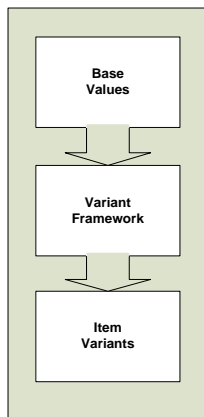
Example:

Variant 000 the Dimension 1 weight (3) * Dimension 2 weight (15) = Variant Weight (45).

The buyer can then for example change the weight of Dimension to 5 to recalculate to 75 as the Variant Weight. The buyer can also just change the Variant Weight directly to 75 without changing the Dimension Weight. The system uses the value of the field Variant Weight and not the Dimension Weight except to calculate the Variant Weight.

Hint:

The buyer can define the weight of values in the Base records and then adjust any of the lower stages to better fit the Variant Framework or the Item. The hierarchy of data can save the buyer some repetition of his work



4.5.4 Using Variant Weight in Purchase Orders

You can use variant weight when entering quantities in purchase orders lines. When the user enters the quantity of an item with variants, the system shows the Variant Matrix form so that the user can adjust or confirm the quantity for each variant. For an item with Variant Weight the system calculates the quantity for each Variant whereas an item without Variant Weight would give each item the same quantity.

Example:

SIZE	YELLOW	RED	PINK	ORANGE	GREEN	BLACK
34	16	17	21	33	25	29
36	16	22	28	44	33	39
38	33	44	55	88	66	77
40	41	55	69	110	83	96
42	37	50	62	99	74	87
44	25	33	41	66	50	58
46	16	22	28	44	33	39

Shows Item 40020 with Variant Weights (2000 pieces distributed between Variants)

SIZE	NAVY	BLACK	GRAY	BLUE
44	50	50	50	50
46	50	50	50	50
48	50	50	50	50
50	50	50	50	50
52	50	50	50	50

Shows item 40060 without Variant Weight (2000 pieces evenly distributed between Variants)

4.6 Cross Docking

The buyer creates a Purchase Order like any other Purchase Orders except that he additionally creates a Planned Cross Docking Transfer Order that will be picked at the warehouse at the time of receiving.

The screenshot shows a 'Retail Purchase Order' window for 'LIZ-s Fashion Ltd'. The window is divided into several sections:

- General:** Contains fields for 'No.' (HO106025), 'Posting Date' (15.08.07), 'Buy-from Vendor No.' (44010), 'Order Date' (15.08.07), 'Buy-from Contact No.', 'Document Date' (15.08.07), 'Buy-from Vendor Name' (LIZ-s Fashion Ltd), 'Expected Receipt Date' (01.08.07), 'Buy-from Address' (HI Fashion House), 'Vendor Order No.', 'Buy-from Address 2', 'Vendor Shipment No.', 'Buy-from Post Code/City' (GB-N16 342, London), 'Vendor Invoice No.', 'Buy-from Contact' (Flat Foot), 'Order Address Code', 'No. of Archived Versions' (0), 'Status' (Open), 'Version No.' (0), 'Retail Status' (New), 'Location Code' (W0001), 'Buyer ID' (SUPER), 'Created By Source Code', and 'Buyer Group Code'.
- Table:** A table with columns: 'T... No.', 'Vendor I...', 'Variant C...', 'Description', 'Location ...', 'Unit of M...', 'Quantity', 'Qty. to Receive', 'Qty. To Invoice', and 'Direc'. The table contains two rows:

T... No.	Vendor I...	Variant C...	Description	Location ...	Unit of M...	Quantity	Qty. to Receive	Qty. To Invoice	Direc
I...	40000	1P11-154	Swimsuit Liz Beach 2	W0001	PCS	200	200	200	
	40020	1P34-956	Skirt Liz Professional Wear	W0001	PCS	2000	2.000	2.000	

The buyer decides to purchase 2000 pieces of item 40020 (Skirt Liz Professional Wear).

When the buyer enters the quantity in an item line with Variant the system shows the Variant Matrix form where the buyer can accept or change the suggested quantity.

The screenshot shows a 'WOMEN 40020 SIZE 34 - Dimension Matrix' window. The window contains a table of variant weights for different sizes and colors. The 'Quantity' field is set to 2,000.

SIZE	YELLOW	RED	PINK	ORANGE	GREEN	BLACK
34	12	17	21	33	25	29
36		16	22	28	44	33
38		33	44	55	88	66
40		41	55	69	110	83
42		37	50	62	99	74
44		25	33	41	66	50
46		16	22	28	44	33

Item 40020 has defined Variant Weights for the Variants and therefore the system has already distributed the quantity between the Variants according to the Variant Weights.

Example:

Variant 000 has the Variant Weight of 45

Variant 001 has the Variant Weight of 60

The system adds up all the Variant Weights of the Item to make the total of 7437.

Then the system calculates the quantity for Variant 000 as $2000 * (45/7437) = 12.10 = 12$

The Variant Weight saves a lot of work for the buyer to fill in all the data but still it is only a suggestion and the buyer can change it as he likes.

If the total quantity is recalculated, the total quantity of the item when leaving the Variant Matrix form will be the quantity registered in the Purchase Order. Thus, for example if the new total quantity is greater or smaller than the older total quantity, it is updated automatically.

If the Variants do not have Variant Weights defined, the system distributes the quantity evenly between all the Variants of the item.

Hint:

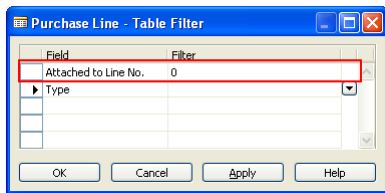
The Variant Weight distribution is only calculated if there are no Variant records for the item. Otherwise it will show the value of the Variant records.

Hint:

The Item record shown in the Purchase Lines is a record of the type BLANK

40020	IP34-956	Skirt Liz Professional Wear	W0001	PCS	2,000
G/L Account					
Item					
Fixed Asset					
Charge (Item)					

The real Variant records in the Purchase Lines are not visible as they are not within the filter of the form. You can see them by removing the filter.

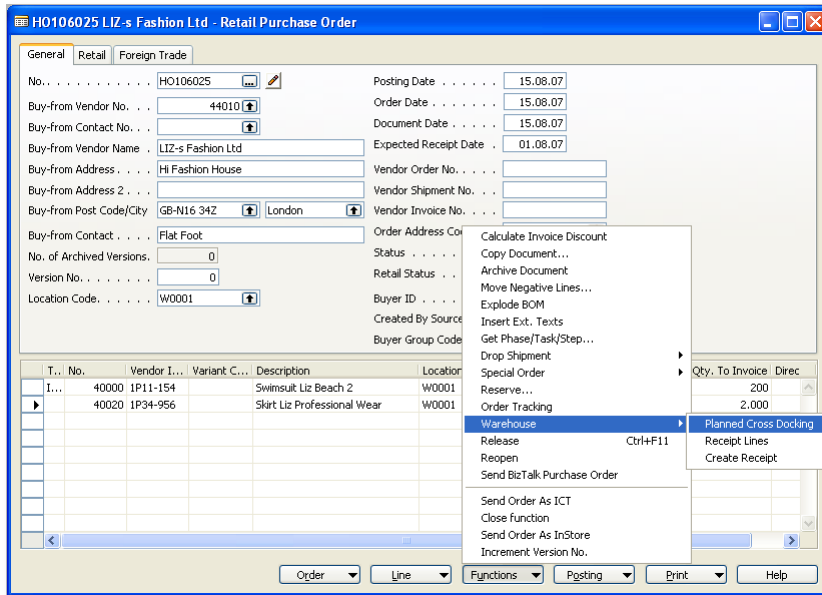


I... No.	Vendor I...	Variant C...	Description	Location ...	Unit of M...	Quantity	Qty. to Receive	Qty. To Invoice	Dirac
I...	40000	IP11-154	Swimsuit Liz Beach 2	W0001	PCS	200	200	200	
I...	40020	IP34-956	Skirt Liz Professional Wear	W0001	PCS	2,000	2,000	2,000	
I...	40020	IP34-956	000 Skirt Liz Professional Wear	W0001	PCS	12	12	12	
I...	40020	IP34-956	001 Skirt Liz Professional Wear	W0001	PCS	16	16	16	
I...	40020	IP34-956	002 Skirt Liz Professional Wear	W0001	PCS	33	33	33	
I...	40020	IP34-956	003 Skirt Liz Professional Wear	W0001	PCS	41	41	41	
I...	40020	IP34-956	004 Skirt Liz Professional Wear	W0001	PCS	37	37	37	
I...	40020	IP34-956	005 Skirt Liz Professional Wear	W0001	PCS	25	25	25	
I...	40020	IP34-956	006 Skirt Liz Professional Wear	W0001	PCS	16	16	16	

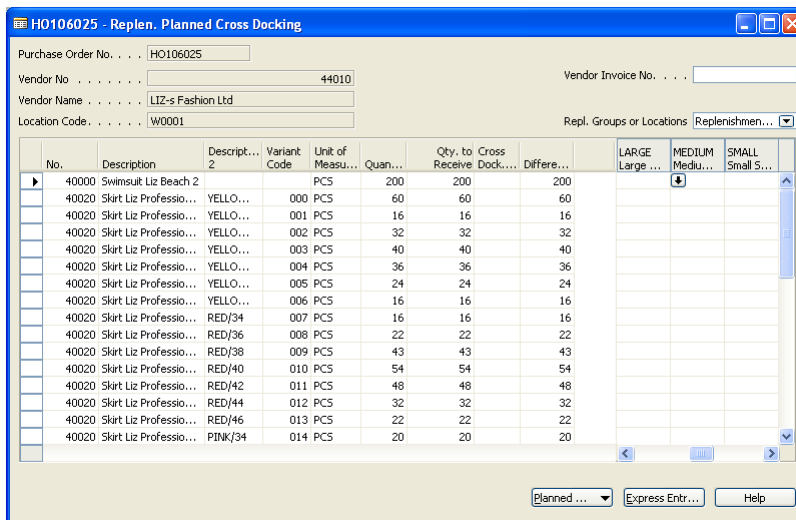
Now the buyer has created a Purchase Order for 2000 pieces and the Variant Weights has suggested the distribution of the Variants.

The buyer has completed the Purchase Order but he wants to cross dock the Purchase Order to stores when receiving the goods at the warehouse.

The buyer presses the Functions button and selects the functions *Warehouse* and *Planned Cross Docking*.



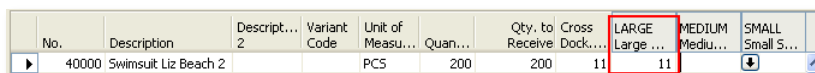
The system now presents the Replenishment Planned Cross Docking form.

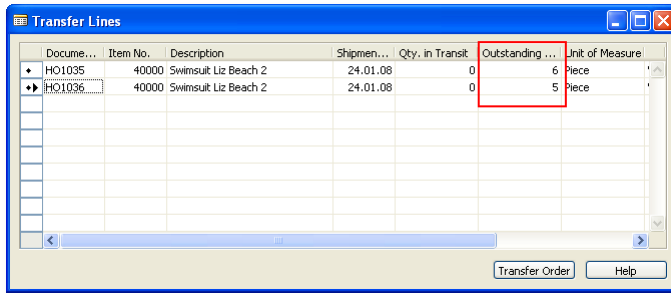


The Replenishment Planned Cross Docking Form shows all the Purchase Order Lines where every Variant line is shown. To the right of the matrix form, the system shows the list of Replenishment Groups or Locations, which is controlled in the header of the form.

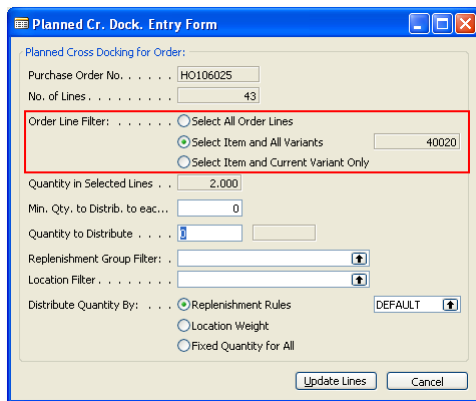
The **Quantity** and **Qty. to Receive** fields in the form represent the same fields on the Purchase Order Lines. The **Cross Dock Qty.** field is the total quantity that has already been cross docked for the item and the **Difference** field is difference between **Cross Dock Qty.** and the **Qty. to Receive**.

The buyer can enter the quantity directly in the quantity field and the system creates Transfer Order Lines as the underlying table. If the form is in the Replenishment Group mode the system will distribute as evenly as possible to the stores in the Replenishment Group.

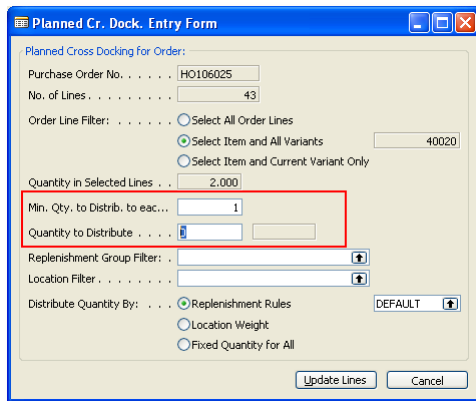




The buyer can also use the Express Entry Form Button to assist with distributing the quantity between the stores according to predefined distribution rules (Replenishment Rules)



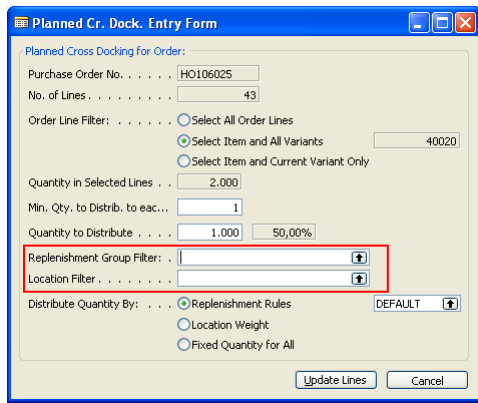
The buyer must select if he is going to distribute all items, a specific item or a specific variant record with the Express Entry Form.



The **Min. Qty. to Distribute each Location** field enables the buyer to specify the minimum quantity each Location should receive. The system then distributes the minimum quantity to each Location and the quantity that is left is distributed according to the distribution ratios.

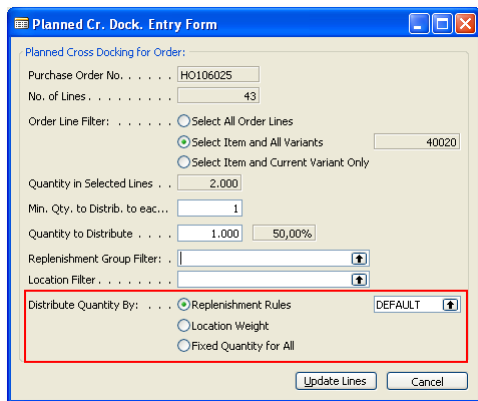
The **Quantity to Distribute** field defines how much of the quantity will be distributed.

For example, the order quantity is 2000 pieces, but the buyer wants to distribute only 1000 pieces by cross docking.



If you want to limit the distribution to certain Replenishment Groups, you can enter a filter for these groups in the Replenishment Group Filter, and if you want to limit the distribution to certain locations you can enter a filter for them in the Location Filter field.

These filters are not used if the **Distribute Quantity By** is set to Replenishing Rules and the specifications of the Replenishing Rule are used.

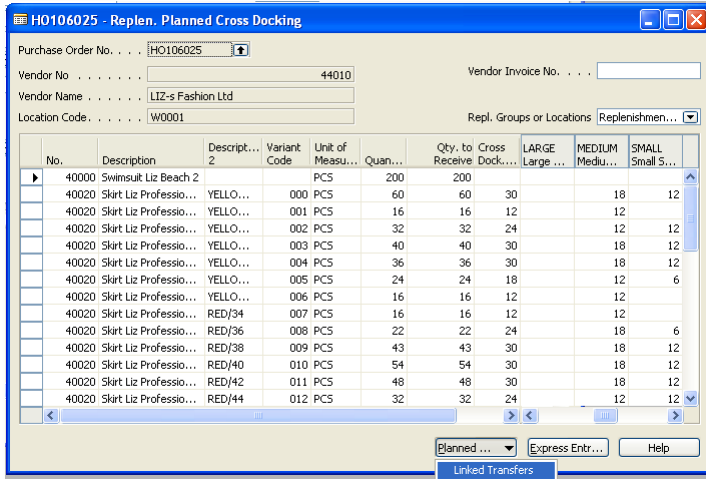


The different options of the **Distribute Quantity By** function are:

- **Replenishment Rules**
 - This function is not valid if *All Order Lines* is selected – the suggested value is not shown
 - The Replenishment Rule value shown is the value the system finds for the item by searching first in the Product Group and then in the Item Category
 - The user can select another value for the Replenishment Rule than the system suggests.
 - The Replenishment Group and Location Filter are not valid in this selection
 - The quantity is distributed according to the specifications of the Replenishment Rule.
- **Location Weight**
 - The system uses the value of the **Replenishment Weight** field in the Location record
 - The Replenishment Group and Location Filter can be used
- **Fixed Quantity for All**
 - The system will distribute the value of the field **Quantity to Distribute** to each Location / Store if there is enough stock. Otherwise all the stores get an equal share of the stock available.
 - The Replenishment Group and Location Filter can be used

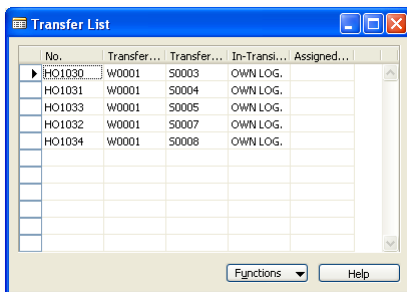
Hint:

If the buyer needs to delete the distributed quantity he clicks on the Express Entry Form Button and then presses the Update Line Button with all the fields empty. The system asks for a confirmation that the user wants to change the Cross Docking data to zero.



The result of the Express Entry Form is the visible to the buyer. He can change the quantity for a Replenishment Group, which will change the quantity in the underlying Transfer Order Lines or directly to the Location.

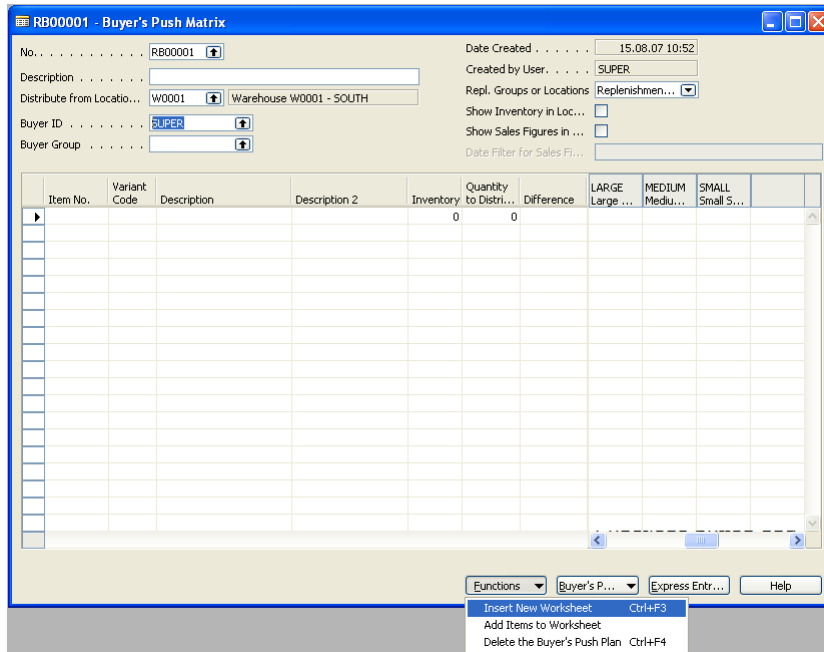
The buyer can then look at the Transfer Orders created by pressing the Planned Crossing Demand button and then the Linked Transfers function to get an overview of Transfer Orders created by the Cross Docking. The form gives access to the Transfer Order Document form and the ability to Release the document.



4.7 Buyer's Push

The Buyer's Push functionality allows you to create transfer orders from the warehouse to the stores or locations.

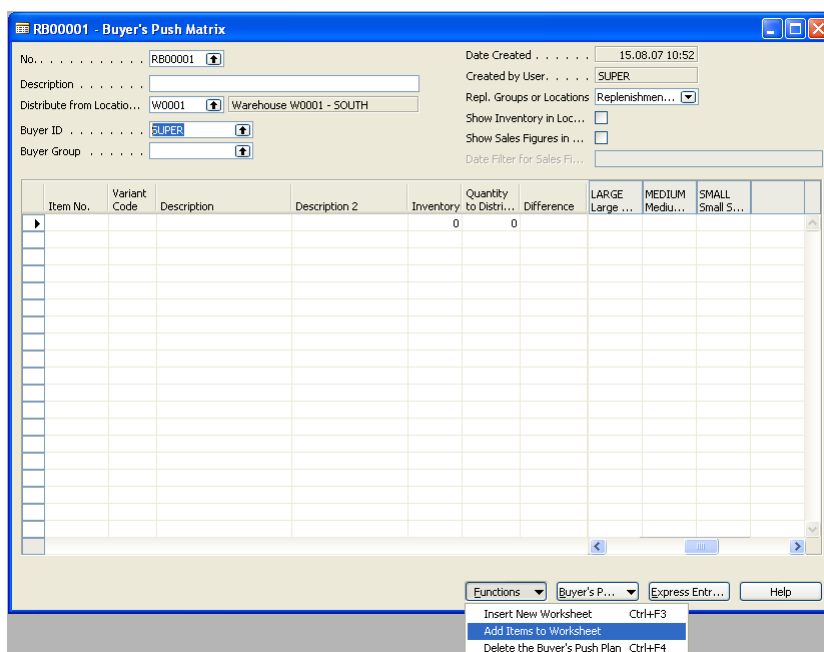
Click on Buyer's Push in the Replenishment menu to open the Buyer's Push matrix form.



Item No.	Variant Code	Description	Description 2	Inventory	Quantity to Distribute	Difference	LARGE Large ...	MEDIUM Medu...	SMALL Small S...
				0	0				

If you want to create a new worksheet, click on the Functions button and select *Insert New Worksheet* or press the Ctrl+F3 button.

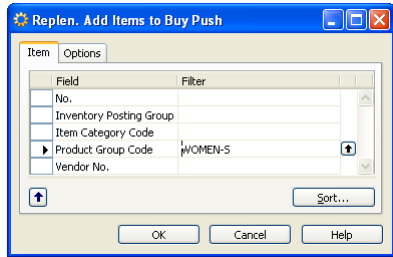
In the new worksheet, fill in the **Description** field and enter the location code of the warehouse in the **Distribute from Location Code** field.



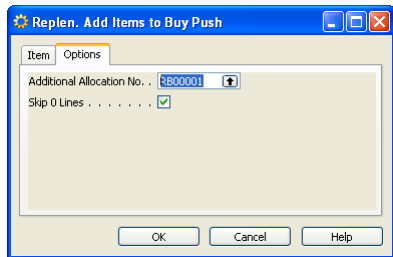
Item No.	Variant Code	Description	Description 2	Inventory	Quantity to Distribute	Difference	LARGE Large ...	MEDIUM Medu...	SMALL Small S...
				0	0				

4.7.1 Adding items to the worksheet.

You can manually enter the item no. in the **Item No.** field, use the lookup functionality to select the item from the item list, or click on the Functions button and select the Add Items to Worksheet.

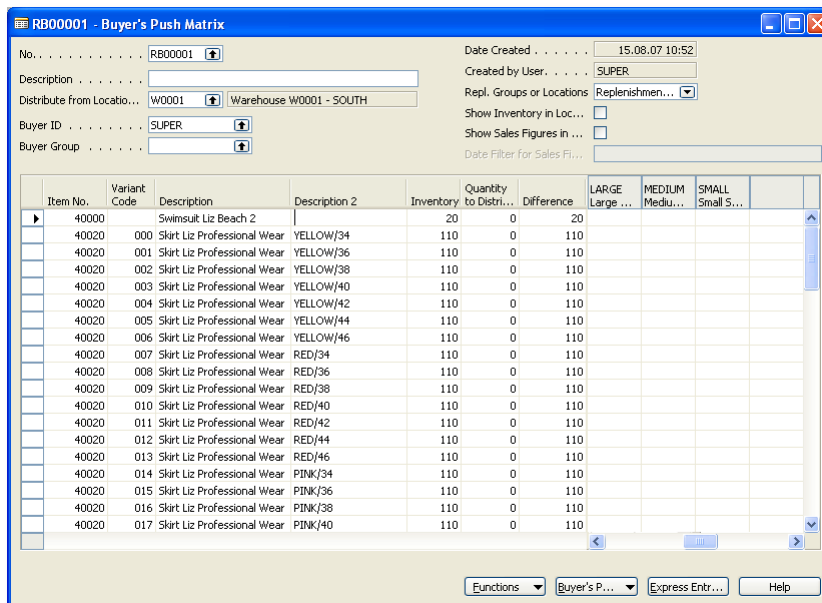


In this document we will use the Buyer's Push functionality to ship items from the WOMEN-S Product Group from the W0001 warehouse to the stores. We therefore use *Add Items to Worksheet* and enter WOMEN-S in the Product Group Code field.



By activating the field **Skip 0 Lines** the process does not add items to the worksheet where the available stock of the item is 0 or less in Location W0001.

Once we press the OK button, the system adds the WOMEN-S items to the worksheet.



The Inventory column shows the inventory at the warehouse location. When we have filled in the quantity fields under the location codes in the matrix portion of the form, the **Quantity to Distribute** will show the total quantity that is to be distributed. The **Difference** field shows the difference between the **Inventory** and the **Quantity to Distribute** fields.

4.7.2 Filling in the Quantity to Distribute

Here you can fill in the quantity you want to distribute from the warehouse to the stores or locations. You can do this by manually entering the quantity for each location or you can use the Express Entry form.

Click on the Express Entry button to open the Replen. Buyer's Push Expr. form:

The buyer needs to select if he is going to distribute all items, a specific item or a specific variant record with the Express Entry Form.

The **Min. Qty. to Distribute each Location** field gives the buyer the chance to specify the minimum quantity each Location should receive. The system then distributes the minimum quantity to each Location and the quantity that is left will be distributed according to the distribution ratios.

The **Quantity to Distribute** field defines how much of the quantity will be distributed. For example, the available quantity is 4620 pieces, but the buyer wants to distribute only 2000 pieces by cross docking.

If you want to limit the distribution to certain Replenishment Groups, you can enter a filter for these replenishment groups in the Replenishment Group Filter, and if you want to limit the distribution to certain locations, you can enter a filter for them in the **Location Filter** field.

These filters are not used if the Distribute Quantity By is set to Replenishing Rules and the specifications of the Replenishing Rule are used.

The different options of the **Distribute Quantity By** function:

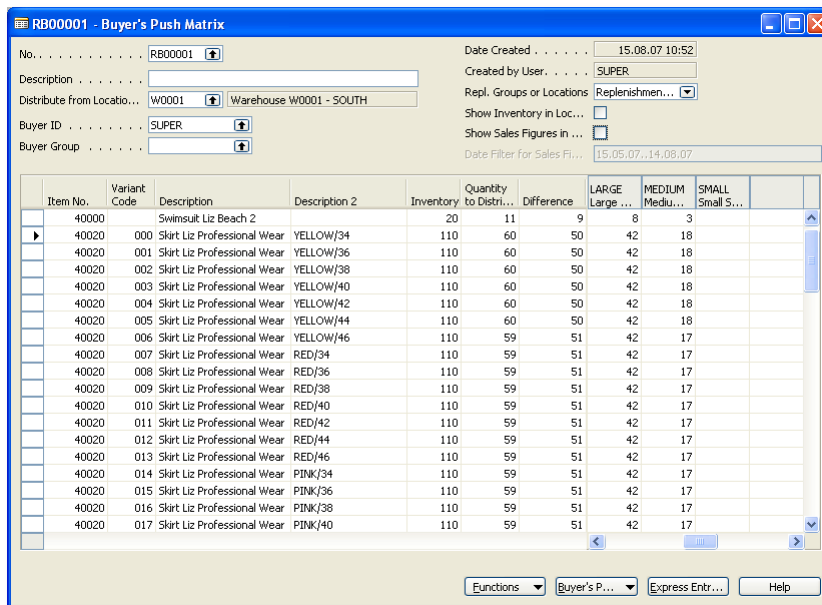
- **Replenishment Rules**
 - This function is not valid if *All Order Lines* is selected – the suggested value is not shown
 - The Replenishment Rule value shown is the value the system finds for the item by searching first in the Product Group and then in the Item Category
 - The user can select another value for the Replenishment Rule than the system suggests.
 - The Replenishment Group and Location Filter are not valid in this selection
 - The quantity is distributed according to the specifications of the Replenishment Rule.

- **Location Weight**
 - The system uses the value of the **Replenishment Weight** field in the Location record
 - The Replenishment Group and Location Filter can be used
- **Fixed Quantity for All**
 - The system will distribute the value of the field **Quantity to Distribute** to each Location / Store if there is enough stock. Otherwise all the stores get an equal share of the stock available.
 - The Replenishment Group and Location Filter can be used

Hint:

If the buyer needs to delete the distributed quantity then press the Express Entry Form Button and then press the Update Line Button with all the fields empty. The system asks for a confirmation that the user wants to change the Cross Docking data to zero.

We press the *Update Lines* and the system calculates the quantity to distribute.



When the **Update Lines** button is pressed, the system steps through all the lines in the worksheet and calculates the quantity to distribute for each line and then distributes it between the store locations S0001, S0002, S0003, S0004 and S0005 using the location weight.

4.7.3 Show Additional Information

In the upper right hand area of the Buyer's Push Matrix form there are two fields, **Show Inventory in Locations** and **Show Sales Figures in Location**. If you check mark them, the system displays the inventory and sales information in addition to the Quantity to Distribute for each combination of Item No. and Location Code. The inventory is displayed within parentheses and sales information preceded by the lower case letter 's'.

Show Inventory in Loc...

Show Sales Figures in ...

Date Filter for Sales Fi... 15.05.07..14.08.07

Quantity to Distribute	Difference	LARGE Large	MEDIUM Medium	SMALL Small
20	11	9	8(-14)	3(3)
10	60	50	42(0)	18(60)
10	60	50	42(-2)	18(68)
10	60	50	42(-2)	18(80)
10	60	50	42(0)	18(70)
10	60	50	42(-1)	18(10)
10	60	50	42(0)	18(15)
10	59	51	42(0)	17(5)

Show Inventory in Loc...

Show Sales Figures in ...

Date Filter for Sales Fi... 15.05.07..14.08.07

Inventory	Quantity to Distribute	Difference	LARGE Large Stores	MEDIUM Medium Stores	SMALL Small Stores
20	11	9	12(0)(s 0)	3(3)(s 1.238)	(0)(s 0)
110	60	50	42(0)(s 0)	18(60)(s 1.238)	(0)(s 0)
110	60	50	42(-2)(s 2)	18(68)(s 1.206)	(0)(s 0)
110	60	50	42(-2)(s 2)	18(80)(s 1.148)	(0)(s 0)
110	60	50	42(0)(s 0)	18(70)(s 1.196)	(0)(s 0)
110	60	50	42(-1)(s 1)	18(10)(s 1.276)	(0)(s 0)
110	60	50	42(0)(s 0)	18(15)(s 1.216)	(0)(s 0)
110	59	51	42(0)(s 0)	17(5)(s 1.250)	(0)(s 0)

4.7.4 Replenishment Groups or Locations

Also in the upper right hand area of the Buyer's Push Matrix form there is an option field where you can select to show either Replenishment Groups or Locations. If you select Replenishment Groups, the system shows the Replenishment Groups as the columns in the matrix part of the form. It sums up the Quantity to Distribute and the inventory if the Show Inventory in Locations is check marked.

Repl. Groups or Locations Location Codes

Show Inventory in Loc...

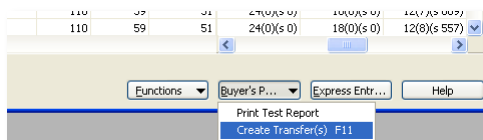
Show Sales Figures in ...

Date Filter for Sales Fi... 15.05.07..14.08.07

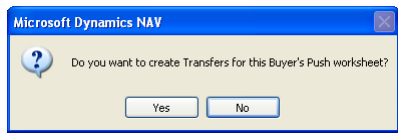
Quantity to Distribute	Difference	S0001 Cronus Super Market...	S0002 Cronus Super Market...	S0003 Cronus Fashion Stor...
20	11	9	4(-14)(s 14)	4(0)(s 0)
110	60	50	24(0)(s 0)	18(0)(s 0)
110	60	50	24(-2)(s 2)	18(0)(s 0)
110	60	50	24(-2)(s 2)	18(0)(s 0)
110	60	50	24(0)(s 0)	18(0)(s 0)
110	60	50	24(-1)(s 1)	18(0)(s 0)
110	60	50	24(0)(s 0)	18(0)(s 0)
110	59	51	24(0)(s 0)	18(0)(s 0)

4.7.5 Creating Transfer Orders

You can manually change the quantity you want to distribute by entering the correct quantity in the appropriate line and column. When you are satisfied with the quantity you want to distribute, you can create Transfer Orders.



Under the **Buyer's Push** menu button, select *Create Transfers* or press F11. You get a message asking you to confirm that you want to create the Transfers.



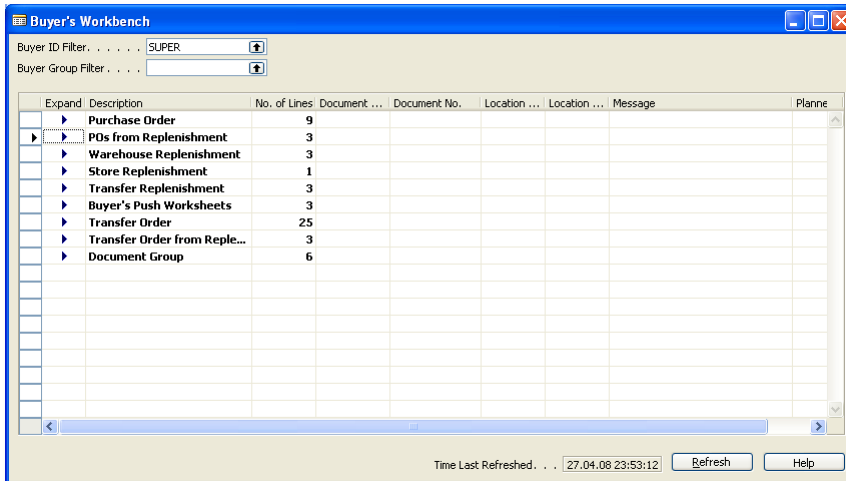
If you press the **Yes** button, the system creates Transfer Orders where the Transfer-From Code is the warehouse location and the Transfer-To Code is the Location Code in the matrix part of the Buyer's Push Matrix form.

4.7.6 Setting up the Transfer Routes

Note that you must set up Transfer Routes between the warehouse and the stores. Otherwise you might get an error message saying that you must specify the In-Transit Code in the transfers. To set up the Transfer Routes, go to the Warehouse menu, select *Planning and Execution, Setup Inventory* and click on Transfer Routes.

5 Buyers Workbench

The Buyers Workbench is a tool to give the buyer a good overview of all the Replenishment Journals, Purchase and Transfer Orders he is responsible for.

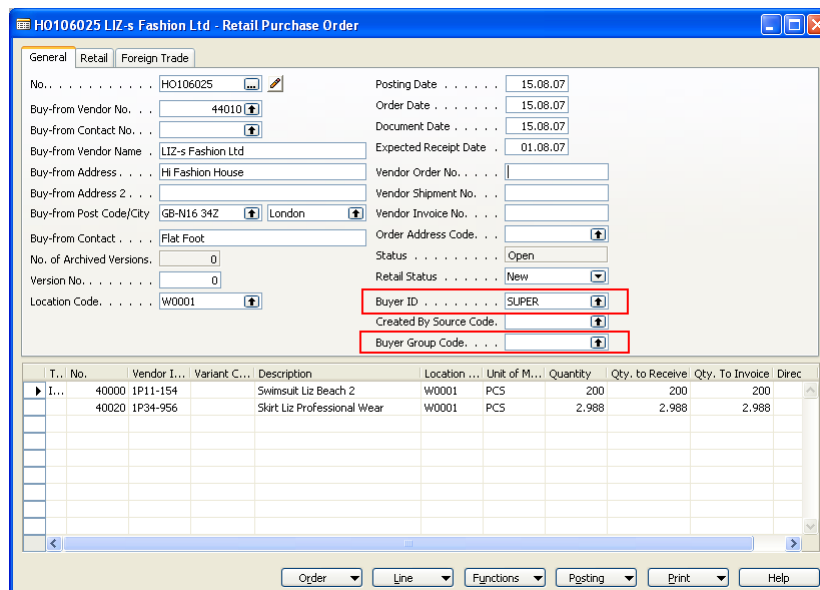


The workbench shows the headlines and number of documents under the headline. The buyer can then press the arrow in the Expand column to show all underlying documents.

5.1 Document Groups

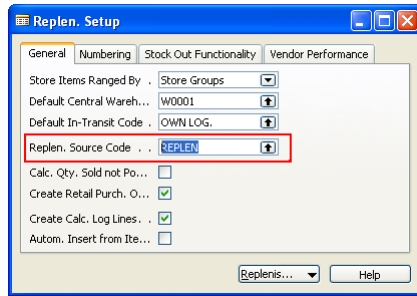
5.1.1 Purchase Order

The headline shows all the Purchase Order Documents that did not originate from a Purchase Replenishment Journal and the Buyer or the Buyer Group responsible. It is possible to drill down to the Document Number to show the Document.



The red boxes show where the Buyer ID and/or Buyers Group must be filled in to have the Document visible in the workbench.

The form shows Purchase Order Document that does not originate from a Purchase Replenishment Journal which all have the **Created By Source Code** defined by the field **Replen. Source Code** in the Replenishment Setup record.



	LIZ-s Fashion Ltd	44 Purchase O...	HO106025	W0001		Expected Receipt
	Planned Cross Docking ...	43 Transfer O...	HO1035	W0001	S0001	
	Planned Cross Docking ...	43 Transfer O...	HO1036	W0001	S0002	
	Planned Cross Docking ...	43 Transfer O...	HO1037	W0001	S0003	
	Planned Cross Docking ...	43 Transfer O...	HO1038	W0001	S0004	
	Planned Cross Docking ...	42 Transfer O...	HO1040	W0001	S0005	
	Planned Cross Docking ...	42 Transfer O...	HO1039	W0001	S0007	
	Planned Cross Docking ...	42 Transfer O...	HO1041	W0001	S0008	

By drilling down on the Purchase Order the buyer can see all the Transfer Orders related to the Purchase Order.

The Message field shows a message to the buyer saying that the Purchase Order is past the Expected Receipt Date of the Document.

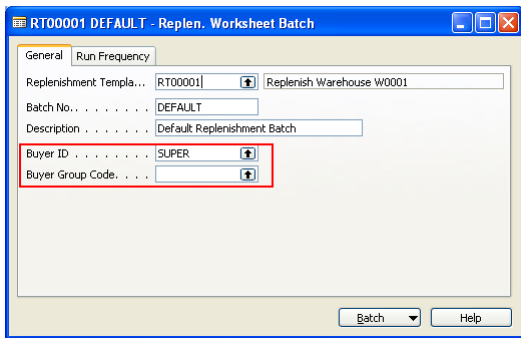
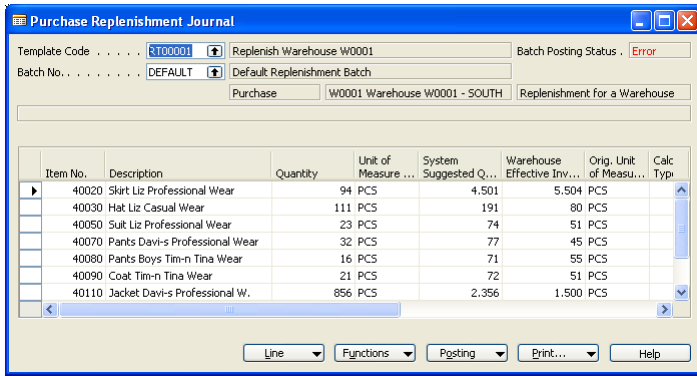
5.1.1.1 Purchase Orders from Replenishment

The headline shows all the Purchase Order Documents that originated from a Purchase Replenishment Journal and the Buyer or the Buyer Group responsible. The functionality is the same as for **Purchase Order**.

The exception however is the field **Created By Source Code** in the Purchase Header. It contains the value defined in the field **Replen. Source Code** in the Replenishment Setup record

5.1.1.2 Warehouse Replenishment

The headline shows all the Purchase Replenishment Journals used to replenish warehouses and the Buyer or the Buyer Group responsible. It is possible to drill down to the Document Number to show the Document.



The red boxes show the Buyer ID and/or Buyers Group that must be filled in in the Replenishment Batch record to have the Purchase Replenishment Journal visible in the workbench.

Warehouse Replenishment	3				
Replenish Warehouse W0001	10 Warehouse...	RT00001			Next Run Date was 10.08.07.
Replenish Warehouse W0002	7 Warehouse...	RT00002			
Purchase Order w/ X-Docking	16 Warehouse...	RT00006			

The Message field displays a message to the buyer about the Purchase Replenishment Journal, if the Next Run Date of the Batch record has past the current date. This shows the buyer which Replenishment Journals he has scheduled but not processed.

5.1.1.3 Store Replenishment

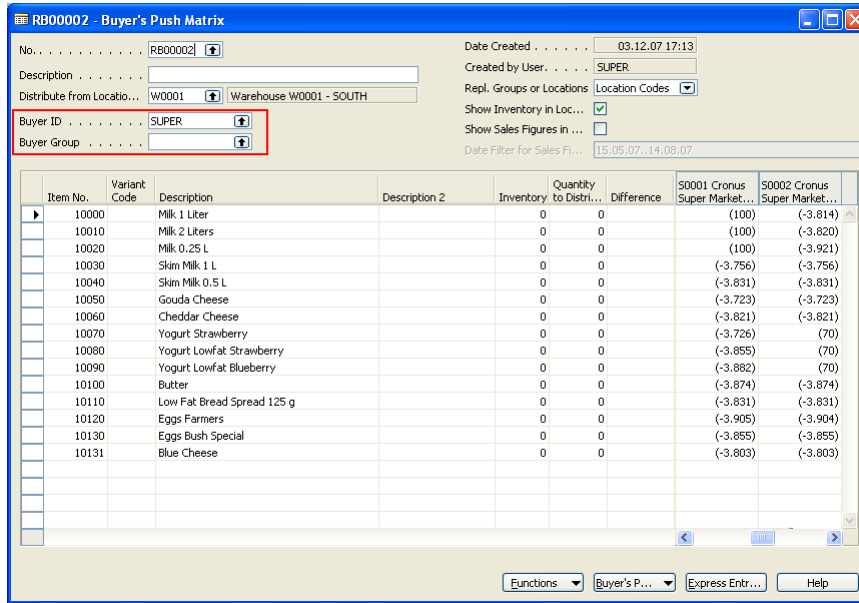
The headline shows all the Purchase Replenishment Journals used to replenish stores directly and the Buyer or the Buyer Group responsible. The functionality is same as for **Warehouse Replenishment**.

5.1.1.4 Transfer Replenishment

The headline shows all the Transfer Replenishment Journals and the Buyer or the Buyer Group responsible. The functionality is same as for **Warehouse Replenishment**.

5.1.1.5 Buyer's Push Worksheets

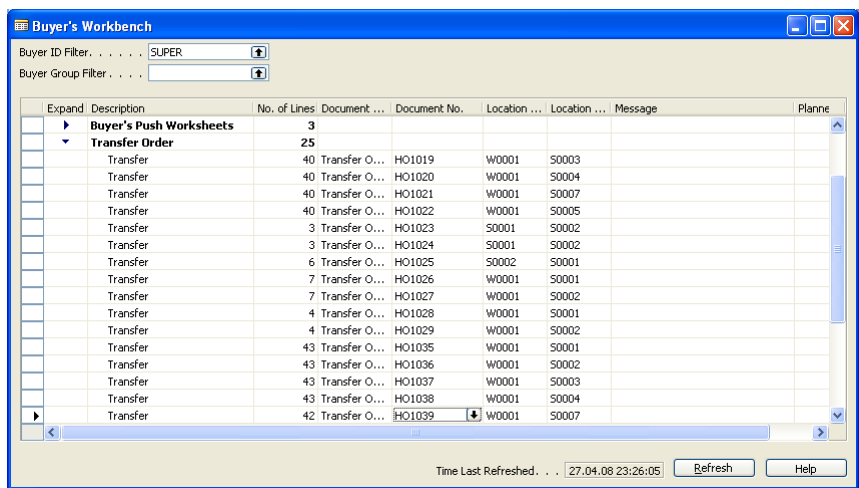
The headline shows all Buyer's Push Worksheets and the Buyer or the Buyer Group responsible. It is possible to drill down to the Document Number to show the Document.

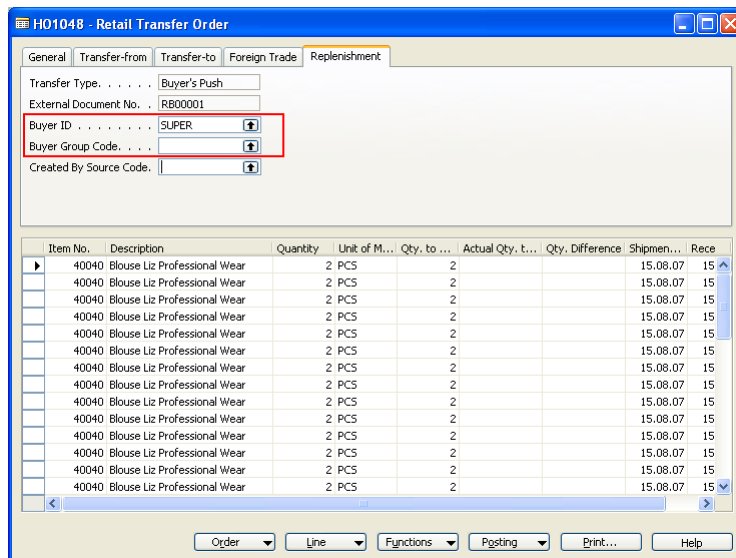


The red boxes show the Buyer ID and/or Buyers Group that need to be filled in to have the Purchase Replenishment Journal visible in the workbench.

5.1.1.6 Transfer Order

The headline shows all the Transfer Order Documents that have not originated from a Transfer Replenishment Journal and the Buyer or the Buyer Group responsible. It is possible to drill down to the Document Number to show the Document.





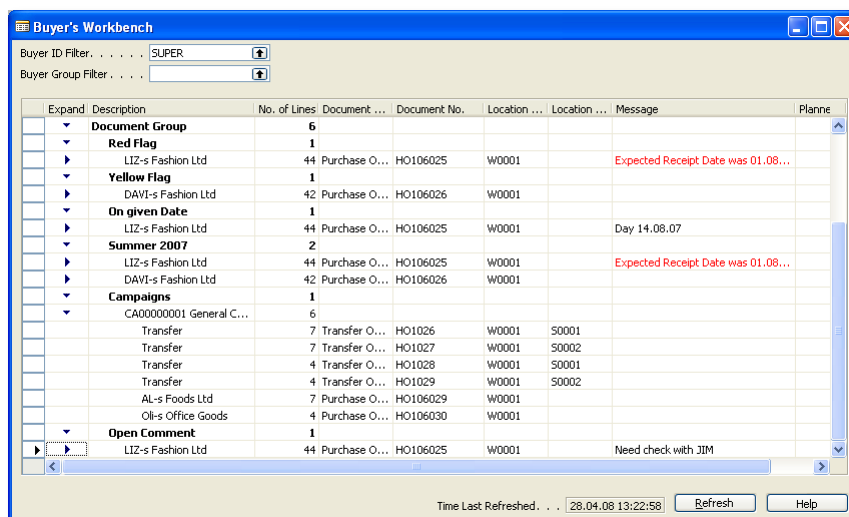
The red box shows the Buyers ID and/or Buyers Group that need to be filled in to have the Transfer Order visible in the workbench

5.1.1.7 Transfer Order from Replenishment

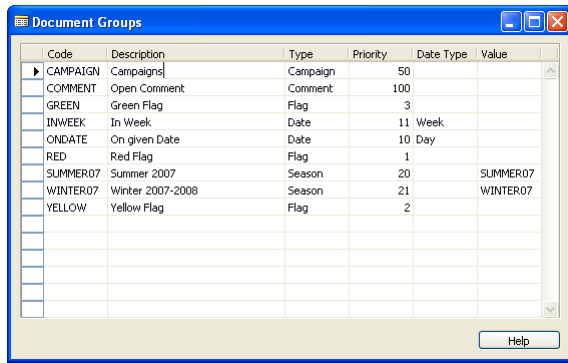
The headline shows all the Transfer Order Documents that originated from a Transfer Replenishment Journal and the Buyer or the Buyer Group responsible. The functionality is the same as for **Transfer Order**.

5.1.1.8 Document Group

The headline shows all the Purchase Order and Transfer Order Documents connected to a Document Group and the Buyer or the Buyer Group responsible. It is possible to drill down to the Document Number to show the Document.



The use of document grouping can be divided into two main steps. The first step is to set up the document groups to use. The second step is to assign a group to a document and enter the additional information associated with that group if needed. The setup is part of Replenishment Setup and the assigning of groups is part of the Purchase and Transfer Order forms.



5.1.1.9 Document Groups Setup

The Document Groups are:

- **Flag**

For grouping documents to be viewed in the Buyer's Workbench.

The name of the flag does not need be the name of a color as in the examples.

Code	Description	Type	Priority	Date Type	Value
GREEN	Green Flag	Flag	3		
RED	Red Flag	Flag	1		
YELLOW	Yellow Flag	Flag	2		

- **Date**

For date marking the document and it will only appear in the Buyer's Workbench once the date condition has been reached.

This gives the buyer the possibility to have the document brought to his attention if it still exists when the date condition is reached.

Code	Description	Type	Priority	Date Type	Value
INWEEK	In Week	Date	11	Week	
ONDATE	On given Date	Date	10	Day	

The types of date conditions are: Day, Week, Month, Quarter and Year.

- **Season**

For connecting a document to a Season and it is then shown under the Season Code in the Buyer's Workbench. This should simplify the management of current and coming seasons for the buyer

Code	Description	Type	Priority	Date Type	Value
SUMMER07	Summer 2007	Season	20		SUMMER07
WINTER07	Winter 2007-2008	Season	21		WINTER07

It is necessary to specify records for each season code for them to be available for selection in the Document Grouping connecting form.

- **Event**

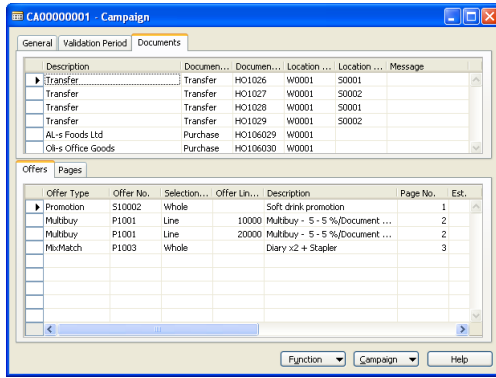
For connecting a document to an Event and it is then shown under the Event Code in the Buyer's Workbench. This is the same functionality as the Season Code.

- **Comment**

For attaching comments to documents to be viewed in the Buyer's Workbench

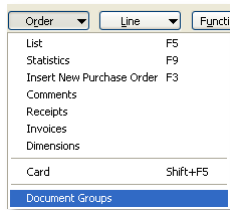
- **Campaign**

For connecting documents to Campaigns to be viewed in the Buyer's Workbench and within the Campaign document. This should simplify things and give the buyer a good overview of the logistics, both in Purchase and Transfer Orders for a Campaign.

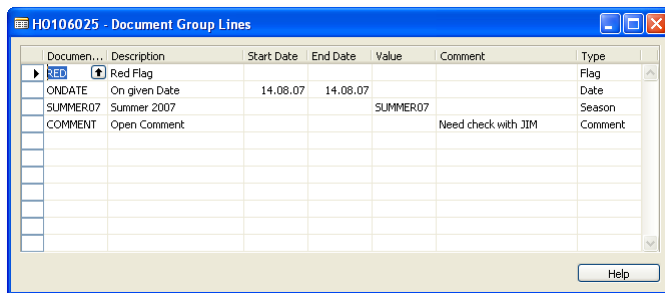


5.1.1.10 Connecting Document Groups to Documents

The process is the same as for connecting a Document Group to a Purchase and Transfer Order. The user selects the *Document Group* function under the Order button in the document.



The Document Group Line form will be shown to the user. He first selects the Document Group Type and then specifies additional data like date or comment. One document can have numerous Document Group Lines.



5.1.1.11 Viewing Document Groups

The Buyer's Workbench will show grouped documents depending of their validation. All groups except the date type are valid only by assigning, date groups are valid only after a given start date and will remain in scope from that day on.

▼	Document Group								
▼	Red Flag								
▶	LIZ-s Fashion Ltd	44	Purchase O...	HO106025	W0001			Expected Receipt Date was 01.08...	
▼	Yellow Flag								
▶	DAVI-s Fashion Ltd	42	Purchase O...	HO106026	W0001				
▼	On given Date								
▶	LIZ-s Fashion Ltd	44	Purchase O...	HO106025	W0001			Day 14.08.07	
▼	Summer 2007								
▶	LIZ-s Fashion Ltd	44	Purchase O...	HO106025	W0001			Expected Receipt Date was 01.08...	
▶	DAVI-s Fashion Ltd	42	Purchase O...	HO106026	W0001				
▼	Campaigns								
▶	CA0000001 General C...	6							
▼	Open Comment								
▶	LIZ-s Fashion Ltd	44	Purchase O...	HO106025	W0001			Need check with JIM	