

**MICROSOFT[®] BUSINESS SOLUTIONS
NAVISION[®] 4.0**

**COURSE 8390A: INVENTORY MANAGEMENT
TRAINING**

Microsoft Internal Use Only

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INTRODUCTION

Welcome

We know training is a vital component of retaining the value of your Microsoft® Business Solutions investment. Our quality training from industry experts keeps you up-to-date on your solution and helps you develop the skills necessary for fully maximizing the value of your solution. Whether you choose Online Training, Classroom Training, or Training Materials, there's a type of training to meet everyone's needs. Choose the training type that best suits you so you can stay ahead of the competition.

Online Training

Online Training delivers convenient, in-depth training to you in the comfort of your own home or office. Online training provides immediate access to training 24 hours a day. It's perfect for the customer who doesn't have the time or budget to travel. Our newest online training option, eCourses, combine the efficiency of online training with the in-depth product coverage of classroom training, with at least two weeks to complete each course.

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Classroom Training provides serious, in-depth learning through hands-on interaction. From demonstrations to presentations to classroom activities, you'll receive hands-on experience with instruction from our certified staff of experts. Regularly scheduled throughout North America, you can be sure you'll find a class convenient for you.

Training Materials

Training Materials enable you to learn at your own pace, on your own time with information-packed training manuals. Our wide variety of training manuals feature an abundance of tips, tricks, and insights you can refer to again and again:

Microsoft Business Solutions Training Courseware: The Microsoft Business Solutions Training Courseware are very detailed training manuals, designed from a training perspective. These manuals include advanced topics as well as training objectives, exercises, interactions, and quizzes.

Look for a complete list of manuals available for purchase on the Microsoft Business Solutions website: www.microsoft.com/BusinessSolutions.

About the Microsoft Navision Inventory Management Courseware

This courseware provides a conceptual and operational description of the standard inventory management functionality of Microsoft® Business Solutions–Navision® 4.0. The manual can be used both in the context of an instructor–led training course and as reference material for self–teaching.

Course Organization

This course provides the participants with an in-depth understanding of the granules and features of the inventory functionality in Microsoft Navision. The recommended duration for the course is one to two days.

The manual consists of the following chapters:

- Chapter 1: Overview
- Chapter 2: Multiple Locations
- Chapter 3: Location Transfers
- Chapter 4: Warehousing
- Chapter 5: Item Tracking

Course Objectives

Whether used in a course setting or for self–teaching, the manual is designed to equip course participants with the product knowledge, both at conceptual and functional levels, required when implementing and supporting Microsoft Navision at a wide range of wholesale and manufacturing companies.

By the end of this course, you should be able to:

- Monitor inventory levels and projected item availability.
- Reserve items and use order tracking functionality to track orders.
- Set up and use multiple locations within a company.
- Set up and use transfers to move quantities between locations.
- Perform basic warehousing operations including receiving, putting away, picking, and shipping.
- Set up and use item tracking features such as serial number tracking, lot number tracking, warranties, and expiration dates.

Target Audience

This training manual is intended for Microsoft Certified Business Solutions Partners' employees selling, implementing and supporting Microsoft Navision.

Course Prerequisites

To successfully participate in the Inventory Management course or complete the training in the self-teaching manner, participants must have passed:

- The Attain Overview test, or have equivalent experience with Microsoft Navision Attain (Financials) application.
- The Attain Essentials test.

Additionally, participants should have a background in distribution/logistics to understand the underlying principles of these businesses.

Before beginning the course (self-teaching), you must install Microsoft Navision on your computer.

Course Overview

This manual provides the participants with an in-depth understanding of the granules and features of the inventory functionality in Microsoft Navision. Every chapter of this manual includes an overview of the granule(s)/feature, explains the setup procedure and describes how the granule(s)/feature supports the associated operating processes involved in inventory management. The chapters also include exercises to allow participants to practice using the functionality on their own.

The chapters in this training manual typically contain the following elements:

- **Concepts:** Concepts explain the business processes that can be managed using the inventory management functionality of the program.
- **Scenarios:** Scenarios represent the typical business situations where the application is used. Scenarios provide a basis for examples that give practical step-by-step descriptions of how to use the application.
- **Test Your Knowledge:** Test Your Knowledge sections allow the course participants (manual readers) to review the information from the chapter by answering questions.
- **Test Your Skills:** Test Your Skills allow the course participants (manual readers) to practice using the program.

Chapter 1: Overview, describes how users can monitor inventory levels in Navision and use the reservation and order tracking systems to ensure that supply meets demand.

Chapter 2: Multiple Locations, explains how to set up and use multiple locations and responsibility centers within one company in order to maximize efficiency and usability.

Chapter 3: Location Transfers, explains how to set up and use the program to record transfers of quantities of items between locations.

Chapter 4: Warehousing, explains how to use the basic warehousing functionality to receive, put away, pick, and ship items in locations that have a defined bin structure.

Chapter 5: Item Tracking, describes how users can track items that require special handling through serial or lot numbers and how they can attach warranty or expiration dates to items.

Demonstration Data

All examples and exercises in this manual are based on a fictitious company, Cronus International Ltd.

Examples and exercises in each individual chapter are, where possible, independent of each other. However, because of the limited scope of the Cronus demo database, the same data is sometimes used in examples illustrating different functionality. Therefore, to be able to follow the examples suggested in this manual, we recommend that you use the clean database every time you start on a new chapter.

To make sure that you always have a clean demo database, make a copy of the database on your hard disk before starting the course.

License Information

To run the examples and exercises included in this training manual, you need a standard Cronus license which is provided on your product CD.

Further Information

The dates in the course manual are in the American format. In order to avoid confusion when reading the manual and following the exercises, if necessary, it is a good idea to change the date format in Windows before starting the training session.

The working date is set to be 01/25/01 (January 25, 2001). It is important that this date is used when following the examples and doing the exercises included in the manual.

You can learn more about Microsoft Navision in the Navision Essentials, Financial Management and Trade Courses.

You can learn more about the topics of distribution and supply chain management from the APICS homepage: <http://www.apics.org>. APICS is a nonprofit, educational society for resource management.

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Student Objectives

What do you hope to learn by participating in this course?

List three main objectives below.

1.

2.

3.

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CHAPTER 1: OVERVIEW

This chapter contains the following sections:

- Overview
- Objectives
- Inventory Availability
- Reservations
- Order Tracking

Objectives

By the end of this chapter you should be able to:

- Determine item availability and projected availability.
- Reserve items from inventory or from a purchase order.
- Track purchase and sales orders using order tracking functionality.

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Overview

Inventory management is a backbone of any company within wholesale and manufacturing businesses. Inventory reliability at a low cost is the key factor to ensure the smooth functioning of all other related operations.

Keeping the inventory data – an item's description in terms of cost/price information, accounting properties, planning and replenishment parameters, and so on – logically structured and organized is an essential precondition for efficient inventory management. For many companies, the greater challenge lies, however, in their ability to couple demand with supply in a manner that provides transparency and guarantees superior customer satisfaction without increasing inventory carrying costs.

To meet such a challenge, most wholesalers and manufacturers generally need:

- To have reliable inventory availability figures calculated on a basis that excludes quantities already committed (allocated) elsewhere.
- To be able to see the details of such allocations in order to locate alternatives that can satisfy urgent customer requests in situations where inventory is otherwise unavailable.
- To gain an overview of inventory level in the future as based on expected supplies in order to be in a position to answer customer requests as to when to expect order delivery.
- To be able to ensure that a specific demand can always be fulfilled through committing a corresponding supply to it.

The Basic Inventory granule in Microsoft® Business Solution–Navision® supports companies in achieving their goals of having accurate inventory data and reliable inventory availability. The Essentials training manual provides a general explanation with regard to the first goal – the inventory records structure.

This chapter addresses the second goal and covers the following topics:

- Inventory availability
- Reservations
- Order tracking

The appendix includes a summary of reservations and order tracking systems when used in combination.

Inventory Availability

The concept of inventory availability is a cornerstone of the company's inventory management. In principle, available inventory can be defined as a quantity that the company has at their disposal at a given point of time. This definition goes beyond the quantity on hand and includes such factors as allocations, meaning quantities that have already been set aside or reserved for specific purposes, and expected inbound orders representing future supply.

With this in mind, inventory availability is defined in connection to the following three aspects: item, location, and point of time.

Depending on the profile and requirements of the company's functional units, calculating the inventory availability is done for a broad range of purposes:

- a. Generally, when inquiring into the item availability situation.
- b. For a requisition department, when deciding on whether, when, and how much to replenish a specific item. In this case, it is necessary to know the quantity available during a certain planning time period.
- c. For a sales department, when responding to customers' inquiries as to whether their orders can be met and when.
- d. When a customer request for a specific item cannot be met, salespeople must be able to get an overview of other alternatives, such as, if there are item quantities that have been set aside for other purposes or can be found elsewhere, or a requested item can be substituted with a similar one.
- e. For a warehouse, when picking an item it is necessary to know if the requested item quantity is available in the warehouse.
- f. For a warehouse/accounting department, when counting physical inventory and identifying differences.

Availability Elements

Inventory availability calculations in Microsoft Navision are performed to meet all of the above-mentioned requirements. Availability calculations consist of the following elements:

- The quantity on hand. This is relevant in connection to requirements a. and f. above.
- The quantity on hand minus allocations. Usually relevant in connection to requirement d.
- The quantity on hand minus allocations plus expected inbound orders reduced by possible pre-allocations. This is relevant in connection to requirements b. and c.

In principle, inventory availability calculation is based on the following formula:

Quantity on hand + Outstanding inbound orders – Allocations

Quantity on Hand

The program calculates the quantity on hand as the sum of all item increases, represented by receipts of inbound orders, minus all item decreases, represented by shipments of outbound orders, at a given date.

The quantity on hand is contained in the **Inventory** field on the **General** tab of each individual item card.

1. In the Navigation Pane, click the **Warehouse** button and click **PLANNING & EXECUTION→ITEMS**. Browse to the item card for item 70000:

The screenshot shows the '70000 Side Panel - Item Card' window with the following data:

Field	Value
No.	70000
Description	Side Panel
Base Unit of Measure	PCS
Shelf No.	A1
Inventory	4,202
Qty. on Purch. Order	0
Qty. on Prod. Order	0
Qty. on Component Lines	0
Qty. on Sales Order	0
Qty. on Service Order	0
Service Item Group	
Blocked	<input type="checkbox"/>
Last Date Modified	05/19/04

Note that the quantity on hand in the **Inventory** field is the total item quantity available in the company and is calculated irrespective of the specific location. Where a company has more than one location set up in the program and orders are received into different locations, it is relevant to know item availability per location. To do so, the user can set the location filter on the item card or, alternatively, use the Items by Location view.

- On the item card, click ITEM→ITEMS BY LOCATION.

No.	Description	BLUE	GREEN	RED	SILVER
70000	Side Panel	2.202	0	0	0
70001	Base	2.310	0	0	0
70002	Top Panel	2.508	0	0	0
70003	Rear Panel	2.094	0	0	0
70010	Wooden Door	2.270	0	0	0
70011	Glass Door	2.212	0	-1	0
70040	Drawer	2.221	0	0	0
70041	Shelf	2.024	0	0	0
70060	Mounting	583	0	249	0

This table contains the item quantities available on sites that are set up in the program as locations. Blank location is not included. Learn more about multiple locations functionality in Microsoft Navision, “Multiple Locations” in this training manual.

The actual physical quantity on hand can differ from the recorded quantity due to shrinkage caused by, for example, scrap, deterioration, or pilferage, as well as administrative mistakes.

Allocations

As mentioned earlier, the quantity on hand can be reduced due to allocations – quantities set aside for some specific purpose, temporarily or permanently. Examples of allocations are as follows:

- A request for items (for example, an urgent sales order) that must be fulfilled before others.
- A quantity that is reserved to serve a specific (foreseen) requirement or kept in quarantine for inspection purposes.
- A quantity defined as a safety stock.
- A quantity set aside for repair.
- A quantity specified for picking or shipment in the warehouse.

Similarly, quantities can also be pre-allocated. Pre-allocation is defined as inbound quantities, such as on a purchase order, being reserved for outbound or specific requests.

In Microsoft Navision, allocations are made either through the reservation system, which is addressed in detail later in the chapter, or through the warehouse, where items can be allocated on picks and shipments.

An example of a typical scenario where calculations of available quantity must take into account possible allocations (reservations) is a sales situation. On the sales line, the program performs a check of whether requested quantity can be fulfilled against the available – unreserved – quantity currently on stock.

Projected Availability

Inbound open or outstanding orders like purchase orders, inbound transfers and production orders are included in the projected (expected) availability calculation. This is relevant in situations when there is a need to know when the inventory on hand is supposed to increase.

You can see the overview of the projected available quantities in the Item Availability By view.

Browse to the item card for item 1908-S and click ITEM→ITEM AVAILABILITY BY→LOCATION. Set the table to show Balance at Date for a week period.

Code	Name	Gross Re...	Schedule...	Planned ...	Projecte...	Planned ...
BLUE	Blue Warehouse	0	0	0	234	0
GREEN	Green Warehouse	5	0	0	52	0
RED	Red Warehouse	1	0	0	13	0
SILVER	Silver Warehouse	0	0	0	0	0
WHITE	White Warehouse	0	0	0	0	0
YELLOW	Yellow Warehouse	0	0	0	0	0

The program calculates the projected availability per location as based on scheduled and planned order receipts. The views of item availability by variant and period also includes the projected availability. As mentioned earlier, calculation of the expected available supply must be offset by any pre-allocations.

Reservations

Reservations are intended for salespeople who want to reserve inventory or inbound items for a specific sales order, and for production planners who want to reserve components for firm planned production orders before they are released.

The reservation system enables the user to make a firm link between existing supply and demand, which directly affects the way the inventory transaction will be performed. Reservations may also be used to handle exceptional situations where the results of the normal, automatic offsetting of supply and demand are unacceptable.

The program follows the simple principle that users should apply reservations manually. Accordingly, users also change or cancel existing reservations manually, unless the foundation for the reservation is removed. If, for example, the user deletes the order, decreases the quantity, or changes the dimensions, then the program will perform the necessary modifications automatically. However, when the user increases the quantity on an order, the program does not automatically increase the reservation; the user must increase the reservation manually.

Automatic reservation with no user involvement occurs when the planning system creates orders using the Make-to-Order (M-T-O) manufacturing policy, or when the user creates a production order directly from a sales order.

It is, however, also possible to work with automatic reservation for an item. You can activate such automatic reservation from the **Planning** tab on the item card by selecting Always in the **Reserve** field. When you activate this option, the program makes an automatic reservation against inventory, purchase orders, and production orders (order network entities), in that order. The program will show a warning if there is not enough supply to reserve the full quantity of the demand.

No other setup is required for reservations.

Handling Reservations

The following reservation options are available from a sales order:

- Reserve inventory (item ledger entry)
- Reserve purchase order line
- Reserve firm planned production order line

The program allows the user to reserve items that are not available in inventory but are inbound on purchase or production orders. The condition is, of course, that their expected receipt date is earlier than the shipment date of the sales order. The program cancels a reservation automatically when date changes make offsetting impossible.

Below is a short scenario that illustrates how to reserve items on a purchase order for a sales order:

Scenario 1: Reserving Items on a Purchase Order

A salesperson is about to finalize a sales order for 4 units of item 80201 for customer 20000. The items are not in inventory, but they are expected to arrive before the sales order is to be shipped. To be absolutely sure that the sales order is fulfilled, the salesperson reserves the needed quantity of the items from the purchase order.

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1. Create a purchase order for 10 units of item 80201 form vendor 30000 with expected receipt date of 02/01/01 at a blank location.

The screenshot shows the 'Purchase Order' window for '106024 CoolWood Technologies'. The 'Shipping' tab is active. The 'Ship-to' information is as follows:

Ship-to Name	RONUS International Ltd.	Location Code	
Ship-to Address	5 The Ring	Inbound Whse. Handl...	
Ship-to Address 2	Westminster	Shipment Method Code	CIF
Ship-to Post Code/City	GB-W2 8HG London	Lead Time Calculation	
Ship-to Contact		Requested Receipt Date	
		Promised Receipt Date	
		Expected Receipt Date	02/01/01
		Sell-to Customer No.	
		Ship-to Code	

The item table below shows one line item:

T... No.	Description	Location ...	Quantity	Reserve...	Unit of M...	Direct U...
I...	80201 GRAPHIC PROGRAM		10		PCS	2:30

Buttons at the bottom include: Order, Line, Functions, Posting, Print..., Help.

2. Create a sales order for customer 20000 for 4 units of item 80201 with the shipment date of 02/03/01 from a blank location:

The screenshot shows the 'Sales Order' window for '1001 Selangorian Ltd.'. The 'Shipping' tab is active. The 'Ship-to' information is as follows:

Ship-to Code		Location Code	
Ship-to Name	Selangorian Ltd.	Outbound Whse. Han...	
Ship-to Address	153 Thomas Drive	Shipment Method Code	EXW
Ship-to Address 2		Shipping Agent Code	
Ship-to Post Code/City	GB-CV6 1GY Coventry	Shipping Agent Servic...	
Ship-to Contact	Mr. Mark McArthur	Shipping Time	
		Late Order Shipping	<input type="checkbox"/>
		Package Tracking No.	
		Shipment Date	02/03/01
		Shipping Advice	Partial

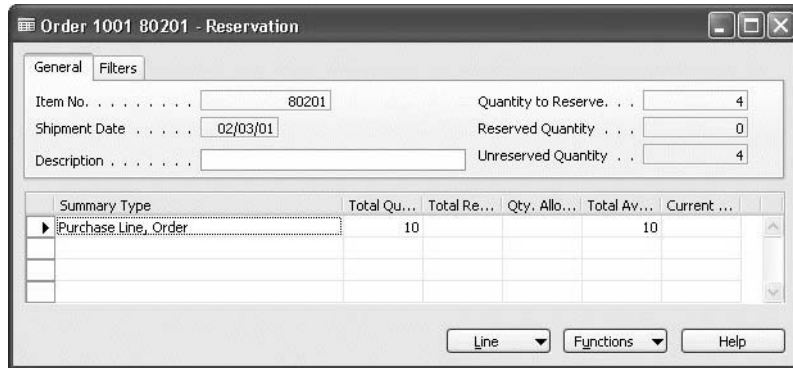
The item table below shows one line item:

T... No.	Description	Location ...	Quantity	Reserve...	Unit of M...	Unit Pric...	L
I...	80201 GRAPHIC PROGRAM		4		4 PCS	4.20	

Buttons at the bottom include: Order, Line, Functions, Posting, Print..., Help.

Now, make the reservations for the required item quantity:

3. Click FUNCTIONS→RESERVE.

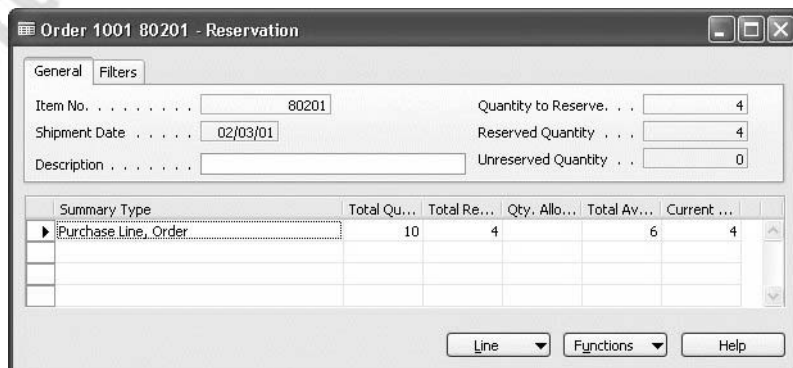


The Reservation window header contains information about the demand. The lines show the available supply, including how much of the supply is currently allocated in the warehouse on picks or shipments. This is shown in the **Qty. Allocated in Warehouse** field. The lines may contain several sources of supply with different reservation status.

***NOTE:** If the sales order is for specific serial and/or lot numbers, the Reservation window will show that unique availability only, and item tracking information will be available when you perform a look up from the different quantity fields.*

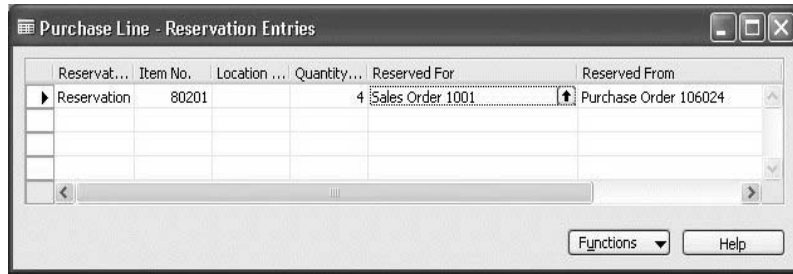
In this scenario, the salesperson is not concerned with reserving specific items (items with serial/lot numbers), so he can proceed to reserve 4 units from the 10 units on the purchase order line.

4. Click FUNCTIONS→RESERVE FROM CURRENT LINE.



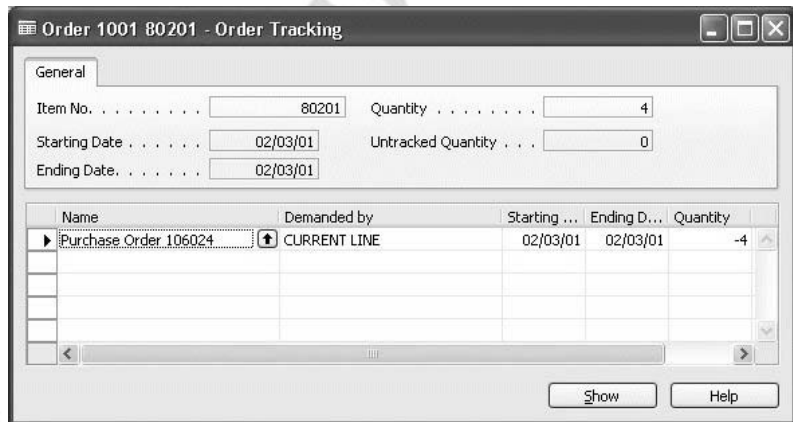
The required quantity is now reserved for the sales order. As a result, the program has created reservation entries.

- From the purchase order, click LINE→RESERVATION ENTRIES.



Reservations and order tracking are managed by the same system, so the program also establishes a tracking link between the sales and purchase orders.

- From the sales order line, click FUNCTIONS→ORDER TRACKING.



The principles of the order tracking functionality are explained in detail in the next section.

Order Tracking

Like reservation, order tracking is the linking of demand to a corresponding supply. However, the program creates order tracking links automatically to reflect the order fulfillment – either suggested dynamically by the availability system or as a reflection of concrete planning results. In any case, order tracking links mainly serve to inform the user about possible fulfillment.

A more advanced feature of order tracking is that of action messaging, which is mostly for decision making in connection with production planning. Please refer to the Manufacturing training manual for detailed information.

When you set up an item for dynamic order tracking using the Tracking Only code (see the “Setting up Order Tracking” section), the program creates order tracking entries dynamically as soon as an order that can be fulfilled is created for the item. This linking works as mere information about possible fulfillment within the availability system and, as such, may work as a simple planning tool.

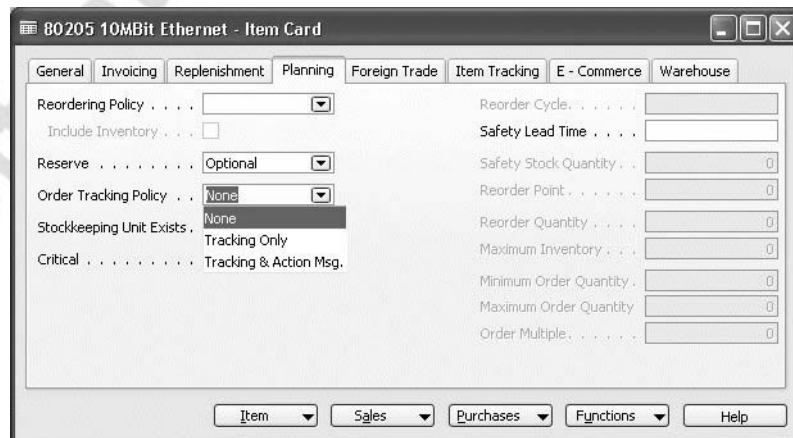
In addition to this dynamic order tracking, the program also creates links between demand and a corresponding supply created by a planning run. A typical example of this is the order tracking between a sales order and a purchase order indicating that the existence of the sales order caused the planning run to create the purchase order.

When the user plans inventory replenishment, the program creates order tracking links between supply and demand to reflect details in the new and balanced demand-supply dependencies. Because this is carried out dynamically, the procedure must follow rather simple rules in order to minimize the level of disorder in the company’s supply chain. The planning system rearranges any disorder by creating new order tracking entries in accordance with the planning parameters of the item. After the planning engine has run, any demand should be met by one or more sources of supply (inventory and/or inbound orders). At the same time, any replenishment order should ideally fulfill one or more demands.

Setting up Order Tracking

Set up order tracking on the **Planning** tab of the item card in the **Order Tracking Policy** field.

1. Browse to the item card for item 80205. Click the **Planning** tab:



The following options are available for order tracking:

- **None:** The program creates no order tracking entries.

- Tracking Only: The program creates order tracking entries to link demand and supply in two circumstances. Dynamically, when creating an order that may be offset by an existing order. This is done after running the planning engine.
 - Tracking & Action Msg: In production planning, this option means the same as above, plus the program will create action messages for net change planning purposes.
2. Set the value in the **Order Tracking Policy** field to Tracking Only for item 80205

Tracking Orders

The following scenario illustrates how the program's planning engine creates order tracking entries via a requisition worksheet.

Scenario 2: Tracking to a Planned Purchase Order

Customer 20000 orders 100 units of item 80205 for delivery on the same date as item 80201 in the previous scenario. The items are to be shipped from the Blue warehouse.

The requisition department uses the program's planning facility to create inbound orders to fulfill this demand. After the new purchase order is created, the salesperson can verify that the purchase of items has been planned for.

1. To be able to use the planning facility, first set the option of the **Reordering Policy** field on the **Planning** tab of the item card for item 80205 to Fixed Reorder Qty.
2. Browse to the sales order for 4 units of item 80201 created in scenario 1.
3. Enter the order details on another sales line. Make sure that the **Location Code** field contains BLUE.

1001 Selangorian Ltd. - Sales Order

General Invoicing Shipping Foreign Trade E - Commerce

Ship-to Code Location Code.

Ship-to Name Selangorian Ltd. Outbound Whse. Han...

Ship-to Address 153 Thomas Drive Shipment Method Code EXW

Ship-to Address 2 Shipping Agent Code

Ship-to Post Code/City GB-CV6 1GY Coventry Shipping Agent Servic...

Ship-to Contact Mr. Mark McArthur Shipping Time

Late Order Shipping

Package Tracking No.

Shipment Date 02/03/01

Shipping Advice Partial

T... No.	Description	Location ...	Quantity	Reserve...	Unit of M...	Unit Pric...	L
I... 80201	GRAPHIC PROGRAM		4	4	PCS	4.20	
I... 80205	10MBit Ethernet	BLUE	100		PCS	4.00	

Customer Information

- Sell-to Customer
- Ship-to Addresses (2)
- Contacts (1)
- Sales History
- Bill-to Customer
- Avail. Credit 0

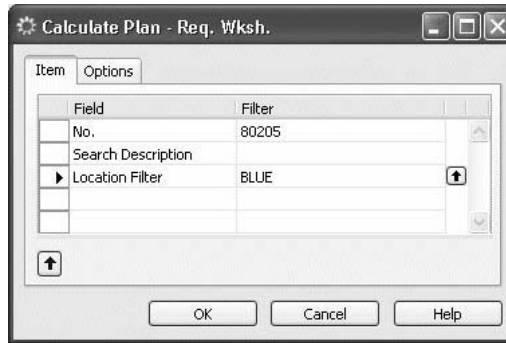
Item Information

- Item Card
- Availability (-100)
- Substitutions (0)
- Sales Prices (0)
- Sales Line Qi... (0)

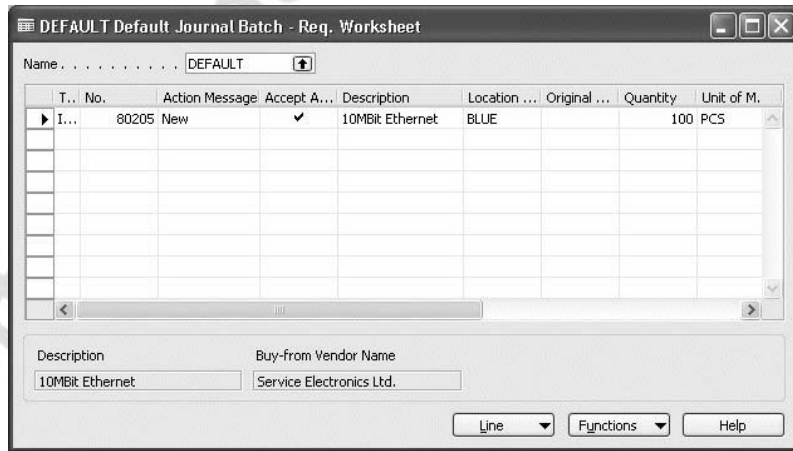
Order Line Functions Posting Print... Help

Now proceed to the requisition task.

4. In the Navigation Pane, click the **Purchase** button and click PLANNING→REQUISITION WORKSHEETS.
5. Click FUNCTIONS→CALCULATE PLAN and set the item and location code filters on the **Item** tab so that the program calculates planning for item 80205 in the Blue location.



6. On the **Options** tab in **Order Date** field, enter the work date and in the **Ending Date** field, enter 02/05/01.
7. Click **OK** to plan the demand for item 80205 at location BLUE.



The program creates a requisition line suggesting you create a purchase order to fulfill the demand of the sales order.

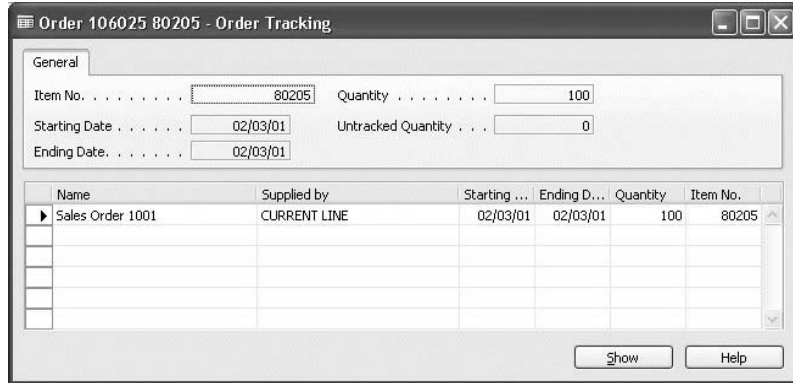
NOTE: To learn more about the program's planning facility, refer to the Trade training manual, "Requisition Management."

8. Click FUNCTIONS→CARRY OUT ACTION MESSAGE to create a suggested purchase order.
9. Browse to the newly created purchase order.

Microsoft Navision Inventory Management

The program has automatically created a link between the purchase order in question and the sales order whose demand triggered the planning run to create the purchase order.

10. From the purchase order, click FUNCTIONS→ORDER TRACKING to see the associated sales order:



Test Your Knowledge – Inventory Overview

1. Complete the following formula:

Available Inventory =

_____ + Outstanding Inbound Orders – _____

2. True or False: It is possible to reserve a quantity of an item from a purchase order that has been created but not yet received.
3. What is the purpose of the order tracking feature in Microsoft Navision?

Microsoft Internal Use Only

Quick Interaction: Lessons Learned

Take a moment to write down three Key Points you have learned from this chapter:

- 1.

- 2.

- 3.

Microsoft Internal Use Only

CHAPTER 2: MULTIPLE LOCATIONS

This chapter contains the following sections:

- Overview
- Objectives
- Setting Up a Company with Multiple Locations
- Selling and Purchasing in a Company with Multiple Locations
- Controlling Inventory at Multiple Locations

Objectives

By the end of this chapter, you should be able to:

- Set up a company with multiple locations.
- Link customers and vendors to locations.
- Set up responsibility centers.
- Link users, customers, and vendors to responsibility centers.
- Create sales and purchase orders for multiple locations.
- Create and set up stockkeeping units.

Microsoft Internal Use Only

Overview

Many modern companies have their organization and operations distributed over large geographic areas, with each unit being managed independently. Such an approach to organizing their business helps companies to gain competitive advantage through achieving operational flexibility and customer responsiveness. At the same time, companies with multiple locations face the challenge of retaining control over their decentralized operations and optimizing the inventory flows. To meet this challenge, such companies must ensure that the real-time information generated at the location level is available to the rest of the organization.

The Multiple Locations and Responsibility Centers granules in Microsoft® Business Solutions–Navision® provide companies that have multiple sites the opportunity to manage their business operations in the most flexible, yet optimal way.

With the Multiple Locations granule, companies can manage their inventory in multiple locations using one database. Two concepts – location and stockkeeping unit – are the cornerstone of this granule. A location is defined as a place that handles physical placement and quantities of items. The concept is broad enough to include locations such as plants or production facilities as well as distribution centers, warehouses, showrooms and service vehicles. A stockkeeping unit is defined as an item or a variant of an item at a specific location. With the stockkeeping units, companies with multiple locations are able to add replenishment information, addresses, and some financial posting information on the location level. As a result, they can replenish variants of the same item for each location as well as order items for each location on the basis of location-specific replenishment information.

The Responsibility Centers granule extends the multiple locations functionality by providing the possibility of handling administrative centers. A responsibility center can be a cost center, a profit center, or an investment center. Examples of responsibility centers are a sales office, a purchasing department for several locations, and a plant planning office. With this granule, companies can set up user-specific views to show only sales and purchase documents related to a particular responsibility center.

Note that the Multiple Locations and the Responsibility Centers granules can be implemented independently.

Setting Up a Company with Multiple Locations

In this section, you should learn how to use the Multiple Locations granule to set up your company with multiple locations to reflect its current and future administrative and geographic configuration. The next section explains the implications that the alternative setups have on the company's business processes in respect to making sales and purchase orders.

We'll use the business operations of Cronus International Ltd. in the United Kingdom market as an example to demonstrate the possibilities of the granules. First, turn your attention to the Multiple Locations granule and then proceed to the Responsibility Centers granule. To demonstrate the flexibility of the program, we present you with a number of different scenarios.

Setting Up Locations

In the following example, a company's structure is represented by a head office, which administers all purchases and sales, and a number of warehouses where inventory is handled and stored. The company follows a centralized purchase policy.

Scenario 1: Setting Up Locations

To run its business in the United Kingdom, Cronus International Ltd. has five physical premises: the headquarters, located in London, and five warehouses located in other cities around the country. The warehouse in Birmingham functions as a central warehouse to which most of the company's vendors ship their items. The central warehouse then transfers inventory to all other warehouses, which operate as distribution centers from which sales orders are shipped to the customers.

Let's have a look at how Cronus reflects their organizational configuration in the Microsoft Navision setup.

The general company information is recorded on the company information card.

1. In the Navigation Pane, click the **Administration** button and click APPLICATION SETUP→GENERAL→COMPANY INFORMATION. The Company Information window appears.

Fields on the **General** tab contain the address details of the Cronus company headquarters:

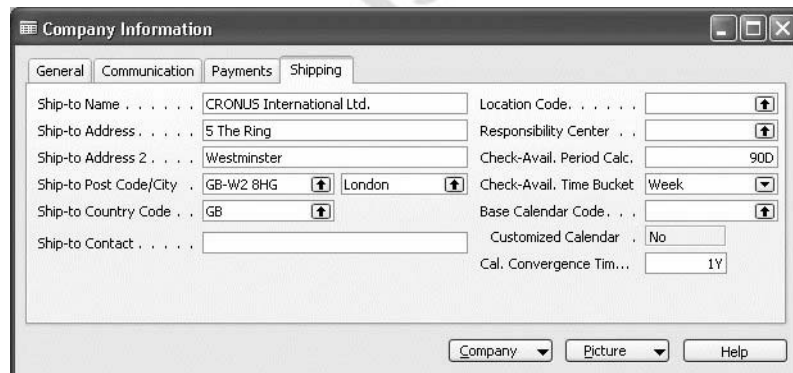


The screenshot shows the 'Company Information' dialog box with the 'General' tab selected. The fields are populated with the following information:

Name	CRONUS International Ltd.
Address	5 The Ring
Address 2	Westminster
Post Code/City	GB-W2 8HG London
Country Code	GB
Phone No.	0666-666-6666
VAT Registration No.	GB77777777
Industrial Classification	

At the bottom right, there is a 'Company' dropdown menu, a 'Picture' dropdown menu, and a 'Help' button. A logo for 'cronus INTERNATIONAL' is displayed on the right side of the dialog.

2. Click the **Shipping** tab.



The screenshot shows the 'Company Information' dialog box with the 'Shipping' tab selected. The fields are populated with the following information:

Ship-to Name	CRONUS International Ltd.	Location Code	
Ship-to Address	5 The Ring	Responsibility Center	
Ship-to Address 2	Westminster	Check-Avail. Period Calc.	90D
Ship-to Post Code/City	GB-W2 8HG London	Check-Avail. Time Bucket	Week
Ship-to Country Code	GB	Base Calendar Code	
Ship-to Contact		Customized Calendar	No
		Cal. Convergence Tim...	1Y

At the bottom right, there is a 'Company' dropdown menu, a 'Picture' dropdown menu, and a 'Help' button.

By default, the program fills in the various ship-to fields on the **Shipping** tab with the address details of the company's headquarters. However, if the company's warehouse is located at a different address than the headquarters, the user can overwrite information in the ship-to fields with the location's address. The information in these fields is then be printed on purchase orders, for example, so that vendors ship items to the correct location.

In the **Location Code** field, the user can select the location code that corresponds to the company's ship-to address. If the field contains a code, whenever the purchasers order items to be shipped to the company, the program automatically uses the warehouse location represented by the code.

The location codes are set up on the location cards:

3. In the Navigation Pane, click the **Administration** button and click APPLICATION SETUP→WAREHOUSE→LOCATIONS. The locations card appears.

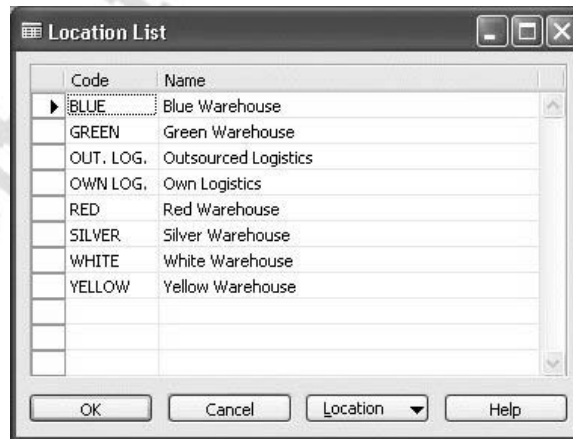
Generally, the location card is used to record information about the company's locations. In Microsoft Navision, location is defined as a physical place where items are produced, handled, and stored before being sold. A location could be, for example, a production plant, a warehouse, or a distribution center. The purpose of setting up locations in Microsoft Navision is to make a distinction between where different locations are geographically located and how they handle inventory. The address information held on the location card is printed on the purchase documents to notify vendors which locations they should ship the ordered items to.

Companies must set up a location card and a location code for each of their locations.

NOTE: We recommend that companies set up at least one location, where they record inventory increases and decreases. If no location is set up, the program uses a "blank location." If part of the inventory quantity is on the "blank location," it is difficult to discern that quantity in Microsoft Navision. For example, the Item by Location only shows the quantities in the different locations but does not show any quantity that does not belong to a location.

Cronus has set up eight locations: six represent warehouses and two, OUT. LOG. and OWN LOG., are the in-transit locations. The concept of in-transit location is explained in the "Location Transfers" chapter.

4. On the location card, press F5 to view the location list.



By selecting a location on the list and clicking LOCATION→CARD, you can see the address and setup details for each location.

The distribution center in Birmingham, represented by location code Blue, is the location that Cronus wants its vendors to ship ordered items to. To set up this process in the program, follow this procedure:

5. On the **Shipping** tab of the Company Information window, in the **Location Code** field, select Blue.

Linking Customers and Vendors to Locations

For a number of reasons, such as to ensure fast deliveries to their customers or to optimize purchase processes with some vendors, companies may choose to pursue a decentralized distribution strategy. Such a strategy suggests that instead of one central warehouse, vendors ship purchase orders to different locations, which then ship the sales orders to the customers. To reflect these procedures in the program, the company can decide to link certain customers and vendors to specific locations.

The following is an example of a situation where a company that implemented a decentralized distribution policy chooses to link some of their customers and vendors to specific locations. As in the previous example, the company has a head office and a number of warehouses located at different geographical locations.

Scenario 2: Link a Customer and Vendor to a Location

Cronus customer 40000, Deerfield Graphics Company, is located in Gloucester. Due to the customer's proximity to the Yellow warehouse, the company has established a procedure by which they always ship items to this customer from this specific warehouse, instead of the central warehouse represented by the default Blue location.

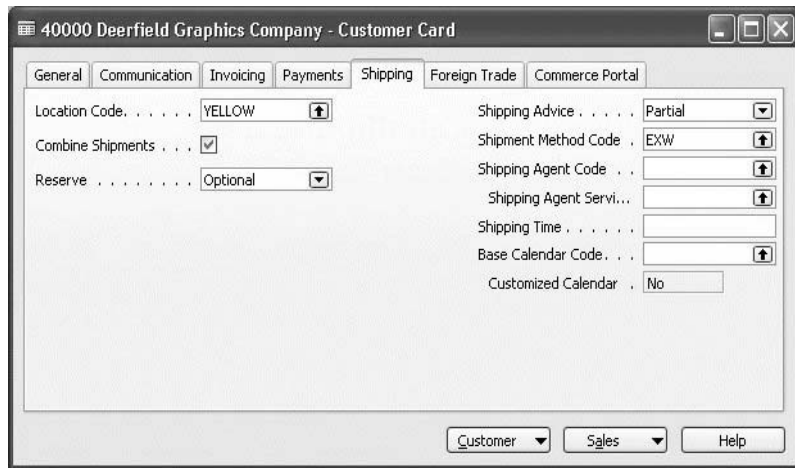
Similarly, Cronus has decided that one of its vendors, vendor 40000, will always ship orders to its Green warehouse located in Liverpool.

To reflect these procedures in the program, the company links customer 40000 to the Yellow location and links vendor 40000 to the Green warehouse.

To link a customer to a location, the user must select a default location code on the customer card:

1. In the Navigation Pane, click the **Sales & Marketing** button and click SALES→CUSTOMERS. The customer card appears.

2. Select customer 40000 and click the **Shipping** tab.

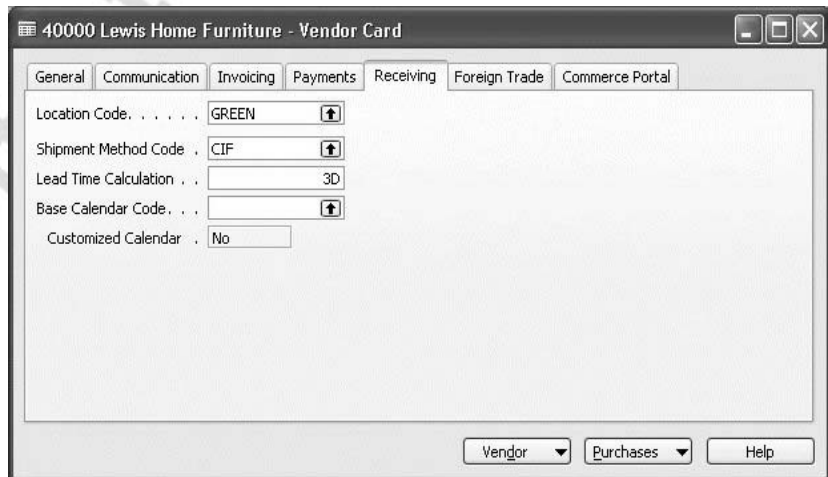


The screenshot shows the 'Shipping' tab of the '40000 Deerfield Graphics Company - Customer Card' window. The 'Location Code' field is set to 'YELLOW'. Other fields include 'Shipping Advice' (Partial), 'Shipment Method Code' (EXW), 'Shipping Agent Code', 'Shipping Agent Servi...', 'Shipping Time', 'Base Calendar Code', and 'Customized Calendar' (No). The 'Combine Shipments' checkbox is checked, and 'Reserve' is set to 'Optional'. Navigation buttons for 'Customer', 'Sales', and 'Help' are at the bottom.

Notice that the **Location Code** field contains the code for the Yellow warehouse. The program uses this code as a default location code every time the user makes a sales order for this customer.

To link a vendor to a location, the user must select a default location code on the vendor card.

3. In the Navigation Pane, click the **Purchase** button and click PLANNING→VENDORS. Browse to the vendor card for vendor 40000 and click the **Receiving** tab.



The screenshot shows the 'Receiving' tab of the '40000 Lewis Home Furniture - Vendor Card' window. The 'Location Code' field is set to 'GREEN'. Other fields include 'Shipment Method Code' (CIF), 'Lead Time Calculation' (3D), 'Base Calendar Code', and 'Customized Calendar' (No). Navigation buttons for 'Vendor', 'Purchases', and 'Help' are at the bottom.

Notice that the **Location Code** field contains the code for the Green location. The program uses this code as a default location code every time the user makes a purchase order for this vendor.

Later in this chapter, you learn what implications this setup has on where addresses on different documents come from. You also see how the company can make use of the functionality of the Multiple Locations granule to distinguish between different locations and manage inventory at each specific location.

Setting Up Responsibility Centers

In Microsoft Navision, companies can set up responsibility centers to help administer their business. For example, a responsibility center can administer sales and purchases for one or more warehouses or distribution centers, where goods are handled and stored prior to being sold. With the functionality of the Responsibility Centers granule, companies can set up user-specific views to show only sales and purchase documents related to a particular responsibility center.

The following is an example of a situation where a company chooses to set up two responsibility centers.

Scenario 3: Set Up a Responsibility Center

To optimize their business operations on the United Kingdom market and to be closer to their customers, Cronus International Ltd. divides their activities into two main geographical areas: the Central area and the Southern area. Each of these areas is administered through a responsibility center. The London responsibility center administers the southern area, while the Birmingham responsibility center is responsible for the central area.

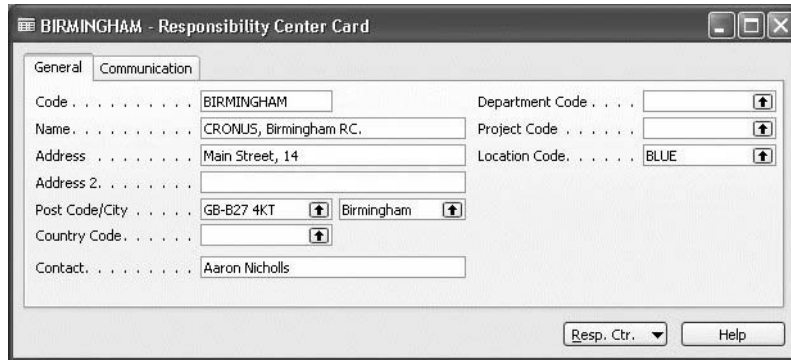
Remember that the company also has six warehouses located in these two areas. In the Central area, the Blue warehouse operates as a central warehouse to which most of the vendors in the area ship their purchase orders, while in the Southern area, vendors ship the orders to different warehouses.

Let's have a look at how Cronus reflects their organizational configuration in the Microsoft Navision setup.

First, look at the responsibility center cards.

1. In the Navigation Pane, click the **Administration** button and click APPLICATION SETUP→GENERAL→COMPANY INFORMATION.
2. Click COMPANY→RESPONSIBILITY CENTERS. The responsibility center card appears.

- Browse to the card for the Birmingham responsibility center:



The screenshot shows a window titled "BIRMINGHAM - Responsibility Center Card" with two tabs: "General" and "Communication". The "General" tab is active. The fields and their values are as follows:

Field	Value
Code	BIRMINGHAM
Name	CRONUS, Birmingham RC.
Address	Main Street, 14
Address 2	
Post Code/City	GB-B27 4KT Birmingham
Country Code	
Contact	Aaron Nicholls
Department Code	
Project Code	
Location Code	BLUE

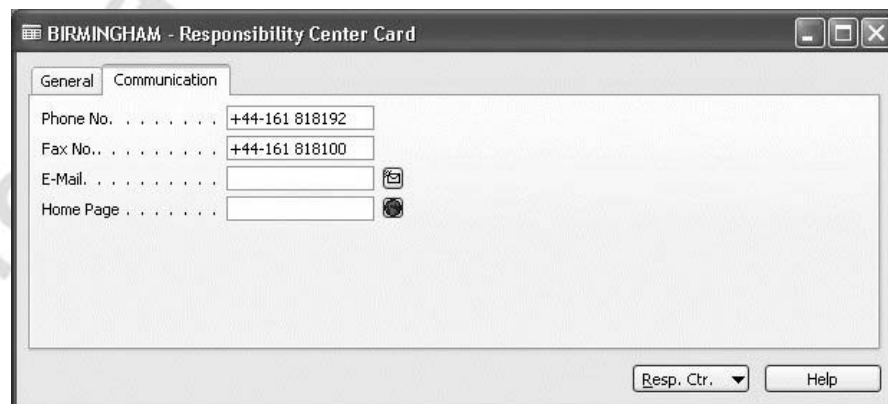
At the bottom right of the window, there is a dropdown menu labeled "Resp. Ctr." and a "Help" button.

Fields on the **General** tab on the responsibility center card specify the code and the name for the responsibility center as well as address details.

Each responsibility center has a name, such as the address of the regional office, as well as a code representing the name. The user can use this responsibility center code elsewhere in the program. For example, when the user enters a responsibility center code on purchase and sales documents, it affects the address and dimensions on the documents. You learn about this later in this chapter.

The **Location Code** field contains the code of a default warehouse, which in this case is the Blue warehouse. Physical transactions administered by the Birmingham responsibility center take place at this location. Entering a location code here makes that location the automatic default location on all sales and purchase documents with this responsibility center.

Cronus has specified the communication information for the Birmingham responsibility center on the **Communication** tab.



The screenshot shows the same window as above, but with the "Communication" tab active. The fields and their values are as follows:

Field	Value
Phone No.	+44-161 818192
Fax No.	+44-161 818100
E-Mail	
Home Page	

At the bottom right of the window, there is a dropdown menu labeled "Resp. Ctr." and a "Help" button.

Another responsibility center for Cronus is located in London:

The screenshot shows a window titled "LONDON - Responsibility Center Card". It has two tabs: "General" and "Communication". The "General" tab is selected. The fields are as follows:

Code	LONDON	Department Code	
Name	CRONUS, London RC.	Project Code	
Address	Kensington Street, 22	Location Code	
Address 2			
Post Code/City	GB-N12 5XY	London	
Country Code			
Contact	Jack S. Richins		

At the bottom right, there is a "Resp. Ctr." dropdown menu and a "Help" button.

Note that the London responsibility center does not have a default location code.

Linking Responsibility Centers to Other Objects in the Program

Linking Users to Responsibility Centers

Having multiple locations can create problems in terms of who can access what. In Microsoft Navision, it is possible to assign permission for different users to perform activities in relation to the different responsibility centers. In this way, the company can ensure that a specific user only gets access to the data that is relevant for that user's particular responsibility center.

Once a user is defined and assigned to a responsibility center, the program automatically selects the responsibility center linked to this specific user every time the user logs on with their own user ID. Specifically, this means that users can make sales and purchases only from the responsibility center indicated in their set of permissions. Also, the responsibility center name appears in the sales and purchase orders as well as in other places in the program where the **Responsibility Center** field is present.

The following is an example of a situation where a company wants to set up their users so that they can create and view sales and purchase documents only related to the responsibility center from which they operate.

Scenario 4: Link Users to Responsibility Centers

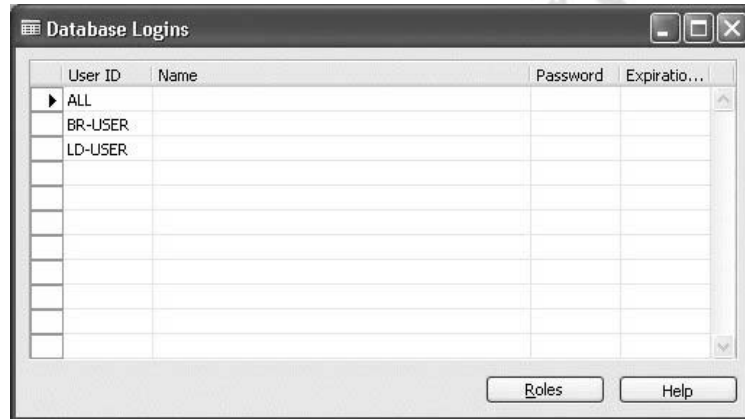
Cronus has two responsibility centers, one in London and another one in Birmingham. The company has decided to set up three main users according to the following considerations:

- A user with the user ID ALL has all the permissions.
- A user with the user ID BR-USER has permission to operate only from the Birmingham responsibility center.
- A user with the user ID LD-USER has permission to operate only from the London responsibility center.

To reflect these procedures in the program, the company must link users to the corresponding responsibility center. The following is the procedure for how to do that.

First, create the users and assign roles to them.

1. On the menu bar, click TOOLS→SECURITY→DATABASE LOGINS.
2. Create three users with the user IDs: ALL, BR-USER and LD-USER:



3. Leave the **Password** and **Expiration Date** fields blank.
4. Select user ID ALL and click **Roles** to open the Roles window.
5. In the **Role ID** field, select SUPER.
6. Repeat steps 4 and 5 for the user IDs BR-USER and LD-USER.

Now, we must assign new users to specific responsibility centers so that the program can accordingly filter data used when creating transactions.

Set up permissions for users in the User Setup window:

7. In the Navigation Pane, click the **Administration** button and click APPLICATION SETUP→USERS→USER SETUP. The User Setup window appears.
8. Create three lines for each of the newly created users by selecting the corresponding user IDs in the **User ID** field.
9. In the **Sales Resp. Ctr. Filter**, **Purchase Resp. Ctr. Filter** and **Service Resp. Ctr. Filter** fields, select Birmingham for the user with BR-USER as user ID to indicate that this user is linked to the Birmingham responsibility center and has permission to make sales, purchase and service orders from this center.

10. Similarly, link the user with the user ID LD-USER to the London responsibility center:



NOTE: You should always have one user configured as ALL, so that there is always a user ID with all the permissions.

Linking Customers and Vendors to Responsibility Centers

Companies often have established processes whereby certain customers are always administered from a specific sales responsibility center. A similar process may exist for vendors. To reflect these business practices, companies may want to use the program's functionality to link their customers and vendors to certain responsibility centers.

As an example of this feature, suppose that a salesperson creates a sales order for a customer that is linked to a specific responsibility center. The corresponding responsibility center code defaults on the sales order header as well as on the printout of the sales order. In addition, the company is able to track their performance toward customers, per specific responsibility center.

The following is an example of a situation where a company chooses to link some of their customers and vendors to a specific responsibility center.

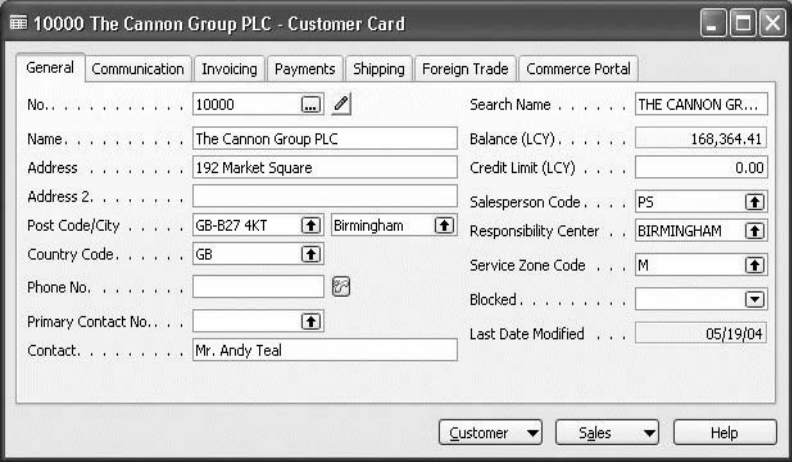
Scenario 5: Link a Customer and Vendor to a Responsibility Center

As a part of their strategy to increase customer responsiveness and improve customer care, Cronus has placed the responsibility for key customers with each individual responsibility center. Similarly, each responsibility center is responsible for improving their relationship with key vendors. To help the responsibility centers to fulfill their new role, Cronus has chosen to link its customers 10000 and 50000 to the Birmingham and London responsibility centers, respectively. Similarly, one of its vendors, 10000, is linked to the London responsibility center.

Let's have a look at how Cronus reflects this business pattern in the Microsoft Navision setup.

To link a customer to a responsibility center, the user must select a responsibility center code on the customer card.

1. In the Navigation Pane, click the **Sales & Marketing** button and click SALES→CUSTOMERS. Browse to the customer card for customer 10000:

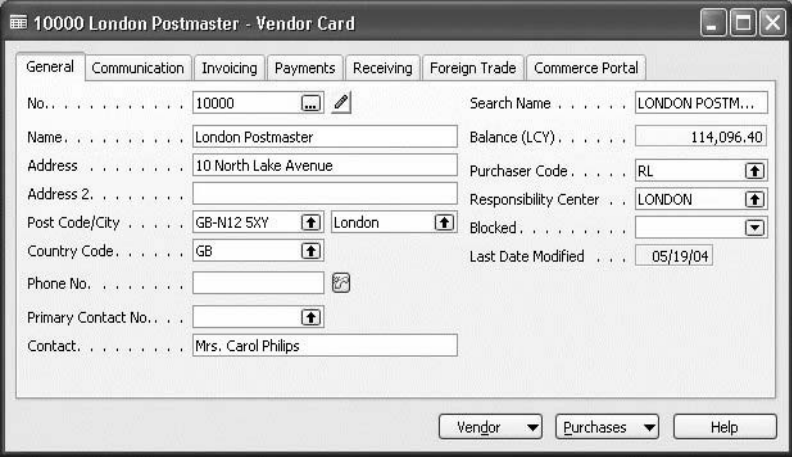


Notice that the **Responsibility Center** field on the **General** tab contains the code for the Birmingham center.

2. Open the customer card for customer 50000 to see the default responsibility center set up for it.

Similarly, to link a vendor to a responsibility center, the user must select a responsibility center code on the vendor card:

3. In the Navigation Pane, click the **Purchase** button and click PLANNING→VENDORS. Browse to the vendor card for vendor 10000:



Note that this vendor is linked with the London responsibility center.

General Guidelines for Setting Up a Company with Multiple Locations

As illustrated in the previous sections, with the two granules in Microsoft Navision, Multiple Locations and Responsibility Centers, multi-site companies can exercise a high degree of flexibility when setting up their organizations in the program.

However, we recommend that companies choose one of the two following generic approaches to the setup:

- The user-focused approach.
- The account (customer/vendor)-focused approach.

The companies where the user perspective is of a higher priority than that of the account may want to choose the user-focused approach. In this case, they follow the general guidelines for setup as follows:

- Link responsibility centers to the users.
- Select a default location code for each responsibility center.
- Do not select default location codes for the accounts.

Where the account perspective is of a higher priority than that of the user, companies may want to choose the account-focused approach. In this case, they use the following general guidelines for setup:

- Select default responsibility centers and location codes for the accounts.
- Do not link responsibility centers to the users.
- Do not select default location codes for the responsibility centers.

NOTE: *The demo database for Cronus does not reflect the above-mentioned approaches.*

Test Your Skills – Create and Set Up a New Location

Scenario: Cronus International Ltd. extends its operations in England and purchases a new warehouse in Brighton.

Cronus management decides that vendors 10000 and 50000 will use this new warehouse as a ship-to location.

All Skill Levels

Your tasks are as follows:

1. Set up this new location in the program. To do so, you must create a new location card. The new location is called Orange Warehouse and it has the location code Orange.
2. Set the Orange location as the default location for vendors 10000 and 50000.

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Test Your Skills – Create and Set Up a New Responsibility Center

Scenario: As Cronus business in northern England increases, the company decides to open a new office in Manchester, which acts as a profit center administrating sales and purchases in the area. A warehouse located in Liverpool and represented by the location code Green is chosen as a default location for this responsibility center.

Employees responsible for sales and purchases at the Manchester responsibility center will have their own user IDs, which allow them to perform the respective processes only from this responsibility center.

Among other things, management also decides to administrate all deals with customer 30000 from the Manchester responsibility center.

All Skill Levels

Your tasks are as follows:

1. Set up this new administrative office in the program. To do so, you must create a new responsibility center card. The new responsibility center will have the responsibility center code Manchester.
2. Set location Green as a default location for this responsibility center.
3. Set up at least one user at the Manchester responsibility center with the permission to make both sales and purchase orders from this center. First, create this user in the program with the MNC-USER user ID. Then set up permissions for this user.
4. Set the Manchester responsibility center as a default for customer 30000.

Test Your Skills – Set up a Multi-site Company

Scenario: Take the example of a multi-site company that you may have knowledge of and suggest a setup for this company in Microsoft Navision. Discuss your considerations and findings in a class and/or with an instructor.

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Overview of Cronus Organizational Setup

The overview of the Cronus organizational setup, including the one presented in scenarios 2-5 of this section and the one performed in Test Your Skills – Create and Set Up a New Location and Test Your Skills – Create and Set Up a New Responsibility Center, is summarized in the following tables:

Responsibility Center	Default Location Code	Comments
Birmingham	Blue	As set up in the demo data
London	no default location	As set up in the demo data
Manchester	Green	Setup performed during exercises 1 and 2

Customer No.	Responsibility Center (RC)	Default Location Code	Comments
10000	Birmingham	Blue	As set up in the demo data
20000	no default RC	no default location	As set up in the demo data
30000	Manchester	no default location	Setup performed during exercises 1 and 2
40000	no default RC	Yellow	As set up in the demo data
50000	London	no default location	As set up in the demo data

Vendor No.	Responsibility Center (RC)	Default Location Code	Comments
10000	London	Orange	Setup performed during exercises 1 and 2
30000	no default RC	no default location	As set up in the demo data
40000	no default RC	Green	As set up in the demo data
50000	no default RC	Orange	Setup performed during exercises 1 and 2

Selling and Purchasing in a Company with Multiple Locations

In the previous section, you learned about the different possibilities in Microsoft Navision for setting up a company with multiple locations. You also learned that it can be useful to link users, customers and vendors, as well as prices, to responsibility centers. Alternatively, if you do not have responsibility centers, you can simply link customers and vendors to different locations.

In this section, you can see what implications the alternative setups have on the company's business processes, with respect to making sales and purchase orders. To illustrate these implications, we refer to different setup scenarios described in the previous section. Before doing so, however, we draw your attention to the priority in which location codes and responsibility centers appear on the sales and purchase documents.

Priorities

In Microsoft Navision, there is a pattern according to which the program applies the responsibility centers and locations codes to the sales and purchase documents. This pattern is based on a priority issue.

The following table shows the priority rules that determine which responsibility center should appear on the sales and purchase documents:

	The User Setup Card	The Company Information Card	The Customer/ Vendor Card
Priority 1	✓		
Priority 2	no default RC	✓	
Priority 3	no default RC	no default RC	✓

You read the table as follows:

- If you selected a responsibility center as the default on the user setup card, the program will always apply this responsibility center to the sales and purchase documents.
- If you did not select a default responsibility center on the user setup card, the program will apply the responsibility center that you selected as the default on the company information card to the sales and purchase documents.
- If you did not select a default responsibility center on the user setup card, and did not select a default responsibility center on the company information card, the program will apply the responsibility center that you selected as the default on the customer or vendor cards to the sales and purchase documents respectively.

The following table shows the priority rules that determine which location should appear on the sales and purchase documents:

	The Customer/ Vendor Card	The Responsibility Center Card	The Company Information Card
Priority 1	✓		
Priority 2	no default location	✓	
Priority 3	no default location	no default location	✓

You read the table as follows:

- If you selected a location code as the default on the customer or vendor cards, the program applies this location code to the sales and purchase documents respectively.
- If you did not select a default location code on the customer and vendor cards, the program will apply the location code that you selected as the default on the responsibility center card to the sales and purchase documents. The program applies a responsibility center according to the rules described on the previous page.
- If you did not select a default location code on the customer or vendor card, and you did not select a default location code on the responsibility center card or you have not set up responsibility centers in the program, the program applies the location code that you selected as the default on the company information card to the sales and purchase documents.

The following section describes specific situations in which the program applies a responsibility center or a location code to sales and purchase documents, depending on the setup of the multi-site company.

These situations are described in the form of scenarios that represent different setups. However, instead of going through all the scenarios you may just choose to have a closer look at the selected few that are of interest to you.

Making Sales and Purchase Orders

Consider the following scenario and its implications for the purchase document.

Scenario 6: Centralized Distribution

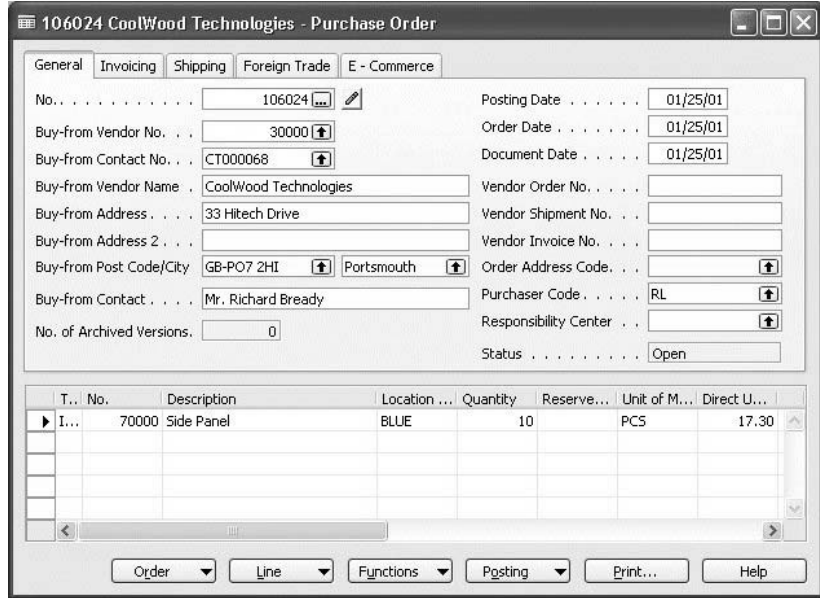
The setup (see scenario 1): A head office with a default ship-to location.

Cronus has one head office set up on the company information card and a number of locations represented by warehouses, with the Blue location being a central warehouse. On the company information card, the location code BLUE is set up as a default ship-to location.

A purchaser in Cronus creates a purchase order for vendor 30000 for 10 units of item 70000.

Create the purchase order for vendor 30000.

1. Fill in the **Buy-from Vendor No., Type, No.,** and **Quantity** fields in the Purchase Order window with the corresponding information.



Notice that the program has automatically filled in the **Location Code** field on the **Shipping** tab and on the purchase line with BLUE.

Now, have a look at the printout of the purchase order document that Cronus sends to their vendor.

2. In the Purchase Order window, click **Print**. Click the **Preview** button. The Print Preview window appears.

As you can see, the vendor's address is in the top-left corner of the document. The address in the top-right corner is the company's headquarters address that the company set up in the Company Information window. In the bottom-left corner you can see the ship-to address to which the vendor ships the ordered items. This address is for the Blue warehouse.

Consider the following scenario and its implications for the purchase document.

Scenario 7: Centralized Distribution with Vendor Linked to Warehouse

The setup (see scenario 2): A head office with a default ship-to location; one warehouse is a default location for a vendor.

Cronus has one head office set up on the company information card and a number of locations represented by warehouses, with the Blue location being a central warehouse. The location code Blue is set up as the default ship-to location on the company information card. The location code Green is set as a default for vendor 40000 on the vendor card.

A purchaser in Cronus creates a purchase order for vendor 40000 for 25 units of item 70001.

Create the purchase order for vendor 40000.

1. Fill in the **Buy-from Vendor No.**, **Type**, **No.**, and **Quantity** fields in the Purchase Order window with the corresponding information.

T. No.	Description	Location	Quantity	Reserve	Unit of M.	Direct U.
I...	70001 Base	GREEN	25		PCS	20.60016

Notice that the program has automatically filled in the **Location Code** field on the **Shipping** tab and the purchase line with GREEN.

Consider the following scenario and its implications for the sales document.

Scenario 8: User Linked to Responsibility Center

The setup (see scenarios 3 and 4): A head office with a default ship-to location; one warehouse is a default location for a responsibility center; a user is linked to the responsibility center.

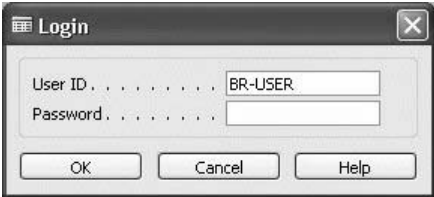
Cronus has one head office set up on the company information card, a number of locations represented by warehouses, and three responsibility centers. The location code Blue is set up as a default for the Birmingham responsibility center. A user with user ID BR-USER is linked to the Birmingham responsibility center. Customer 20000 does not have a default location code set up.

A salesperson at the Birmingham responsibility center makes a sales order for customer 20000 and 10 units of item 70000.

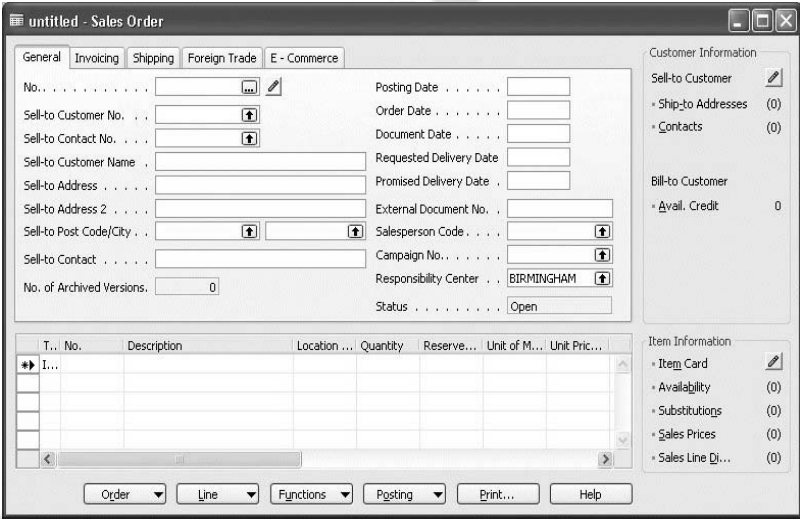
Create the sales order for customer 20000 from the Birmingham responsibility center.

First, log on as BR-USER:

- 1. In the Login window, in the **User ID** field, enter BR-USER.



- 2. Click **OK**.
Now, create a new sales order:
- 3. In the Navigation Pane, click the **Sales & Marketing** button and click ORDER PROCESSING→ORDERS. Press F3 to create a new order.



Notice that the **Responsibility Center** field on the **General** tab is automatically filled in with BIRMINGHAM. The **Location Code** field on the **Shipping** tab contains BLUE, because this is the default location for the Birmingham responsibility center.

4. Fill in the **Sell-to Customer No.**, **Type**, **No.**, and **Quantity** fields in the Sales Order window with the corresponding information.

The screenshot shows the '1001 Selangorian Ltd. - Sales Order' window. The 'General' tab is selected, and the 'Shipping' sub-tab is active. The 'Sell-to Customer' information is filled in: No. 1001, Sell-to Customer No. 20000, Sell-to Contact No. CT000002, Sell-to Customer Name Selangorian Ltd., Sell-to Address 2 153 Thomas Drive, Sell-to Post Code/City GB-CV6 1GY Coventry, Sell-to Contact Mr. Mark McArthur, and No. of Archived Versions 0. The 'Posting Date' is 01/25/01, 'Order Date' is 01/25/01, and 'Document Date' is 01/25/01. The 'Responsibility Center' is BIRMINGHAM. The sales lines table shows one line with Item No. 70000, Description Side Panel, Location BLUE, Quantity 10, and Unit Price 30.70. The 'Status' is Open.

Notice that the program has automatically filled in the **Location Code** field on the sales lines with BLUE. This code is copied from the **Shipping** tab.

Now you can see how these different addresses appear on the printout of the sales order to be sent to the customer for confirmation:

5. In the Sales Order window, click the **Print** button and then click **Preview**. The print preview of the order confirmation appears.

As you can see, the customer's sell-to address is in the top-left corner of the document. The top-right corner of the document contains the address of the responsibility center that the sales order has been made for. In this case, it is the Birmingham responsibility center.

Consider the following scenario and its implications for the purchase document.

Scenario 9: Purchase Order for Responsibility Center with No Default Ship-to Location

The setup (see scenarios 1, 3 and 4): A head office with a default ship-to location; a user is linked to a responsibility center with no default location.

Cronus has one head office set up on the company information card, a number of locations represented by warehouses, and three responsibility centers. The location code Blue is set up as a default ship-to location on the company information card. A user with user ID LD-USER is linked to the London responsibility center. The London responsibility center does not have a default location code.

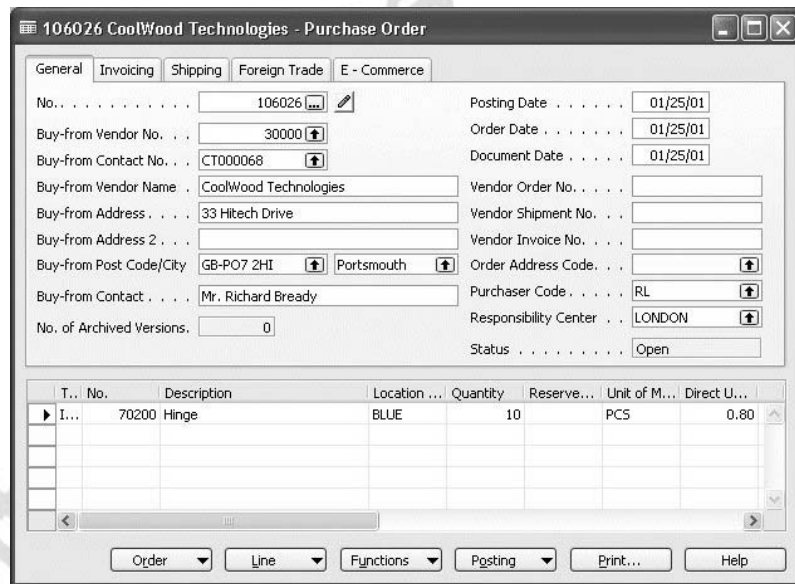
A purchaser in the London responsibility center creates a purchase order for vendor 30000, for 10 units of item 70200.

Create the purchase order for vendor 30000 from the London responsibility center.

1. Log in as LD-USER.
2. In the Navigation Pane, click the **Purchase** button and click ORDER PROCESSING→ORDERS. Press F3 to create a new order.

Notice that the **Responsibility Center** field on the **General** tab is automatically filled in with LONDON. The **Location Code** field on the **Shipping** tab is filled in with BLUE. This is a default location that has been set up for the entire company on the **Shipping** tab of the company information card.

3. Fill in the **Buy-from Vendor No.**, **Type**, **No.** and **Quantity** fields in the Purchase Order window with the corresponding information.



Notice that the program has automatically filled in the **Location Code** field on the sales lines with BLUE. This code is copied from the **Shipping** tab.

Now, look at the printout of the purchase order to see how these different addresses appear on the printout that is sent to the vendor.

As you can see, the vendor’s address is in the top-left corner of the document. The top-right corner of the document contains the address of the responsibility center that the purchase order has been made for. In this case it is the London responsibility center. The bottom-left address is the recipient’s address, at the Blue warehouse.

If Cronus did not have a default location set up on the company information card, the ship-to address would be the company’s general address.

The last two scenarios illustrated how the program uses the address information in situations when a user is linked to a specific responsibility center. Now, consider scenarios when customers and vendors are linked to a responsibility center or location that is different from the one linked to the user.

Scenario 10: Sales Order from Responsibility Center with No Default Location

The setup (see scenario 5): A head office with a default ship-to location; a customer is linked to a responsibility center with no default location; the customer does not have a default location.

Cronus has one head office set up on the company information card, a number of locations represented by warehouses, and three responsibility centers. The location code Blue is set up as a default ship-to location on the company information card. The London responsibility center is the default for customer 50000. There is no default location set up for this customer. The London responsibility center does not have a default location code. A salesperson in Cronus creates a sales order for customer 50000, for 5 units of item 70002.

Create the sales order for customer 50000:

1. Log in with user ID ALL.
2. In the Navigation Pane, click the **Sales & Marketing** button and click ORDER PROCESSING→ORDERS. Press F3 to create a new order and fill in the **Sell-to Customer No.** field with the customer number.

Notice that the **Responsibility Center** field on the sales header contains LONDON which is a default code for this customer. Meanwhile, the **Location Code** field on the **Shipping** tab is filled in with BLUE. This is a default location that has been set up for the entire company.

3. Fill in the **Type**, **No.** and **Quantity** fields in the Sales Order window with the appropriate information.

The screenshot shows the '1002 Guildford Water Department - Sales Order' window. The 'General' tab is active, displaying fields for 'No.' (1002), 'Posting Date' (01/25/01), 'Sell-to Customer No.' (50000), 'Order Date' (01/25/01), 'Sell-to Contact No.' (CT000005), 'Document Date' (01/25/01), 'Sell-to Customer Name' (Guildford Water Department), 'Requested Delivery Date', 'Sell-to Address' (25 Water Way), 'Promised Delivery Date', 'Sell-to Address 2', 'External Document No.', 'Sell-to Post Code/City' (GB-GU7 5GT, Guildford), 'Salesperson Code' (PS), 'Sell-to Contact' (Mr. Jim Stewart), 'Campaign No.', 'Responsibility Center' (LONDON), 'No. of Archived Versions' (0), and 'Status' (Open). The 'Shipping' tab is also visible, showing 'Location' (BLUE). The 'Item Information' table contains one row: '70002 Top Panel' with 'Quantity' 5 and 'Unit of M...' PCS. The 'Customer Information' pane on the right shows 'Sell-to Customer' (Guildford Water Department), 'Ship-to Addresses' (0), 'Contacts' (1), 'Sales History' (1), 'Bill-to Customer' (Guildford Water Department), and 'Avail. Credit' (0). The 'Item Information' pane shows 'Item Card' (1), 'Availability' (2,484), 'Substitutions' (0), 'Sales Prices' (0), and 'Sales Line Q...' (1).

The program copies the location code on the sales line from the **Shipping** tab.

Consider the following scenario and its implications for the sales document.

Scenario 11: Conflicting Responsibility Centers

The setup (see scenarios 4 and 5): A head office with a default ship-to location; a user is linked to a responsibility center with a default location; a customer is linked to another responsibility center.

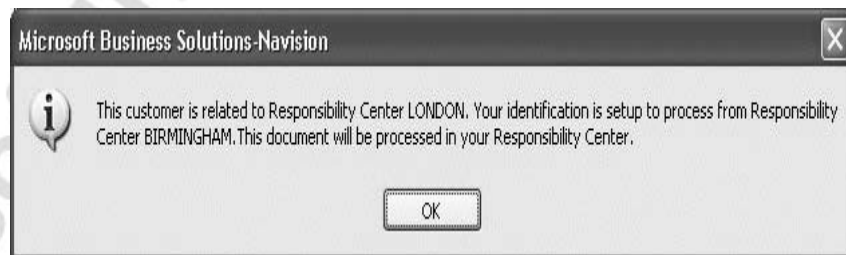
Cronus has one head office set up on the company information card, a number of locations represented by warehouses, and three responsibility centers. A user with user ID BR-USER is linked to the Birmingham responsibility center. The location code Blue is set up as the default for the Birmingham responsibility center. The London responsibility center is the default for customer 50000.

A salesperson at the Birmingham responsibility center creates a sales order for customer 50000, for 15 units of item 70010.

Create the sales order for customer 50000 from the Birmingham responsibility center:

1. Log in with user ID BR-USER.
2. In the Navigation Pane, click the **Sales & Marketing** button and click ORDER PROCESSING→ORDERS. Press F3 to create a new order.
3. In the **Sell-to Customer No.** field in the Sales Order window, select customer 50000.

You then receive the following warning message:



4. Click **OK**.

You have accepted that the program will process the sales order from the Birmingham responsibility center, which is a default responsibility center for the salesperson making the orders, rather than from London responsibility center, which is the default responsibility center for the customer.

Consider the following scenario and its implications for the sales document.

Scenario 12: Conflicting Default Locations

The setup (see scenarios 2 and 4): A head office with a default ship-to location; a user is linked to a responsibility center with a default location; a customer has a default location.

Cronus has one head office set up on the company information card, a number of locations represented by warehouses, and three responsibility centers. A user with user ID BR-USER is linked to the Birmingham responsibility center. The location code Blue is set up as the default for the Birmingham responsibility center. The customer 40000 is not linked to any responsibility center, but has the location code Yellow as default.

A salesperson at the Birmingham responsibility center creates a sales order for customer 40000, who has placed an order for 10 units of item 1896-S.

Create the sales order for customer 40000 from the Birmingham responsibility center.

1. Log in with user ID BR-USER.
2. In the Navigation Pane, click the **Sales & Marketing** button and click ORDER PROCESSING→ORDERS. Press F3 to create a new order.

Notice that the **Responsibility Center** field on the sales order header is automatically filled in with BIRMINGHAM, while the **Location Code** field on the **Shipping** tab contains BLUE.

3. Fill in the **Sell-to Customer No.** Notice that the **Location Code** field on the **Shipping** tab now contains YELLOW.
4. Fill in the **Type, No.** and **Quantity** fields in the Sales Order window with the appropriate information:

The screenshot displays the 'Sales Order' window for '1004 Deerfield Graphics Company'. The 'Shipping' tab is active, showing fields for 'No.' (1004), 'Posting Date' (01/25/01), 'Order Date' (01/25/01), 'Document Date' (01/25/01), 'Requested Delivery Date', 'Promised Delivery Date', 'External Document No.', 'Salesperson Code' (PS), 'Campaign No.', 'Responsibility Center' (BIRMINGHAM), and 'Status' (Open). The 'Sell-to Customer No.' is 40000, 'Sell-to Contact No.' is CT000004, 'Sell-to Customer Name' is Deerfield Graphics Company, 'Sell-to Address' is 10 Deerfield Road, 'Sell-to Post Code/City' is GB-GL1 9HM Gloucester, and 'Sell-to Contact' is Mr. Kevin Wright. The 'Item Information' section shows a line for item 1896-S, ATHENS Desk, with a location code of YELLOW, a quantity of 10, and a unit price of 649.40.

The program copies the location code on the sales line from the **Shipping** tab.

Test Your Skills – Create Purchase Orders in a Company with Multiple Locations

Scenario: A purchaser at Cronus needs to buy 70 units of item 70000 from vendor 20000 and 30 units of item 70200 from vendor 40000.

All Skill Levels

Your tasks are as follows:

1. Create the two purchase orders.
2. Make printouts of the two purchase documents that will be sent to the vendors. Instead of printing, you can view the print previews of the documents.
3. Explain where the addresses on the purchase documents come from.

HINT: Make sure that you are logged on as ALL.

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Test Your Skills – Create a Sales Order in a Company with Multiple Locations

Scenario: At Cronus, a salesperson at the Manchester responsibility center needs to make a sales order for the customer 40000, who has placed an order for 25 units of item 1896-S.

All Skill Levels

Your tasks are as follows:

1. Create the sales order.
2. Print out the sales document that will be sent to the customer for confirmation. Instead of printing, you may just view the print preview of the document.
3. Explain where the addresses on the sales document come from.

HINT: Make sure that you are logged on as ALL.

Controlling Inventory at Multiple Locations

Companies with many warehouse locations want to have a certain degree of flexibility in managing these locations. They need to be able to make individual replenishment plans based on the supply-demand pattern at a specific location or based on a variant of the item.

Microsoft Navision provides companies with multiple locations with functionality that allows them to handle and control inventory in such a flexible manner. This is done by means of creating stockkeeping units. Information recorded on the stockkeeping unit card specifies individual parameters used by the program to calculate replenishment schedules at the location and/or variant level.

The Stockkeeping Unit Concept

The Stockkeeping Unit (SKU) is an item with a particular variant and/or at a particular geographic location. For example, a product stocked at both a main location and six different distribution centers would represent seven SKUs. Information held on the SKU card can include cost prices, replenishment and manufacturing information.

Whenever there is an SKU, the program uses the information on the SKU card instead of referring to the item card. SKUs have priority over the item card but do not replace it.

Setting Up an SKU

Consider the following scenario:

Scenario 13: Set up a Stockkeeping Unit

Based on different supply-demand patterns for a number of certain items at specific warehouses, Cronus realizes the need to reflect this difference in the program. For this purpose, an inventory manager creates and sets up the corresponding number of stockkeeping units for the selected items.

Item 70001 is among these items.

Look at the SKUs that have been created for item 70001.

NOTE: The user can create a stockkeeping unit by clicking *Inventory, Stockkeeping Units*, pressing *F3* and then entering the appropriate information on the SKU card. To create several stockkeeping units for an item, the user can use the *Create Stockkeeping Unit batch job* by clicking **Functions** on the item card.

The user can access the stockkeeping unit card from both the item card (by clicking *ITEM→STOCKKEEPING UNITS*) and the menu:

1. In the Navigation Pane, click the **Purchase** button and click INVENTORY & COSTING→ITEMS and browse to the item card for item 70001.

The screenshot shows the '70001 Base - Item Card' window. The 'General' tab is selected, and the 'Inventory' field is visible. The 'Planning' tab is also visible in the background, showing the 'Stockkeeping Unit Exists' field with a checkmark.

Notice the **Stockkeeping Unit Exists** field on the **Planning** tab of the item card. If this field contains a check mark, then one or more stockkeeping units for this item have already been created.

2. On the item card, click ITEM→STOCKKEEPING UNITS. A list of SKUs for the item appears.

Item No.	Variant ...	Location ...	R..	Description	Inventory
70001		BLUE	P..	Base	2,310
70001		YELLOW	T..	Base	15

3. Select the SKU for the Blue location and click SKU→CARD.

The screenshot shows the 'General' tab of the 'BLUE 70001 - Stockkeeping Unit Card' window. The fields are as follows:

Item No.	70001	Inventory.	2,310
Description	Base	Qty. on Purch. Order . .	0
Location Code.	BLUE	Qty. on Prod. Order . .	0
Variant Code		Qty. in Transit	0
Bill of Materials	<input type="checkbox"/>	Qty. on Component Lines	0
Shelf No.	A2	Qty. on Sales Order . .	0
		Qty. on Service Order . .	0
		Last Date Modified . . .	

Buttons at the bottom: SKU, Item, Functions, Help.

Notice that many fields on the **General** tab of the SKU card are the same as on the item card for the corresponding item.

4. Click the **Replenishment** tab.

The screenshot shows the 'Replenishment' tab of the 'BLUE 70001 - Stockkeeping Unit Card' window. The fields are as follows:

Replenishment System. . .	Purchase	Production	
Purchase		Manufacturing Policy . .	Make-to-Stock
Vendor No.		Flushing Method.	Manual
Vendor Item No.	10-103	Components at Location .	
Lead Time Calculation . .		Lot Size.	0
Transfer			
Transfer-from Code . . .			

Buttons at the bottom: SKU, Item, Functions, Help.

The fields on the **Replenishment** tab specify details of the replenishment process that the inventory manager has established for this item at the Blue location.

The **Replenishment System** field specifies the type of order the program suggests when it creates orders as the result of the replenishment planning.

At Cronus, where location Blue is the company's main distribution center, most of the items stored at this location are replenished through purchase. Therefore, purchase is selected in the **Replenishment System** field for this stockkeeping unit.

The user can differentiate between items at different locations by specifying unique values in the SKU for characteristics such as maximum inventory, reorder point, and reorder quantity. To learn about other fields on the **Replenishment** and **Planning** tabs, click the respective field and press F1.

Now, view the details for the SKU card for the same item at the Yellow location:

5. From the stockkeeping units list, select the SKU for location Yellow and click SKU→CARD. Click the **Replenishment** tab.

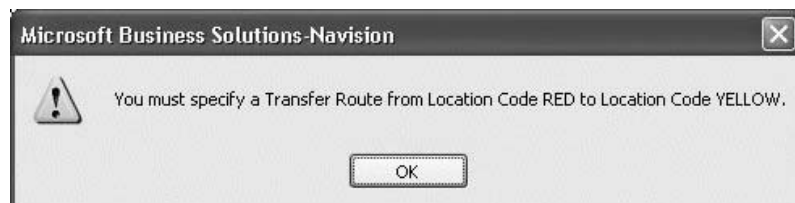
According to the company's established procedures, most of the items stored at the Yellow location are replenished by means of transfer from the Blue location. This practice is reflected in the program through the selection of Transfer as replenishment system and the selection of BLUE as a transfer-from code.

When the user selects a code in the **Transfer-from Code** field, the program verifies whether the combination of the transfer-to and the selected transfer-from locations is a valid transfer route.

NOTE: You can learn more about setting up transfer routes in "Location Transfers".

If the transfer route is invalid, the program gives a warning message:

6. In the **Transfer-from Code** field, select Red. The following warning message appears:



As you have seen, Cronus has stockkeeping units for item 70001 at the Blue and Yellow locations. When this item is handled from other locations, the program uses the information on the item card.

To view a list of all stockkeeping units:

1. In the Navigation Pane click the **Purchase** button and click INVENTORY & COSTING→STOCKKEEPING UNITS.
2. Press F5 or click SKU→LIST.

Item No.	Variant ...	Location ...	R..	Description	Inventory
70001		BLUE	P..	Base	2,310
70002		BLUE	P..	Top Panel	2,508
70003		BLUE	P..	Rear Panel	2,094
LS-MAN-10		SILVER	P..	Manual for Loudspeakers	0
LS-515		SILVER	T..	Stand for Loudspeakers LS-150	0
LS-10PC	LS-10PC-B	SILVER	P..	Loudspeakers, White for PC	0
LS-120		SILVER	P..	Loudspeaker, Black, 120W	0
LS-150		SILVER	P..	Loudspeaker, Cherry, 150W	0
LS-2		SILVER	T..	Cables for Loudspeakers	0
LS-75	LS-75-B	SILVER	P..	Loudspeaker, Cherry, 75W	0
LS-MAN-10		WHITE	P..	Manual for Loudspeakers	140
LS-515		WHITE	T..	Stand for Loudspeakers LS-150	60
LS-10PC	LS-10PC-B	WHITE	P..	Loudspeakers, White for PC	0
LS-120		WHITE	P..	Loudspeaker, Black, 120W	6
LS-150		WHITE	P..	Loudspeaker, Cherry, 150W	8
LS-2		WHITE	T..	Cables for Loudspeakers	200
LS-75	LS-75-B	WHITE	P..	Loudspeaker, Cherry, 75W	0
70001		YELLOW	T..	Base	15
70002		YELLOW	T..	Top Panel	3
70003		YELLOW	T..	Rear Panel	31
1928-5		YELLOW	P..	AMSTERDAM Lamp	97
1972-5		YELLOW	P..	MUNICH Swivel Chair, yellow	90

Using SKU Information

The program uses information on the stockkeeping unit card when producing different reports. In this way, companies can handle and control inventory stored at different locations, without losing the overview of the entire inventory.

Let's make an inventory availability report:

1. In the Navigation Pane, click the **Purchase** button and click INVENTORY & COSTING→REPORTS→INVENTORY AVAILABILITY.
2. In the Inventory Availability window, click the **Options** tab.
3. Place a check mark in the **Use Stockkeeping Unit** field.
4. Click **Preview**. The report lists the availability of items by stockkeeping unit.

To print other inventory reports, follow the same procedure as described in steps 1-4.

Test Your Skills – Create and Set Up Stockkeeping Units

Scenario: Due to the different conditions under which the various warehouses within Cronus operate, the company decides to establish a set of parameters with regard to certain items, which will distinguish the way that these items are handled and managed at different locations.

Among these items is item 70100. General practice is that this item is purchased from a limited number of vendors, who are located in close proximity to the Blue warehouse. These vendors therefore ship their orders directly to this warehouse. The Red and Yellow warehouses will not purchase this item from the vendors but will transfer it from the Blue warehouse.

All Skill Levels

Your tasks are as follows:

1. Create stockkeeping units for item 70100 at the Blue, Red and Yellow locations.
2. Set up the stockkeeping units according to the following parameters:

	At the Blue Warehouse	At the Red Warehouse	At the Yellow Warehouse
Requisition System	Purchase	Transfer	Transfer
Transfer-from Code	-	Blue	Blue
Reorder Point	150	100	100

3. Print an inventory availability report per stockkeeping unit.

Test Your Knowledge – Multiple Locations

1. In Microsoft Navision, a _____ is defined as a physical place where items are produced, handled, and stored before being sold, such as a production plant, a warehouse, or a distribution center.
2. What is the difference between using multiple locations and using responsibility centers?
3. Suppose that you have set up multiple locations for your company, and you have decided that a certain customer should always receive shipments from a particular location. How would you specify that the customer should be associated with the location?
4. Which is the correct hierarchy of priorities that the program uses to determine which responsibility center should appear on a document such as a sales order?
 - a. Company Information card, User Setup card, Customer card
 - b. Customer card, User Setup card, Company Information card
 - c. User Setup card, Company Information card, Customer card
5. What feature would you use to specify in Microsoft Navision that a certain variant of an item in a certain location should have unique inventory handling?

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Quick Interaction: Lessons Learned

Take a moment to write down three Key Points you have learned from this chapter:

- 1.

- 2.

- 3.

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CHAPTER 3: LOCATION TRANSFERS

This chapter contains the following sections:

- Overview
- Objectives
- Setting Up Transfers
- Transferring Items Between Locations
- Viewing Items in Transit

Objectives

By the end of this chapter, you should be able to:

- Set up the program to handle transfers.
- Create and post manual transfers.
- Adjust transfer quantities.
- Identify the locations and quantities of items in transit.

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Overview

Many large wholesale distributors and manufacturers have a number of branch warehouse locations, each servicing a specific area or region. To minimize their total inventory level, these companies often follow the strategy of having safety stock in one main warehouse, while maintaining minimum inventory in regional warehouses. This practice requires the transfer of inventory from the main warehouse to the regional ones. Companies also move inventory from one location to another to satisfy unexpected demand.

If the company is large enough, a significant amount of inventory can be in transit at any given time. This creates problems from both a financial and a logistical perspective. Financially, it is difficult to determine the value of the inventory, because it is in transit. Logistically, it is not possible to accurately estimate total availability of the inventory.

With the Location Transfers granule, companies use a transfer order to accurately track the movement of inventory from one location to another. To transfer items, they create a transfer order containing a line for each inventory item that is being transferred. When the inventory is shipped from the source location, it is considered to be in transit until it is received at its destination.

In this chapter you should learn how to:

- Set up transfer procedures.
- Transfer items between locations.
- View items in transit.

To illustrate the functionality of the Location Transfers granule, the example of Cronus International Ltd. is used in the chapter. To follow the suggested scenarios, remember to install a clean database.

Cronus is a company with many warehouses located all over the UK, with one central warehouse and a number of regional warehouses, each with its own manager. To ensure a high level of customer service in terms of delivery time, the company strives to achieve maximum operational flexibility through decentralized management of its warehouses. The chapter on multiple locations described how Cronus has established its setup to achieve this flexibility. According to this setup, some customers are always supplied from specific warehouse(s) and some vendors deliver to certain warehouses. With such an organizational configuration, Cronus sometimes needs to transfer inventory from one location, for example a central warehouse, to another, such as a regional warehouse.

Setting Up Transfers

To use location transfers, a company must have the Multiple Locations granule. You can learn more about this granule and the setup procedures in “Multiple Locations.”

The location transfer setup consists of two elements:

- **In-Transit Location Setup:** To use the transfer functionality, a company must define an in-transit location, which is a temporary location created for transferring items only. When the order is shipped from the transfer-from location, the program assigns the items to the in-transit location. When the order is received at the transfer-to location, the program moves the items from the in-transit location to the transfer-to location.
- **Transfer Routes Setup:** A company can choose to set up transfer routes between locations. This enables the company to assign a default in-transit location code, shipping agent and shipping agent service code to each route. With the shipping time defined, the program uses the information to calculate the receipt date for transfer orders at the target location.

Setting Up In-Transit Location

With the in-transit location, companies can track the quantity and value of items in transit at any given time after they are shipped from the source location, called a transfer-from location, up until they are received at the target location, called a transfer-to location. They can set up as many or as few in-transit locations as they like.

The following is a situation where a company chooses to set up two in-transit locations.

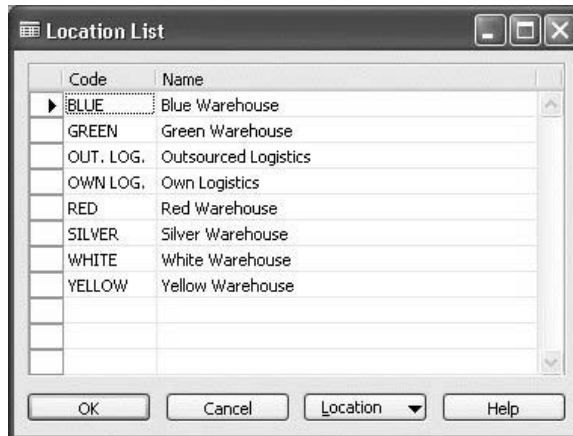
Scenario 1: Set Up an in-Transit Location

Due to its organizational and geographical configuration, Cronus needs to make inventory transfers from one warehouse to another. To do so in Microsoft® Business Solutions–Navision®, they must set up a temporary location where the items are placed while in transit.

Typically, the in-transit location is a truck or a van transporting the inventory from one location to another. Because the distance between different warehouses within the Cronus distribution network varies, the company uses either its own logistics facilities or external ones to transport inventory between its different locations.

To reflect this practice in the program, Cronus has set up two in-transit locations:

1. In the Navigation Pane, click the **Administration** button and click APPLICATION SETUP→WAREHOUSE→LOCATIONS.
2. Click LOCATION→LIST to see the list of all locations in Cronus.



Notice the two locations called Outsourced Logistics and Own Logistics. These two locations are the in-transit locations with OUT. LOG. and OWN LOG. in-transit codes respectively.

3. Select location code OWN LOG. from the list and click LOCATION→CARD to open the location card.



At a minimum, the **Code** and **Name** fields on the **General** tab must be filled in. The **Use As In-Transit** field must contain a check mark. This indicates that this location is used as an in-transit location.

You can read about how to set up in-transit locations in the topic called “Setting up In-Transit Codes” in online Help.

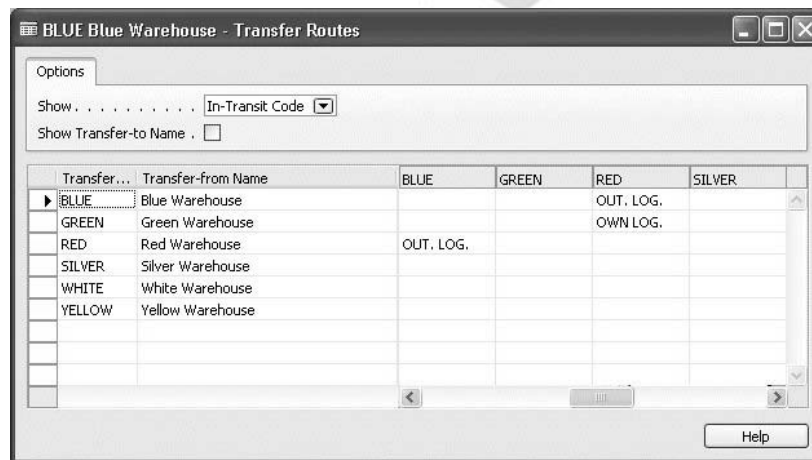
Setting Up Transfer Routes

Typically, an authorized person, such as the company's administrator, is in charge of setting up the transfer routes. A transfer route is the combination of a transfer-from location and a transfer-to location. The program uses the transfer route to validate location information when making transfer orders or entering lines in the requisition worksheet.

You can assign each transfer route a default in-transit code, shipping agent code and shipping agent service code. The program uses the shipping time of the shipping agent service to calculate the receipt date at the transfer-to location.

You can read about how to set up shipping agents and shipping agent services in the topics called "Setting up Shipping Agents" and "Setting Up Shipping Agent Services" in online Help. At Cronus, transfer routes have been set up to reflect the current business processes:

In the Navigation Pane, click the **Administration** button and click APPLICATION SETUP→WAREHOUSE→SETUP-INVENTORY→TRANSFER ROUTES.



You can see that Cronus has set up five transfer routes. On the transfer routes from the Blue to the Red and Yellow locations and from the Red to the Blue location, the company uses an external carrier represented by the OUT. LOG. code. On the transfer routes from the Green to the Red and Yellow locations, the company uses its own logistics facilities represented by the OWN LOG. code.

In the **Show** field, the user can select the transfer route specification that they want to have shown in the fields in the right pane.

To display the names of the transfer-to locations as headings in the right pane, the user must place a check mark in the **Show Transfer-to Name** field. If the field is blank, the program displays the location codes.

You can read about how to set up transfer routes in the topic called "Setting up Transfer Routes" in online Help.

Test Your Skills – Setting Up a Transfer Route

All Skill Levels

Scenario: Set up a transfer route between Red and Green locations, with Red being a transfer-from code. Assign OWN LOG. as the in-transit code.

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Transferring Items between Locations

The transfer order is the key object of the transfer functionality. With the transfer order, a company can create a transfer, post the shipment of the items and post the receipt of the items. The transfer order contains information regarding how much has been shipped and received in the same manner as the purchase and sales documents, using quantity shipped, quantity received and so on.

With the location transfers functionality, companies can make transfers both manually and automatically. A company may need a manual transfer when there is lack of inventory at a certain location, and this inventory is needed to fulfill a sales order. In this case, an initiator, such as a salesperson, decides to move items from a location where the required inventory is available to the location in question.

Automatic transfer order creation is an outcome of the replenishment planning activity. To make automatic transfers, dedicated persons, typically purchasers, use the requisition or planning worksheet.

Let's first take a look at how to make a transfer order manually.

Making a Manual Transfer

The following is a situation where a company chooses to create a manual transfer between locations.

Scenario 2: Make a Manual Transfer

Cronus customer 40000 is expected to place an order for 50 units of item 70002 to be delivered within one week. According to the company's established procedure, this customer's orders normally come from the Yellow warehouse.

When creating a sales order for this customer, a salesperson finds out that the quantity of item 70002 on stock in warehouse Yellow is not sufficient to fulfill this order. To ensure order fulfillment, the salesperson decides to make a transfer from the Blue warehouse, where the needed items are available, to the Yellow warehouse, from which the order is shipped to the customer. This customer wants to ship complete and from one warehouse, and they have only agreed to pay any transportation costs that occur when the final complete order is shipped from the Yellow warehouse.

The first thing that the salesperson must do is to create a transfer order.

Creating a Transfer Order

The following steps illustrate the process for creating a transfer:

1. In the Navigation Pane, click the **Purchase** button and click ORDER PROCESSING→TRANSFER ORDERS. The Transfer Order window appears.
2. To create a new transfer document, press F3.

3. In the **Transfer-from Code** field, select Blue.
4. In the **Transfer-to Code** field, select Yellow.

Item No.	Description	Quantity	Reserve...	Reserve...	Reserve...	Unit of M...	Qty.
*▶							

Note that the program fills the **In-Transit Code** field automatically with the in-transit code OUT. LOG. This code is a default in-transit code for the transfer route between the Blue location and the Yellow location.

The program also automatically fills in the name and address information for the Blue and Yellow locations in the corresponding fields on the **Transfer-from** and **Transfer-to** tabs, respectively.

5. Click the **Transfer-from** tab.

Item No.	Description	Quantity	Reserve...	Reserve...	Reserve...	Unit of M...	Qty.
*▶							

On the right side of the transfer order header, there are six fields specifying shipping details for this transfer. The program fills in the **Shipping Agent Code**, the **Shipping Agent Service Code** and the **Shipping Time** fields automatically from information defined for this transfer route.

- Click the **Transfer-to** tab.

Item No.	Description	Quantity	Reserve...	Reserve...	Reserve...	Unit of M...	Qty.

The **Receipt Date** field indicates when the items are to be received at the Yellow location. This calculation is based on the outbound warehouse handling time at the Blue location (0 days), the shipping time set up for this transfer route, which is two days, and inbound warehouse handling time at the Yellow location, which is one day.

If the user enters Green as the location code in the **Transfer-to Code** field, the program does not suggest a default in-transit location. This is because the transfer route that permits transfers from Blue to Green is not a valid route in the program.

In this case, the user must manually enter an in-transit code in the **In-Transit Code** field. Because there are no shipping agent and shipping agent service set up for this transfer route, the program uses only the outbound warehouse handling time for the transfer-from location and the inbound warehouse handling time for the transfer-to location to estimate the receipt date. To estimate the receipt date more accurately for this transfer order, the user must select a specific shipping agent and shipping agent service or enter a shipping time in the corresponding fields on the **Transfer-from** tab.

Complete the transfer order from the Blue to Yellow location by filling in the transfer order lines with the item number and quantity to be transferred:

- In the Transfer Order window, in the **Item No.** field, enter 70002.

8. In the **Quantity** field, enter 50.

Item No.	Description	Quantity	Reserve...	Reserve...	Reserve...	Unit of M...	Qty.
70002	Top Panel	50				PCS	

On completion of the transfer header and lines, release the order. Some companies may have an authorized person responsible for releasing transfer orders.

To release a transfer order:

9. In the Transfer Order window, click **FUNCTIONS**→**RELEASE**.

The **Status** field on the header has changed from Open to Released.

To release all the transfer orders from a given location, the user must open a Transfer Order List window.

1. In the Transfer Order window, click **ORDER**→**LIST**.

No.	Transfer...	Transfer...	In-Transi...
1001	YELLOW	RED	OWN LOG.
1002	BLUE	YELLOW	OUT. LOG.
1004	BLUE	WHITE	OWN LOG.
1005	GREEN	WHITE	OWN LOG.
1006	WHITE	RED	OWN LOG.
1007	WHITE	YELLOW	OWN LOG.
1008	GREEN	YELLOW	OWN LOG.
1009	GREEN	RED	OWN LOG.
1010	RED	BLUE	OUT. LOG.
1011	BLUE	YELLOW	OUT. LOG.

In this window, the user can filter the transfer orders that they want to release according to different parameters by using a table filter.

Employees responsible for releasing transfer orders from a specific location typically want to filter the transfer orders according to the transfer-from and/or transfer-to codes.

To release all the transfer orders at once:

2. In the Transfer Order List window, select all the active lines and then click **FUNCTIONS**→**RELEASE**.

Shipping a Transfer Order

After the transfer order has been released, an authorized person at the transfer-from location can ship the requested items. A warehouse administrator is typically responsible for shipping the transfer orders from the respective location. The warehouse administrator can post only one transfer order shipment at a time.

Let's illustrate this process by using the example of the transfer that you have just created between the Blue and Yellow locations.

To perform the posting process in an efficient manner, the administrator in the Blue warehouse may want to view only those transfer orders that are to be shipped from this location. To do so, they must set up a table filter to filter all the transfer orders according to the transfer-from code Blue.

To post a transfer shipment, follow these steps:

1. Open the transfer order you created in the previous example.
2. Click **POSTING**→**POST**. Select **Ship**.

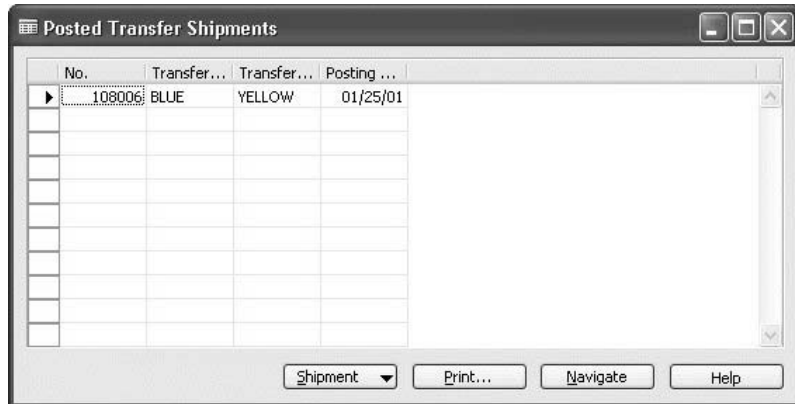


3. Click **OK**.

Now, the transfer order has been shipped out of the Blue location and 50 units of item 70002 are currently in-transit.

To view the posted transfer shipment document for this specific transfer, open the Posted Transfer Shipments window:

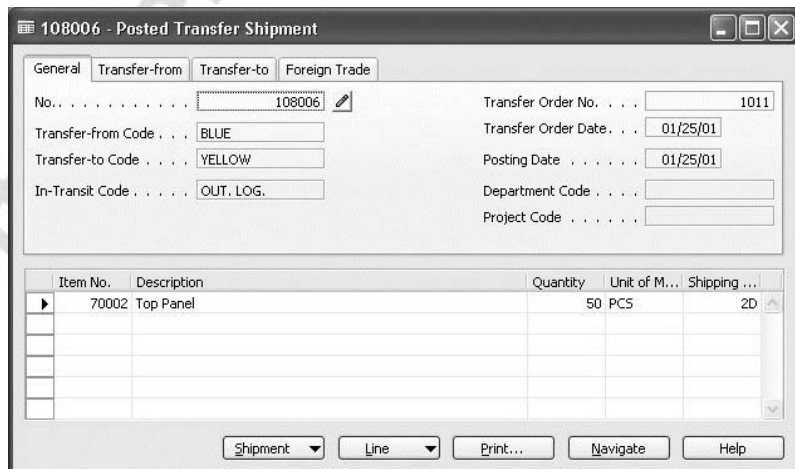
1. In the Transfer Order window, click ORDER→SHIPMENTS.



From this window, the user can navigate to gain more detailed information about this transaction.

The user can also access the posted transfer shipment card from the menu:

2. In the Navigation Pane, click the **Warehouse** button and click HISTORY→POSTED DOCUMENTS→POSTED TRANSFER SHIPMENTS. Browse to the posted transfer shipment for the transfer order you have just shipped.



Receiving a Transfer Order

Receiving the transfer order at the target location is the final step in the transfer process.

Let's illustrate this process by using the example of the transfer that you have just shipped from the Blue warehouse to the Yellow warehouse.

Two days after the Blue warehouse shipped the transfer order, 50 units of item 70002 arrive at the Yellow warehouse, which is the target location for this transfer. A warehouse person at the Yellow warehouse must open the transfer order that corresponds to the arrived items and post the transfer receipt.

As in the case of posting the transfer shipment, a warehouse person can use a table filter to filter the transfer orders according to certain parameters, for example, the transfer-to code.

To post a transfer receipt:

1. Browse to the transfer order for 50 units of item 70002, and fill in the **Qty. to Receive** field.
2. Click POSTING→POST. Select **Receive**.



3. Click **OK**.

NOTE: If you ship the transfer order from a location that requires picking or if you receive the order at a location that requires receiving, the program requires you to process the shipping or receiving through the warehouse and gives the message "There is nothing to post." You can skip this process by entering the corresponding amounts in the **Qty. To Ship/Qty. to Receive** fields on the transfer lines and then accepting the warning messages given by the program.

The receiving/shipping processes of the Warehouse Management functionality are described in detail in the warehousing chapter of this manual.

The following message box appears:



4. Click **OK**. The program deletes the corresponding transfer order.

The program transfers the received transfer order record to the posted receipt transfer card:

5. In the Navigation Pane, click the **Warehouse** button and click HISTORY→POSTED DOCUMENTS→POSTED TRANSFER RECEIPTS. Browse to the transfer order that you have just posted.

Item No.	Description	Quantity	Unit of M...	Shipping ...
70002	Top Panel	50	PCS	2D

Adjusting Transfer Quantities and Values

The procedure described above for posting the transfer receipt is based on the assumption that the quantity of the items received at the transfer-to location is the same as the quantity of the items shipped from the transfer-from location. However, this assumption is not always valid. Occasionally, items may be lost while in transit or the quantity received at the target location is greater than the one shipped from the source location.

To handle these situations in Microsoft Navision, companies must do two things.

Firstly, receive the actual transfer order quantity. This is performed by the warehouse worker at the transfer-to location. The program, however, does not delete a transfer order, and consequently does not record the transaction in the posted transfer receipts, before the entire transfer order quantity is received.

Secondly, a dedicated person in the company needs periodically to screen all the open transfer orders, post the receipt of the outstanding quantities and then adjust the inventory and value at the transfer-to location for those quantities. In Microsoft Navision, they can do this in the item journals.

The following is a situation where a company needs to make adjustments to their inventory as a result of inventory loss during transfer.

Scenario 3: Adjust a Transfer Quantity

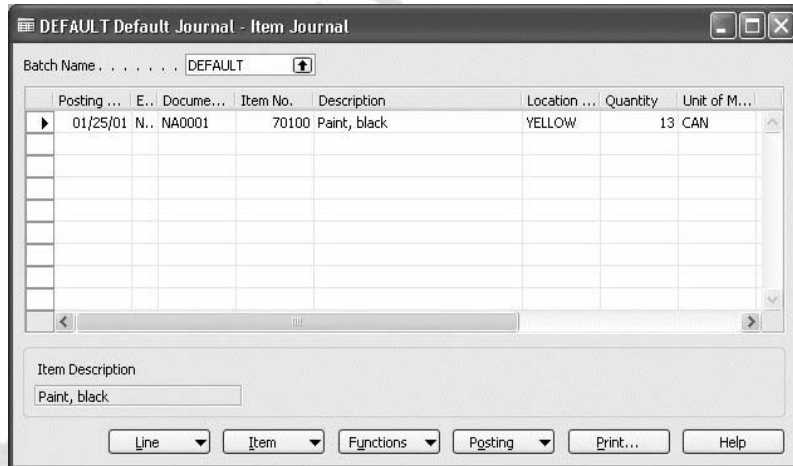
At Cronus, a transfer order for 100 units of item 70100 is released and shipped from the Blue to the Yellow warehouse. When the items arrive at the Yellow warehouse, a warehouse person discovers that there are only 87 units of the item instead of 100. A quick enquiry shows that the missing 13 items were lost in transit.

Now, the warehouse person records the receipt of the actual quantity of 87 units of item 70100. Later, a dedicated person needs to make adjustments for this loss in the program.

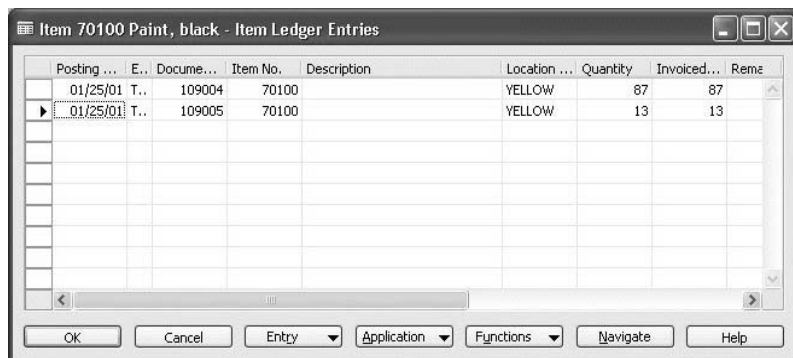
First, create, release, and post the shipment of the transfer order for 100 units of item 70100 from the Blue to the Yellow warehouse. Then, post the transfer receipt for 87 units, and then post the receipt for the remaining 13 units.

To adjust the inventory for the lost 13 units of item 70100, follow this procedure:

1. In the Navigation Pane, click the **Purchase** button and click INVENTORY & COSTING→ITEM JOURNALS.
2. In the Item Journal window, in the **Entry Type** field, select Negative Adjmt.
3. Fill in the **Document No.**, **Item No.**, **Location Code**, and **Quantity** fields on the journal line with the appropriate data.



4. In the **Applies-to Entry** field, click the **AssistButton** to open the Item Ledger Entries window.



5. Select the item ledger entry for the transfer receipt of 13 units and click **OK**.

Now, post the item journal:

6. In the Item Journal window, click POSTING→POST. Click **Yes** to confirm that you want to post the journal.
7. Click **OK** in the message box confirming that the journal was posted.

You have now adjusted inventory at the location code Yellow to account for 13 items lost in transit.

Remember, however, that, unless you have activated the automatic cost posting in the inventory setup, inventory accounts in the general ledger are not updated when you post from an item journal. To update them, you must use the Post Inventory Cost to G/L batch job. Before that, you should run the Adjust Cost – Item Entries batch job.

***NOTE:** You can learn more about the Post Inventory Cost to G/L batch job and the Adjust Cost – Item Entries batch job in online Help. In addition, you can also refer to the Inventory Costing training manual.*

First, run the Adjust Cost – Item Entries batch job:

1. In the Navigation Pane, click the **Purchase** button and click INVENTORY & COSTING→COSTING→ADJUST COST ITEM ENTRIES. Click **OK** in the request form for the batch job.

Now, run the Post Inventory Cost to G/L batch job:

2. In the Navigation Pane, click the **Financial Management** button and click INVENTORY→COSTING→POST INVENTORY COST TO G/L.
3. On the **Value Entry** tab, set the filter for item 70100. On the **Options** tab, select Per Entry in the **Posting Method** field. Click **Preview**.

You have now posted the quantity and value adjustments to the corresponding G/L accounts.

To view those records in the item ledger entries and value entries:

4. In the Navigation Pane, click the **Purchase** button and click INVENTORY & COSTING→ITEMS. Browse to item 70100.

5. Click ITEM→ENTRIES→LEDGER ENTRIES.

Posting ...	E.. Docume...	Item No.	Description	Location ...	Quantity	Invoiced...	Reme
12/31/00	P.. START	70100		BLUE	3,662	3,662	
12/31/00	N.. PHYS1	70100		BLUE	-21	-21	
01/25/01	T.. 108007	70100		BLUE	-100	-100	
01/25/01	T.. 108007	70100		OUT. LOG.	100	100	
01/25/01	T.. 109004	70100		OUT. LOG.	-87	-87	
01/25/01	T.. 109005	70100		OUT. LOG.	-13	-13	
01/25/01	T.. 109004	70100		YELLOW	87	87	
01/25/01	T.. 109005	70100		YELLOW	13	13	
01/25/01	N.. NAO001	70100		YELLOW	-13	-13	

Notice that the last line in the Item Ledger Entries window is the posted adjustment you have made for the 13 units lost in transit. Use the Navigate functionality to view the detailed information for this posting.

Creating Transfer Orders Automatically

The previous section described the rationale and procedure for creating transfer orders manually. It is also possible for companies to use the requisition worksheet to create transfer orders automatically. There is more information about this procedure in the requisition management chapter of the Trade training manual.

Microsoft Internet Explorer

Test Your Skills – Transfer Items between Locations

Scenario: Cronus customer 50000 places an order for:

- 1000 units (packs) of item 80100.
- 30 units of item 1908-S.
- 10 units of item 1964-W.

The order is for delivery in five days.

Due to certain considerations, the order is shipped to this customer from the Red warehouse. The availability check undertaken by the salesperson shows that there are not enough items in stock at the Red warehouse to fill the order and no receipt of new stock is scheduled or planned within the next five days. At the same time, there is enough stock available at the Green warehouse to fulfill this sales order. The salesperson decides to transfer the required quantity of the above items from the Green to the Red warehouse.

All Skill Levels

Your tasks are as follows:

1. Create three separate transfer orders for the required quantity of items 80100, 1908-S and 1964-W.

HINT: Note that item 80100's base unit of measure is BOX, while its sales unit of measure is PACK. One box contains five packs.

2. Release and ship all the created transfer orders from the Green warehouse.
3. Receive the transfer order for item 80100 at the Red warehouse.
4. For the transfer order of item 1908-S, only 28 units arrive at the Red warehouse. Two units are lost. Receive the order and adjust the inventory at this warehouse to account for the lost items.
5. Do not receive the transfer order for item 1964-W at the Red warehouse.

NOTE: The outcome of this exercise is used in the following section as well as the next exercise.

Viewing Items in Transit

Constant movement of inventory between different locations creates a need in companies with multiple locations to determine the status of a specific item(s). With the location transfers functionality in Microsoft Navision, a multi-site company is able to track quantity and value of inventory currently in transit at any time.

Viewing Quantities

Companies can view items in transit per in-transit location code and per item. Furthermore, all the reports that relate to item availability include quantities in transit. Let's have a closer look at these options using Cronus.

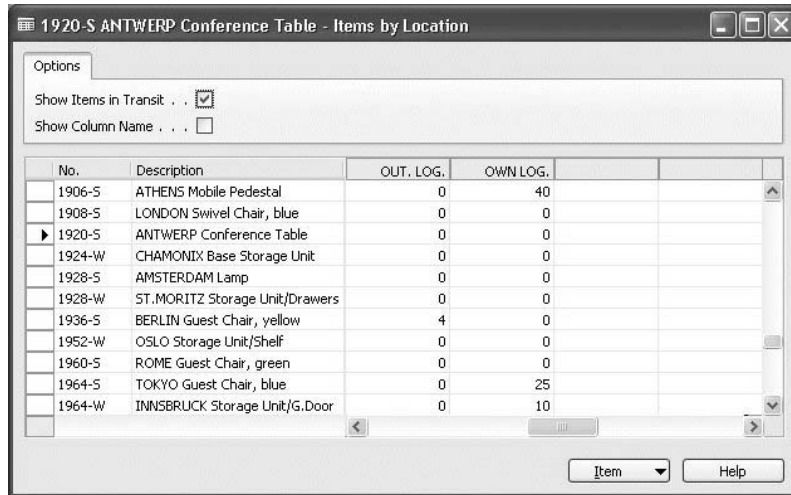
To view items in-transit per in-transit code:

1. In the Navigation Pane, click the **Purchase** button and click INVENTORY & COSTING→ITEMS.
2. Click ITEM→ITEMS BY LOCATION. The Items by Location window appears:

No.	Description	BLUE	GREEN	RED	SILVER
70000	Side Panel	2,202	0	0	0
70001	Base	2,310	0	0	0
70002	Top Panel	2,458	0	0	0
70003	Rear Panel	2,094	0	0	0
70010	Wooden Door	2,270	0	0	0
70011	Glass Door	2,212	0	-1	0
70040	Drawer	2,221	0	0	0
70041	Shelf	2,024	0	0	0
70060	Mounting	583	0	249	0
70100	Paint, black	3,541	0	0	0
70101	Paint, yellow	3,718	0	0	0

By default, this window shows item availability per normal physical locations. To view item quantities per in-transit location code:

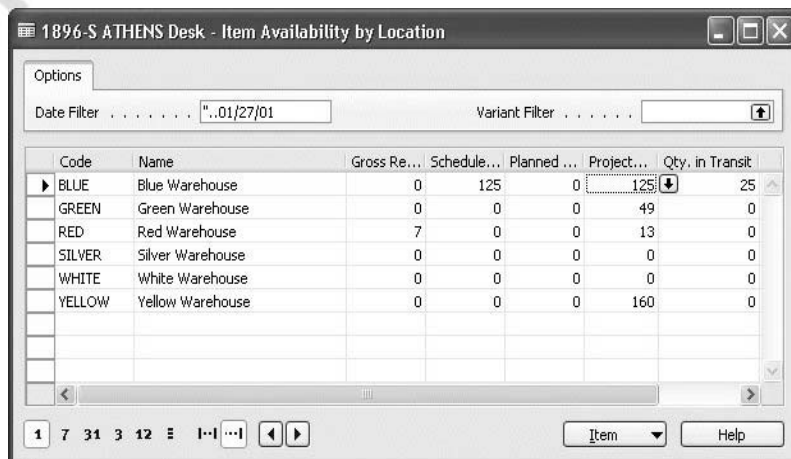
- In the **Show Items In Transit** field, insert a check mark.



In the Item Availability by Location window, you can see the total quantity of an item that is in-transit on a specific date per transfer-to location, regardless of the in-transit location code, in the **Qty. in Transit** field. This field is not shown in the standard layout of the window. To insert the field, use the Show Column function.

View the quantity in-transit for item 1896-S in the period up to 01/27/01:

- Open the item card for item 1896-S. Click ITEM→ITEM AVAILABILITY BY→LOCATION.
- In the **Date Filter** field of Item Availability by Location window, enter 01/27/01 and press Enter. Click the **Balance at Date** button at the bottom of the window to see the balance up to 01/27/01.



As indicated by the contents of the **Qty. in Transit** field, the total of 25 units of item 1896-S is on the way to the Blue warehouse as of 01/27/01.

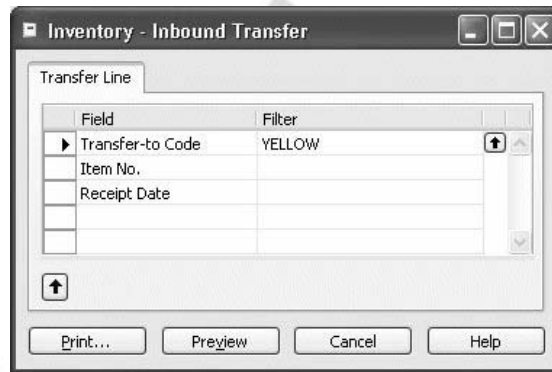
Quantities in transit are also included in all the reports that specify inventory availability. The Inventory – Inbound Transfer report shows items in transit that are to be received at the transfer-to location:

6. In the Navigation Pane, click the **Purchase** button and click INVENTORY & COSTING→REPORTS→INVENTORY– INBOUND TRANSFER.

In the request form, the user can define what to include in the document by setting filters.

Assume that an inventory manager at the Yellow warehouse wants to know which items and how many of them are on the way to the warehouse.

7. In the Inventory – Inbound Transfer window, in the **Filter** field for the Transfer-to Code line, select Yellow:



8. Click **Preview**.

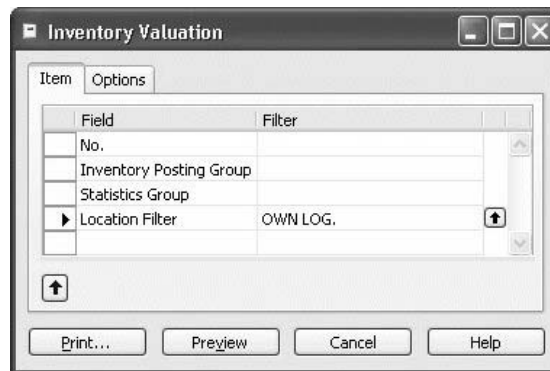
This report provides additional information on about the transfers, such as when warehouse Yellow can expect items to arrive and from which location they were transferred.

Viewing Values

To view value of items in transit, companies can use the Inventory Valuation report.

1. In the Navigation Pane, click the **Financial Management** button and click INVENTORY→REPORTS→INVENTORY VALUATION.

2. In the Inventory Valuation window, set OWN LOG. as a location filter on the **Item** tab.



3. Click **Preview**.

The Invt. Valuation – Cost Spec. and the Item Age Composition – Value reports also show the value of items in transit.

Test Your Skills – View Items in Transit

All Skill Levels

Your tasks are as follows:

1. Run the Inventory – Inbound Transfer report for the Red warehouse.
2. Run the Inventory Valuation report for the Blue warehouse.

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Test Your Knowledge – Location Transfers

1. Besides standard multiple location setup, what two elements must you set up in Microsoft Navision before you can use location transfers?
2. How do you specify that a location will be used as an in-transit location?
3. Suppose that when a transfer shipment arrives at the destination warehouse, the warehouse employee discovers that a small number of the items have been broken in transit. What steps must the employee take to record the adjusted quantity in the program?
4. True or False: It is possible to check what quantity of an item is in transit by using the Item Availability by Period window.

Quick Interaction: Lessons Learned

Take a moment to write down three Key Points you have learned from this chapter:

1.

2.

3.

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CHAPTER 4: WAREHOUSING

This chapter contains the following sections:

- Overview
- Objectives
- Setting Up Warehousing
- Receiving and Putting Away
- Picking and Shipping
- Movements and Adjustments
- Physical Inventory

Objectives

By the end of this chapter, you should be able to:

- Set up locations for warehousing, including bin setup.
- Receive and put away items using the purchase order, inventory put-away, or warehouse receipt documents.
- Pick and ship items using the sales order, inventory pick, or warehouse shipment documents.
- Move items between bins.
- Adjust item quantities in bins.
- Conduct a physical inventory count in a location with bins.

Overview

Maximum efficiency, data accuracy, and reliability in inventory management and warehousing operations are of utmost importance to any company striving for excellence in customer service and cost reduction. While these goals are relevant to any business, not every company would consider warehousing as their core competence, which in turn reflects on their willingness to invest in extensive warehousing solutions and accept long implementation time.

With this in mind, companies with straightforward warehousing needs, such as small distributors, manufacturing or service companies, have a number of challenges they have to deal with while ensuring that overall goals are reached.

First of all, to sustain efficiency and short order-handling time, items must be easy to find in the warehouse. Additionally, warehouse employees must be able to focus on carrying out physical movements rather than spending time in front of computers recording information. Moreover, in companies that experience high turnover of warehouse employees, the ability to train them quickly in how to use the program is highly relevant.

Considering these challenges, companies with simple warehousing generally need:

- To be able to reflect their warehouse data structure in the program.
- To gain an overview of inventory levels and of item placement in the warehouse.
- To get program support to perform the basic movements of receiving, putting away, picking, and shipping.

The warehousing offering in Microsoft® Business Solutions–Navision® provides a way for companies with even the most simple warehouse data and processes to perform daily activities in a reliable and easy-to-use environment, while allowing for increasing complexity as the company grows and processes change. The program does this by providing the following benefits:

- Efficiency and overview
This is supported by features such as dynamic bin suggestion, the ability to record warehouse information directly on the order documents, the facility to handle warehousing tasks on separate documents where only relevant order information is displayed, and being able to get an overview of warehouse pending tasks.
- Shortened learning curve
A simplified user interface on warehouse documents and support for easily being able to undo mistakes are among the features that help warehouse employees to quickly learn the program.

- Reduced implementation risk
Scalability of the total warehousing offering, that is, the possibility to start with a base level from which more advanced functionality can be installed in the preferred place, is the key factor that contributes to mitigating implementation risk.

The warehousing offering in Microsoft Navision is represented by five granules – Bin, Pick, Put-away, Receipt, and Shipment. These granules can be implemented in any combination, thereby giving companies with different warehousing requirements the ability to tailor their warehouse solutions as they see fit.

The ability to use bins on sales and purchase documents with the Bin granule gives companies with a simple warehouse organization a way to perform picks and put-aways while using documents they are already familiar with. When these companies grow and find that their pick and put-away processes become more complicated, the Pick and Put-away granules give them the perfect step up to a level where their information can be handled with greater flexibility. With the Pick and Put-away granules comes the ability to access pick and put-away information from separate documents and menu options, which means that warehouse employees can do their work in a specialized and focused environment. Finally, the Receipt and Shipment granules give companies the ability to process receiving and shipment information for multiple orders in one separate warehouse document.

This chapter describes the different setup options for warehousing and explains the implications of selecting them. It then explains the warehousing processes by dividing them into the following categories:

- Receiving and putting away
- Picking and shipping
- Movements and adjustments
- Physical inventory

To demonstrate the value of the warehouse management features in improving the efficiency of warehouse operations, we use comprehensive scenarios and examples throughout the chapter. To follow the suggested scenarios, remember to install a clean database.

For a quick overview of typical procedures associated with specific warehouse handling activities, we recommend that you read the respective topics in the online Help.

Setting up Warehousing

When you set up warehousing options in Microsoft Navision, these options trigger the features in the warehousing granules in Microsoft Navision. The warehousing setup consists of the following two elements:

- **Location setup:** The setup begins with defining a warehouse as a location and specifying the extent to which the company wants their warehouse processes to be supported by the program.
- **Bin setup:** A bin is the most basic storage unit in the warehouse. To reflect the actual warehouse structure in terms of a bin numbering system and to be able to keep inventory records on the bin level, the company must set up bins in the program. This includes defining how bins should be used and specifying what should be stored in them (bin contents).

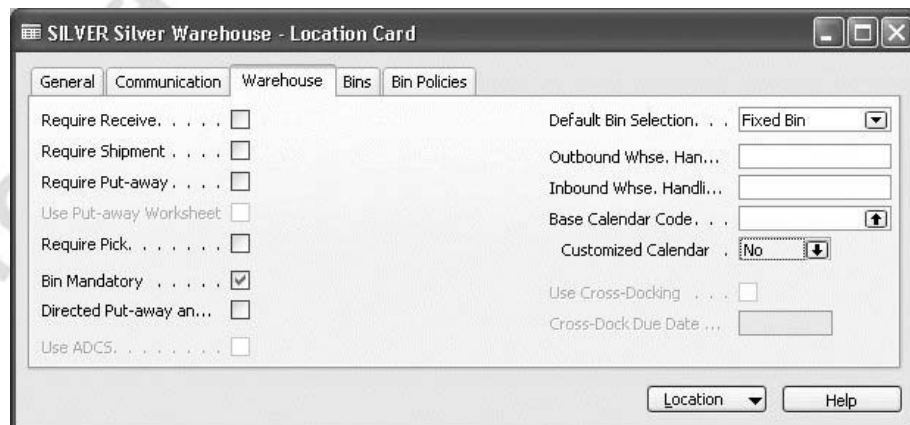
The following sections describe these two elements.

Setting up Locations

In the program, you must set up each warehouse as a location. You define the extent to which you want the program to support warehouse processes for a specific location on the **Warehouse** tab of the location card.

The Cronus company has a number of locations for warehousing. Consider the setup for the Silver location:

In the Navigation Pane, click the **Administration** button and click APPLICATION SETUP→WAREHOUSE→LOCATIONS. Browse to the Silver location and click the **Warehouse** tab:



The fields on the left side of the tab define the different ways the program can handle inbound and outbound warehouse processes. As explained earlier, these different ways are directly linked with the functionality of different warehousing granules.

A check mark in the **Bin Mandatory** field means a company has chosen to define and record bin information for all movements that take place in this location. This means that posting of transactions, both from journals and documents, is not possible unless a bin code is specified. Keeping records of inventory movements at the bin level is an important precondition for efficient warehousing.

The **Require Receive**, **Require Shipment**, **Require Put-away**, and **Require Pick** fields define whether separate warehouse documents are used to handle the respective warehousing processes – receiving, shipping, putting away, and picking. You decide to use one or another document, or a combination of documents, to support handling of a corresponding process using the same logic as deciding to use one or another warehousing granule. You must take into account the volume and complexity of the warehousing workload and the organizational setting of the warehouse.

Essentially, if these fields contain checkmarks, it means that the company has a designated warehouse environment, where actual order handling is carried out and order posting takes place. Otherwise, the company operates on the premise that all warehousing activities are handled and posted from the actual order document (or journal).

***NOTE:** If the **Bin Mandatory** field contains a check mark, the **Directed Put-away and Pick** field is available. A check mark in this field indicates that the company is using functionality from the Warehouse Management Systems granules and that the location requires advanced warehousing functionality. Directed put-away and pick makes it possible to use such features as bin ranking, bin capacity, and put-away templates to let the program suggest which bins to use for put-aways and picks. You can learn about these features in the Warehouse Management Systems training material.*

Notice that at Cronus, the Silver location has been set up to use bins without requiring the use of separate warehouse documents. The Green and Yellow warehouses are, on the other hand, set up in a way that requires all warehouse activities to be processed separately from the order documents without registering bin information.

Setting up Bins

A bin is the most basic storage unit in the warehouse. When requiring bin information to be entered for each inventory transaction and movement, a company must consider a number of bin setup options.

For locations using bins, the program uses a system of default bins to facilitate the warehouse handling tasks. You assign every item that is stored in a warehouse a default bin, and each item can have only one default bin per location. The program then suggests the default bin whenever you perform a transaction with the item. For instance, when creating a purchase order, the user enters the item number and location code, and the program automatically fills in the bin code with the item's default bin.

The first step is to create the bins in the program. You must identify bins by codes that reflect the actual bin numbering in the warehouse.

Bin Code and Content Setup

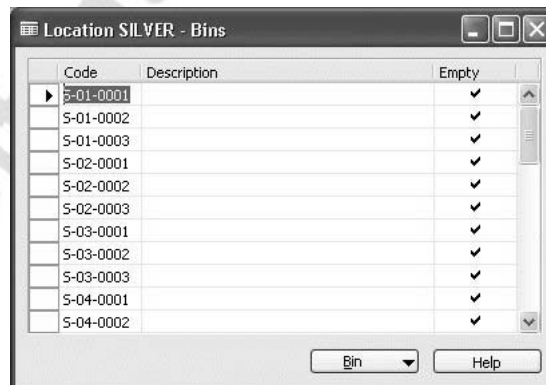
You can assign a code to and describe bins in two ways:

- Manually
- Automatically by using the Bin Creation Worksheet

The method you choose depends on the scope of the setup task. If the task is limited to only a few modifications, then the manual bin creation method is most appropriate. If the task is to register a large number of bin codes – as typically would be the case in the startup phase of an entire warehouse setup – then you should choose to do so automatically.

You create bins manually from the location card. Cronus has a number of bins for the Silver location:

1. On the location card for the Silver warehouse, click LOCATION→BINS:



In the Bins window, a bin has a code and description.

To create bins automatically using the worksheet, the user must first define bin templates. The user can then create bins automatically using the Bin Creation Worksheet window. In the worksheet, the user can use the Calculate Bins function to create a large number of bins.

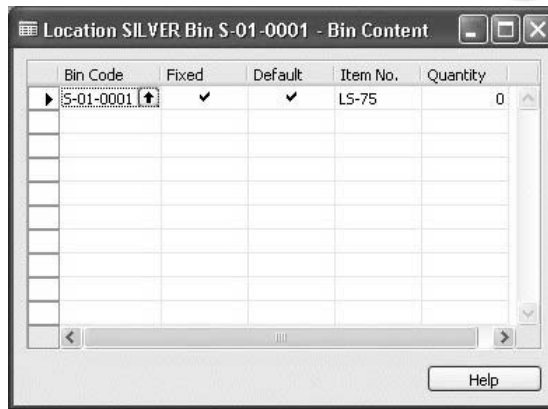
Once bin codes have been assigned, the user can define bin contents.

Bin content defines which items are stored in each bin. It also describes a relation between the bin and the item in terms of whether a particular bin is default or fixed for a specific item.

Like bins, bin content can also be set up in two ways: manually and automatically. The first and most simple method is to set up bin content manually. This can be done from both the location card and item card.

Have a look at the content of one of the bins set up for location Silver:

2. On the location card for the Silver warehouse, click LOCATION→BINS. Select the first bin code and click BIN→CONTENTS:



In the Bin Content window, the user specifies which item is to be stored in the bin.

A check mark in the **Fixed** field indicates that the item (bin content) has been associated with this bin, and that the bin should normally contain the item. If the item quantity goes to zero, the program does not delete the bin content line.

A check mark in the **Default** field indicates that this bin should be the first bin the program suggests when the user enters details of a transaction involving this item on the order document or journal line. For items with no default bin specified in advance, the program sets the bin in which the item is put away for the first time as the default bin.

NOTE: The way that the program behaves (as described above) can be used as an alternative method for setting up default bins.

The **Quantity** field is for information only and is not editable. This field shows how many units of the item are currently in the bin.

If required, you can set up the same bin to contain more than one item and, similarly, you can store the same item in several bins. However, an item has only one default bin per location.

The second, and most efficient, way to set up large numbers of bins with bin content is to use the Bin Content Creation Worksheet window.

***NOTE:** The bin creation and bin content creation worksheets are part of the Bin Setup granule. For more details on these two worksheets, read the corresponding topic in the online Help or refer to the Warehouse Management Systems training material.*

To complete the setup of bin usage rules for the location, the company must specify how the program should handle default bins once they are set up. This is done by selecting one of the two options in the **Default Bin Selection** field on the **Warehouse** tab of the location card:

- If the **Fixed Bin** option is selected, the program always suggests the same bin for picking and putting the item away. The user can always change the default bin assignment should such a need occur.
- If **Last-Used Bin** is selected, the program changes the default bin assignment to the last bin in which the item was put away.

Selecting fixed bins as default bins is the rule specified for the Silver warehouse.

This completes the setup procedure for a warehouse using bins.

Test Your Skills – Setting up a Warehouse Location

Scenario: Cronus has established a new warehouse location that is referred to as the Orange location. This location uses bins.

The warehouse manager must create the location in Microsoft Navision using the location code ORANGE, set up a basic bin structure using bins numbered from O-01-0001 to O-01-0005, and set up bin O-01-0001 as the default bin for item LS-75.

All Skill Levels

Your task is as follows:

1. Create a new location with the location code ORANGE. Set the warehousing options for the location so that bin usage is mandatory.
2. Manually create the five bins for the Orange location, using bin codes O-01-0001 to O-01-0005.
3. Set up bin O-01-0001 as the default bin for item LS-75.

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Receiving and Putting Away

This section explains how warehousing functionality in Microsoft Navision enables the receiving and putting away of inbound orders, such as purchase orders, sales return orders, or inbound transfer orders. Putting away a production output is addressed in the Manufacturing training material.

In principle, the process of receiving inbound orders consists of two major activities:

- Receiving items at the warehouse receiving dock
- Putting away items to the stocking area

A typical scenario might be that items arrive at the warehouse, where a warehouse person confirms the received quantities stated on the delivery documents with the quantities on the company's order records and then records both the received quantities as well as the place where the items are put away.

In the Microsoft Navision warehousing solution, receiving and putting away takes place in one of four ways, described in the following table:

		Bin Granule	Receipt Granule	Put-away Granule
(a)	Post receipt and put-away from the order line	✓		
(b)	Post receipt and put-away from an inventory put-away document			✓
(c)	Post receipt and put-away from a warehouse receipt document		✓	
(d)	Post receipt from a warehouse receipt document and post put-away from a warehouse put-away document		✓	✓

Selecting one or another approach depends upon the company's accepted practices and the level of their organizational complexity. In an order-by-order warehousing environment, where most of the warehouse employees work directly with order documents, a company might decide to use option (a). On the other hand, a company which has a more complex put-away process, or where there are dedicated warehouse staff to perform warehousing functions, might decide to separate their put-away functions from the order document. In addition to this, companies that need to plan the handling of multiple orders might find it helpful to use warehouse receipt documents.

In methods (a), (b), and (c), the program combines the actions of receiving and putting away in one step when posting the corresponding documents as received. In the method (d), the program posts the receipt first to recognize the increase of inventory and thus that items are available for sale. The user registers the put-away to make items available to pick.

When a location is set up for mandatory bin usage, the program also creates warehouse entries in addition to the item ledger entries and value entries, upon posting a receipt. These entries are the records of the items' placement in the warehouse at the bin level.

An order document is available for invoicing when the warehouse personnel complete handling the receiving and put-away processes. If the source document is an inbound transfer order, the program deletes it and creates a posted transfer receipt.

The following sections show how to use methods (a), (b), and (c) and explain the implications of each. For simplicity, the example of a purchase order is used as the inbound order throughout the explanations.

Receiving and Putting Away From the Order

Recording a receipt and put-away on the order is the simplest way to receive and put away items. With this method, the program posts the receipt and put-away in one step, and no additional warehouse documents are required. This method is available with the Bin granule, and the only requirement to use this method is that the location must be set up with mandatory bin usage. When items arrive at the warehouse, the person who receives the shipment records the bin code on the order line. This bin code is where the item is put away. When the user posts the order as received, the program posts the put-away as well.

The following example illustrates the processes of receiving and putting away Cronus. The example is based on scenario 1 as well as on the existing data in the demo database.

Scenario 1: Receive and Put Away from the Purchase Order

A purchaser creates a purchase order for 70 units of item LS-120 and 80 units of item LS-150 from vendor 10000 to be delivered to the Silver warehouse. When the shipment arrives at the warehouse, the warehouse employee must perform a series of activities to record the correct numbers of items in the program and make them available for sale.

1. First, create the purchase order from vendor 10000 to be received in the Silver location. Use the Show Column function to make the **Bin Code** field visible.

T.. No.	Description	Location ...	Bin Code	Quantity	Reserve...	Unit of M...
I... LS-120	Loudspeaker, Black, 120W	SILVER	S-02-0001	70		PCS
I... LS-150	Loudspeaker, Cherry, 150W	SILVER	S-03-0001	80		PCS

Notice that the program fills in the default bin code for each item in the **Bin Code** field.

To make the order ready for handling in the warehouse, the purchaser must use the release function. Releasing the order changes the order's status to Released, which serves as a signal to the warehouse that the order is complete and is ready to be delivered from the vendor and received into the warehouse.

2. Click **FUNCTION**→**RELEASE** to release the purchase order, or alternatively, press **CTRL + F11**.

Assume that the shipment now arrives at the warehouse. The warehouse employee uses the accompanying delivery documents to determine which purchase order the shipment belongs to. With this information, the employee can now carry out receiving and putting the order away.

3. In the Navigation Pane, click the **Purchase** button and click **ORDER PROCESSING**→**ORDERS**. Browse to the purchase order created above.

The bin codes on the purchase order lines serve as an indication to the warehouse person as to where the respective items must be put away. A situation could occur where items must be put in a bin other than a default one or be placed in more than one bin.

Suppose that, when putting item LS-120 away, the warehouse employee finds that the bin can only hold 20 units. The remaining 50 units must be put away in bin S-02-0002. To record this handling in the program, the warehouse employee must do a partial receipt:

4. In the **Qty. to Receive** field, change the quantity to 20. This indicates that only 20 units are put into the bin on the order line.
5. Click POSTING→POST. The following window appears:



6. Select Receive and click **OK**.

To complete the put-away and receipt of the remaining quantity of item LS-120:

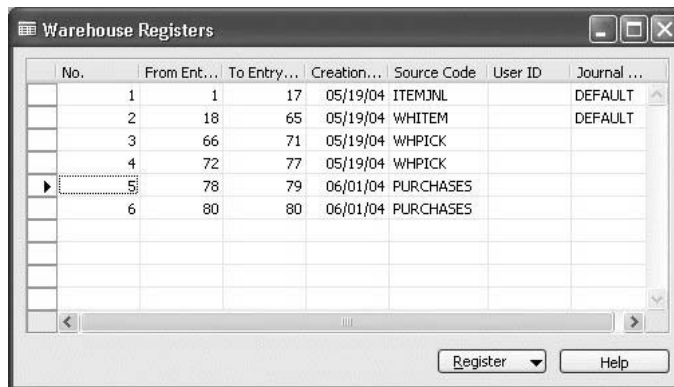
7. In the **Bin Code** field, change the code to S-02-0002 – the bin code where the remaining quantity is actually put away.
8. Post the order as received.

As a result of the posting, the program has now:

- Run the receive function for the received items and updated the relevant fields on the order.
- Recorded the put-away information for the bin by creating a warehouse register and warehouse entries specifying the quantity and bin information for the put-away.
- Updated the bin contents for the corresponding bin.

To view the put-away information, open the warehouse registers created by the posting.

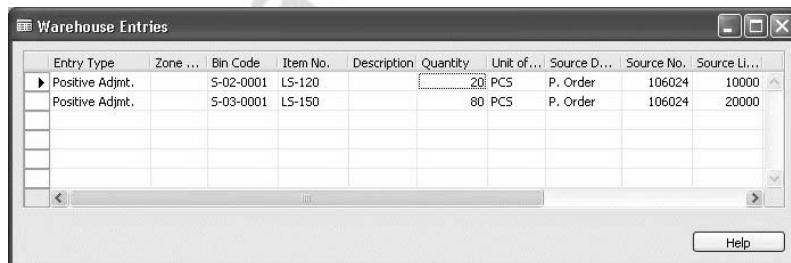
1. In the Navigation Pane, click the **Warehouse** button and click HISTORY→REGISTERS→REGISTERS.



No.	From Ent...	To Entry...	Creation...	Source Code	User ID	Journal ...
1	1	17	05/19/04	ITEMJNL		DEFAULT
2	18	65	05/19/04	WHITEM		DEFAULT
3	66	71	05/19/04	WHPICK		
4	72	77	05/19/04	WHPICK		
5	78	79	06/01/04	PURCHASES		
6	80	80	06/01/04	PURCHASES		

Notice that the last two entries are marked with the Purchases source code. Those are the registers for the put-away that we just posted.

2. Select the first of the two lines and click REGISTER→WAREHOUSE ENTRIES to see the warehouse entries that correspond to the put-away.



Entry Type	Zone ...	Bin Code	Item No.	Description	Quantity	Unit of ...	Source D...	Source No.	Source Li...
Positive Adjmt.		S-02-0001	L5-120		20	PCS	P_Order	106024	10000
Positive Adjmt.		S-03-0001	L5-150		80	PCS	P_Order	106024	20000

Based on these entries, the program updates the bin content records for the bins, respectively.

To check that the quantity has been received and put away in the appropriate place, check the bin contents:

1. Open the location card for the Silver warehouse.
2. Click LOCATION→BINS.

The program opens the list of all the bin codes set up for this location. Notice that the **Empty** field for the bins to which the items on the purchase order have been put away does not contain a check mark.

3. Select the line for the bin code S-02-0001 and click BIN→CONTENTS.

The bin content record specifies that there are 20 units of item LS-120 in the bin.

Bin Code	Fixed	Default	Item No.	Quantity
S-02-0001	✓	✓	LS-120	20

When a purchase order is associated with a sales order set to be drop shipped (the order line has a purchasing code defined as drop shipment), in principle, items do not enter and are not handled in the company's warehouse. In this case, the program prevents the user from entering a bin code on a sales/purchase order, even though the location has mandatory bin usage. As a consequence, when the user posts the orders, the program does not create warehouse entries.

Undoing the Put-away Quantity

When a user has posted an order with incorrectly entered quantity as received but not invoiced, they can use the program's function of undoing the posting, which is available on the posted receipt document. In a situation where an order was posted as received into the location with mandatory bin usage, the undo quantity posting function ensures that the warehouse-related records are automatically reversed. The following example illustrates this.

Scenario 1 (continued)

Suppose that in the process of putting the item LS-150 away in the bin and, importantly, after the order has been posted as received, a warehouse employee discovers that only 60 of the expected quantity of 80 units were delivered. When the purchaser is alerted to the problem, it turns out that according to the agreement with the vendor, the order was indeed for 60 units.

This error must now be corrected.

To undo the posting of the receipt and put-away:

1. In the Navigation Pane, click the **Purchase** button and click HISTORY→POSTED RECEIPTS.

2. Browse to the first posted receipt for the purchase order, in which the item LS-150 was received.

T. No.	Description	Location	Quantity	Unit of M...	Quantity...	Planned ...
I... LS-120	Loudspeaker, Black, 120W	SILVER	20	PCS		01/25/01
I... LS-150	Loudspeaker, Cherry, 150W	SILVER	80	PCS		01/25/01

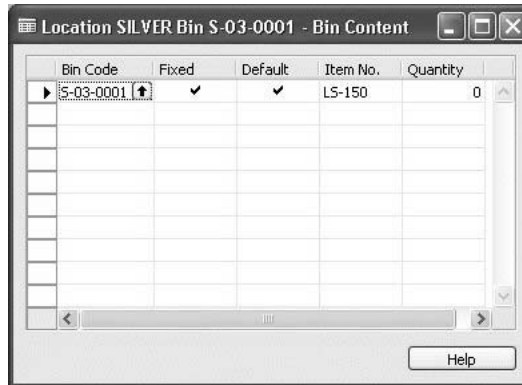
3. Select the line containing the receipt of the item LS-150 and click FUNCTIONS→UNDO RECEIPT.

In addition to performing a number of regular steps to ensure that the receipt is undone correctly (which are: (a) creating a corrective negative receipt line applied to the one to be corrected and (b) updating the respective fields on the associated purchase order) the program also reverses the put-away. This is done by means of creating a warehouse entry for the bin in question with the negative quantity.

4. In the Warehouse Register window, select the last warehouse register and open the associated warehouse entry:

Entry Type	Zone	Bin Code	Item No.	Description	Quantity	Unit of...	Source D...	Source No.	Source Li...
Negative Adjmt.		S-03-0001	LS-150		-80	PCS	P. Order	106024	20000

The record of the content of bin S-03-0001 has now been updated:



If the warehouse employee had put away the order line in more than one bin using multiple receipts, then the employee must undo each receipt as appropriate.

Generally, the undo quantity function can reverse the warehouse records for the posted receipt line as long as there is enough quantity in the bin to which the corresponding quantity was originally put away. This means that the user can still perform the function even though some or all of the items in the bin were moved elsewhere but the bin contains the quantity specified for the undoing operation.

***NOTE:** The undo quantity posting functionality is also available if you have posted a receipt from a warehouse receipt document (when using the Receipt granule). However, the undo functionality is not available when you post a receipt from an inventory put-away document (using the Put-away granule and not the Receipt granule).*

To complete the handling of scenario 1, update the purchase order with the correct quantity of item LS-150:

5. Browse to the purchase order and reopen it.
6. Click FUNCTIONS→REOPEN to reopen the order.
7. In the **Quantity** field for the line for item LS-150, enter 60. Post the order.

Receiving and Putting Away from the Inventory Put-away Document

This second method of receiving and putting away allows companies to record put-away information separately from the order information. This method requires the Put-away granule and requires that the **Require Put-away** field on the **Warehouse** tab on the location card contains a check mark.

To register the item's physical placement in the warehouse, rather than using the purchase order line, the warehouse employee uses a separate document – an inventory put-away. In essence, this document is a copy of the order document but only displays the information relevant to the warehouse. Moreover, the inventory put-away document provides greater flexibility as regards handling additional warehouse requirements such as splitting lines and document printing. Therefore, for companies with dedicated warehouse employees who do not typically work with orders, the ability to work with inventory put-away documents can be an advantage in terms of simplicity and better usability.

The user creates an inventory put-away document and accesses it either directly from the purchase order or from the Warehouse menu on the Navigation Pane. When the user posts the put-away document, the program also posts the order as received.

The principle behind the functionality of the Put-away granule is identical to that of the Pick granule, which is described in detail in the section “Picking and Shipping,” of this chapter, so this section does not address it here.

Receiving from a Receipt Document

In addition to recording put-away information separately from the order document, the third method of receiving and putting away gives companies a way to plan receipt and put-away tasks for multiple orders. This method requires the Receive granule and requires that the **Require Receive** field on the **Warehouse** tab of the location card contains a check mark.

This option is particularly relevant for companies where the receiving process is more complex or should be given more attention. Planning for the receipt tasks is done by means of creating a warehouse receipt document. With this document, which is based on released inbound orders, companies get an accurate picture of the expected work load and can manage the receiving process in the most efficient way.

Typically, creating warehouse receipts falls under the responsibility of a warehouse manager, who uses this document for planning purposes. When items arrive at the warehouse, a warehouse employee handles them and records the received quantities in the appropriate warehouse receipt document. Upon completion of this task, the warehouse employee must post the warehouse receipt. The program then registers the items as part of the company's inventory.

If the location has been set up for separate put-away processing (the **Require Put-away** field on the location card contains a check mark), as described earlier as method (d), posting the receipt also creates a warehouse put-away document. This document is an instruction to the warehouse personnel to move items from the receiving area to the storing area. They also use this document to register the handled quantities and the bin information.

If the location has not been set up for put-away processing but the bin usage is mandatory, the warehouse employee must record the bin information on the warehouse receipt lines. The receipt document can be printed as a put-away list to aid warehouse employees. When the warehouse employee posts the receipt, the program also posts bin information on the line and creates warehouse entries as well.

When the warehouse completes the receiving process, the associated order document (purchase order or sales return order) is ready for invoicing. If the source document is an inbound transfer order, the program deletes it and creates a posted transfer receipt.

The following scenario describes the process of receiving with a warehouse document using Cronus. In this example, the Silver location is set up to require only receive processing in the warehouse and not put-away processing.

Scenario 2: Receive and Put Away with a Warehouse Receipt Document

The purchaser creates two purchase orders – one for 30 units of item LS-150 for vendor 10000 and another one for 20 units of item LS-120 for vendor 50000 –to be received into the Silver location.

When the items arrive at the warehouse, the warehouse personnel must perform a series of activities to receive the items.

The first step is to set up the Silver location to require that receipts are handled through warehouse documents.

1. Open the location card for the Silver warehouse. Click the **Warehouse** tab.
2. Place a check mark in the **Require Receive** field.



Now, create the two purchase orders for vendors 10000 and 50000, respectively.

3. Enter the header and line details for the purchase orders. Make sure that the items are to be shipped to the Silver location.

4. Release the orders.

A released purchase order represents a request to the warehouse to expect arrival of the items. Managers use a list of all the released inbound orders to create receipt documents by setting certain parameters.

Creating a Warehouse Receipt

In the program, you can create a receipt of a purchase order from two functional areas:

- The warehouse: A warehouse manager at the warehouse where the order is to arrive can create a receipt document with all, filtered, or manually selected released purchase orders.
- The purchase office: A purchaser responsible for the specific order may choose to send a purchase order directly to the warehouse receipt document from the purchase order by clicking **FUNCTIONS→CREATE WHSE. RECEIPT.**

Suppose that, as part of regular daily activity, the warehouse manager at the Silver warehouse creates a warehouse receipt.

To create a warehouse receipt:

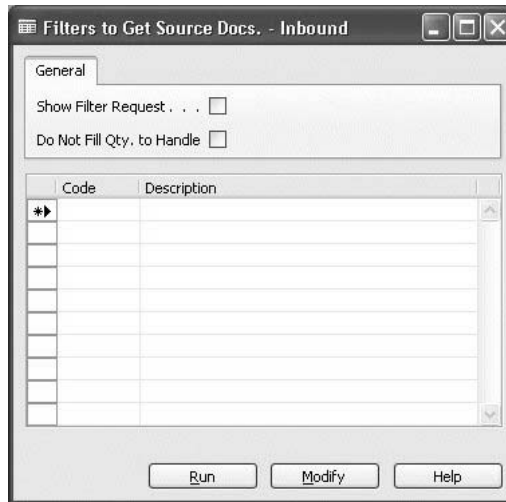
1. In the Navigation Pane, click the **Warehouse** button and click **PLANNING & EXECUTION→RECEIPTS**. The Warehouse Receipt window appears.
2. In the **No.** field, press F3 to create a new document and then press Enter to assign a number to this document.
3. In the **Location Code** field, select the Silver location.

The warehouse manager must now select the released source documents (in our example, purchase orders) with lines for quantities that have not yet been received. To do this, the manager has two options:

- Click **FUNCTIONS→USE FILTERS TO GET SRC. DOCS.** to use filters to select the source documents to retrieve lines from.
- Click **FUNCTIONS→GET SOURCE DOCUMENTS** to view a list of all released orders with lines to be received at the selected warehouse. The manager then selects the orders to retrieve, and the program copies the information from the source documents into the receipt lines. The procedure for using the Get Source Documents function to create a warehouse receipt document is described in the respective topic in the online Help.

The procedure for using the warehouse source filter card to create a warehouse receipt document is as follows:

4. In the Warehouse Receipt window, click FUNCTIONS→USE FILTERS TO GET SRC. DOCS. The Filters to Get Source Docs. – Inbound window appears:



This window contains a list of filter codes that represent filter combinations. The program only retrieves lines from source documents that meet the filter criteria. You can save and reuse filter combinations with the code reference.

If the **Show Filter Request** field contains a check mark, the Filters to Get Source Docs. function shows the filter request form before the program retrieves the lines. Read more about the filter request in the topic called “Get Source Documents Batch Job” in the online Help.

NOTE: *The Filters to Get Source Docs. – Inbound window appears empty only if the warehouse has not yet set up filters. In this case, when the user clicks **Run**, the program retrieves all the released source documents. Once the filters are set up, the window contains a list of corresponding filter codes.*

Suppose that the warehouse manager at the Silver warehouse decides to set up a filter card specifying that the program must only retrieve all the released purchase orders, without retrieving any other inbound orders.

When setting up a filter for the first time, the user must enter a code name on the Filters To Get Source Docs. – Inbound window and then open the filter card to specify other parameters.

To set up the filter card:

5. In the Filters to Get Source Docs. – Inbound window, in the **Code** field, enter PO ALL, and in the **Description** field, enter Get all purchase orders. Click **Modify**. The filter card appears:

The screenshot shows a dialog box titled "PO ALL - Source Document Filter Card - Inbound". It has four tabs: "General", "Sales", "Purchase", and "Transfer". The "General" tab is selected. The "Code" field contains "PO ALL" and the "Description" field contains "Get all purchase orders". Under the "Source Document:" section, there are two columns of checkboxes. The first column includes "Sales Orders", "Purchase Return Ord...", and "Outbound Transfers", all of which are unchecked. The second column includes "Sales Return Orders", "Purchase Orders", and "Inbound Transfers", all of which are checked. Below this are several filter fields: "Source No. Filter", "Item No. Filter", "Variant Code Filter", "Unit of Measure Filter", and "Shipment Method Cod...", each with a dropdown arrow. To the right of these are "Shipping Agent Code F...", "Shipping Agent Service...", and "Shipping Advice Filter", each with a dropdown arrow. Further right are "Partial" (checked) and "Complete" (checked). At the bottom left are "Show Filter Request" (unchecked) and "Do Not Fill Qty. to Handle" (unchecked). At the bottom right are "Run" and "Help" buttons.

The manager can define the source document(s) for a specific filter by inserting and removing check marks in the fields representing the types of source documents. Note that, by default, only fields representing the inbound source documents (sales return orders, purchase orders and inbound transfers) are editable and contain check marks.

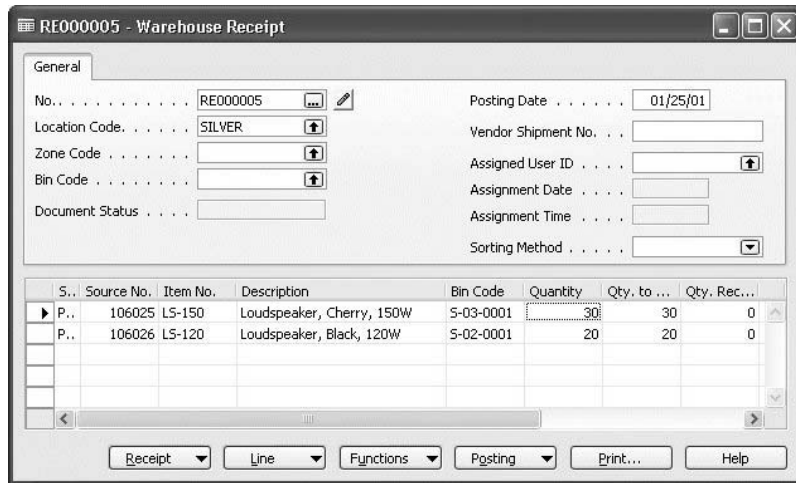
6. Remove the check marks in the **Sales Return Orders** and the **Inbound Transfers** fields.

Every time the manager chooses to create a receipt document by using the Use Filters to Get Src. Docs. function, the program opens the Filters to Get Source Docs. – Inbound window, where the manager can select, modify and run the appropriate filter.

Suppose that now the manager wants to retrieve all the released purchase orders with the expected receipt date of 01/26/01:

7. In the filter card just created, on the **Purchase** tab, in the **Expected Receipt Date** field, enter 01/26/01. Click **Run**.

The program retrieves the lines from the purchase order documents and fills in the fields in the Warehouse Receipt window:



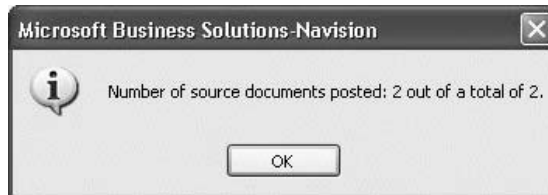
As it appears in the window, on this working date there are two purchase orders (created according to scenario 2) that meet the parameters specified in the source document filter card.

Notice that the program fills the **Bin Code** field on the line with the item's default bin code.

Suppose that all items now arrive at the warehouse. A warehouse person must now handle the items and record their receipt in the program. While the quantities of all other items that arrive correspond to the quantities on the purchase orders, only 25 units out of 30 of item LS-150 arrived.

8. In the **Qty. to Receive** field in the warehouse receipt document, enter the quantities that have been received on the respective lines.
9. Post the receipt document. Click **Yes** to confirm that you want to post the warehouse receipt.

The program gives the following message:



10. Click **OK**.

The program has now:

- Updated the relevant quantity fields on the lines of the source documents (in our example, purchase orders) and run the Post, Receive function for the orders.
- Recorded the put-away information for the bin by creating warehouse entries specifying the quantity and bin code for the put-away.
- Updated the **Qty. to Receive** field for the receipt lines and calculated the outstanding quantities as the difference between the quantity on the source document and the quantity handled. Lines with no outstanding quantities are removed from the receipt document and those with the outstanding quantities remain:

S.	Source No.	Item No.	Description	Bin Code	Quantity	Qty. to ...	Qty. Rec...
P.	106025	LS-150	Loudspeaker, Cherry, 150W	S-03-0001	30	5	25

The warehouse personnel must repeat the handling and posting tasks for the remaining receipt line(s) when the items arrive at the warehouse.

In our example, we combined the actions of receiving and putting-away in one step of posting the warehouse receipt document. This is in accordance with the warehousing setup chosen for the Silver location – the location does not require put-away processing through separate put-away documents.

If the location is set up with a check mark in the **Require Put-away** field on the location card, the posting of the warehouse receipt creates a warehouse put-away document, accessible from the Warehouse menu. Similar to the inventory put-away document, the function of the warehouse put-away document is to allow the warehouse personnel to handle put-away information separately from the warehouse receipt document.

The process of using a warehouse put-away document is not described here, since it is similar to that of using a warehouse pick document, which is described in the section “Picking and Shipping” of this chapter.

Test Your Skills – Receiving and Putting Away from the Purchase Document

Scenario: A purchaser creates a purchase order for four pallets of item LS-75 from vendor 10000 to be delivered to the Orange location. The Orange location is set up for mandatory bin usage.

When the shipment arrives, the warehouse employee finds that only two of the pallets can be put away in the bin suggested by the program. The other two must be put away into an available bin, and the warehouse employee chooses to use bin O-01-0002.

All Skill Levels

Your task is as follows:

1. Create and release the purchase order, ensuring that the shipment is delivered to the Orange location.
2. Receive the correct quantity into the correct bins.

Microsoft Internal Use Only

Test Your Skills – Receiving with a Warehouse Receipt

Scenario: A purchaser at Cronus creates a purchase order for 30 units of item 70010 for vendor 50000. The expected receipt date for this order is 01/28/01.

The Silver warehouse is set up to require receipt and but not put-away.

When the items arrive at the warehouse, the warehouse personnel must perform a series of activities to make items available for sale and for picking.

All Skill Levels

Your task is as follows:

1. Create and release the purchase order.
2. Create a warehouse receipt for all the orders from vendor 40000 with the expected receipt date of 01/28/01.
3. Ensure that the items are made available for sale and for picking.

Picking and Shipping

This section explains how warehousing functionality in Microsoft Navision helps companies efficiently manage picking and shipping outbound orders – sales orders, purchase return orders and outbound transfer orders. Picking components for production orders is addressed in the Manufacturing training material.

In principle, the process of shipping outbound orders consists of two major tasks:

- Picking items from the shelves
- Shipping items out of the warehouse

Like the receiving and putting away processes, four methods exist to support picking and shipping, controlled by respective granules:

		Bin Granule	Pick Granule	Shipment Granule
(a)	Post pick and shipment from the order line	✓		
(b)	Post pick and shipment from an inventory pick document		✓	
(c)	Post pick and shipment from a warehouse shipment document			✓
(d)	Post pick from a warehouse pick document and post shipment from a warehouse shipment document		✓	✓

What differentiates the four methods from one another is how complex the picking process or warehouse organization is for a company. In the order-by-order warehousing environment, for a company with straightforward processes where the bin structure is simple, picking and shipping from the order line is appropriate. Conversely, for a company where items for one order line might come from more than one bin, or where warehouse employees typically do not work with the order documents, the use of separate pick documents is more appropriate. Where a company's picking and shipping processes involve multiple order handling and thus require greater control and overview, the company might choose to use a warehouse shipment document and warehouse pick document to separate the picking and shipping tasks.

In the methods (a), (b), and (c), the program posts picking and shipping in one step when either of the corresponding documents is posted as shipped. In method (d), the program registers the pick first and posts the shipment at a later time from a different document.

Just as in the receiving process, upon posting an outbound order or a pick/shipment document from a location set to use bins, the program creates warehouse entries. These entries are the records of the decreases in item quantity at the bin level.

The following sections demonstrate methods (a), (b), and (d) and explain the implications of each. For simplicity, the example of a sales order is used as the outbound order throughout the explanations.

Picking and Shipping from the Order Line

Registering the picking information directly on the order line is the simplest method of warehousing in Microsoft Navision. With this method, when the user creates the sales order, the program automatically fills in the bin information on the order line. When the time comes to ship the order to the customer, a warehouse employee uses the specified bin code as an indication of where to find the item for picking. When the order is posted as shipped, the program posts the pick information as well, so that the bin contents reflect that the items have been taken from the bins.

In addition to the item ledger entries and value entries for the shipment, this shipment posting also creates warehouse entries, which are the records of where the items were picked from in the warehouse.

We do not address the principles behind the functionality of picking and shipping from the order line, because they are identical to that on the receiving side, which was described in detail in the previous section.

Picking and Shipping from Inventory Pick Documents

When using separate pick documents, the user enters bin code information on the pick document rather than handling picking information on the order line. The pick information can then be printed and manipulated as necessary. To use this method, a company must have the Pick granule, and the **Require Pick** field on the location card must contain a check mark.

For companies with dedicated warehouse staff, the use of pick documents is the best option. This is due to the fact that the functionality of the Pick granule offers greater flexibility in terms of meeting their key requirements, such as:

- A warehousing program must be easy and fast for the users to learn.
- The warehouse employees can carry out their jobs without having to be tied to the computer to perform lengthy or complicated procedures.

An inventory pick document is created on the basis of a released outbound order, only displaying the information relevant for the warehouse. To prepare the shipment, the warehouse employees use the pick documents as instructions of what and how many items to pick and where to find them in the warehouse.

When the user posts the pick document, the program also posts the associated outbound order as shipped.

The following scenario illustrates how you can create pick documents and use them to efficiently pick and ship.

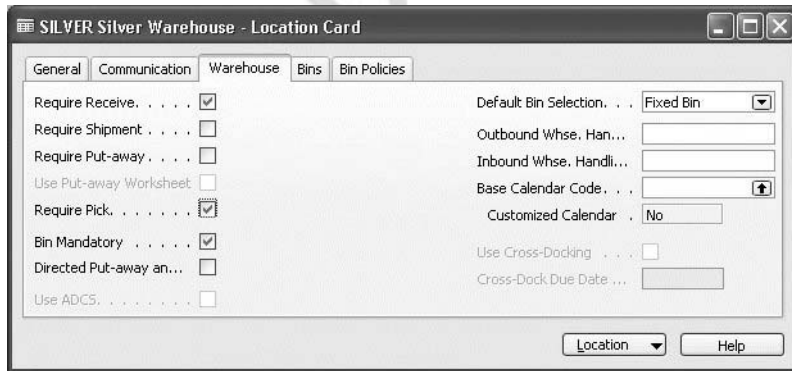
Scenario 3: Pick and Ship from an Inventory Pick Document

A salesperson creates a sales order for 50 units of item LS-120 to be shipped to customer 20000 from the Silver warehouse.

The warehouse employee must now ensure that the shipment is prepared and delivered to the customer.

As explained earlier, for picking to be handled through pick documents, you must first set up the warehouse location to require pick:

1. Open the location card for the Silver warehouse. On the **Warehouse** tab, insert a check mark in the **Require Pick** field.



Now create the sales order for customer 20000.

2. Enter the header and line details for the sales order. Make sure that the items are shipped from the Silver location. Use the Show Column function to make the **Bin Code** field visible.

The screenshot shows the '1001 Selangorian Ltd. - Sales Order' window. The 'General' tab is active, displaying fields for 'No.' (1001), 'Posting Date' (01/25/01), 'Order Date' (01/25/01), 'Document Date' (01/25/01), 'Requested Delivery Date', 'Promised Delivery Date', 'External Document No.', 'Salesperson Code' (PS), 'Campaign No.', 'Responsibility Center', and 'Status' (Open). The 'Customer Information' pane on the right shows 'Sell-to Customer' (Selangorian Ltd.), 'Ship-to Addresses' (2), 'Contacts' (1), 'Sales History', 'Bill-to Customer', and 'Avail. Credit' (0). The 'Item Information' pane shows 'Item Card', 'Availability' (40), 'Substitutions' (0), 'Sales Prices' (0), and 'Sales Line' (0). The table below has columns: T... No., Description, Location, Bin Code, Quantity, Reserve..., and Unit of M... The first row is: 1... LS-120, Loudspeaker, Black, 120W, SILVER, S-02-0001, 50, PCS. The bottom of the window has buttons for 'Order', 'Line', 'Functions', 'Posting', 'Print...', and 'Help'.

3. Release the order.

The release of an order is a signal to the warehouse that the order is ready for picking and shipping.

Suppose that, as a part of regular daily activity, the warehouse manager consults the list of released orders and creates a pick document for each.

The warehouse manager has three options for creating a pick document:

- Create the pick document from the sales order document by clicking **FUNCTIONS**→**CREATE INVENTORY PUT-AWAY/PICK**.
- Create the pick document from the Warehouse menu.
- Create pick documents for several orders from the **Create Invt. Put-away/Pick batch job** found under **WAREHOUSE**→**PLANNING & EXECUTION**.

In this scenario, the warehouse manager prefers to create the pick documents for orders one at a time using the Warehouse menu.

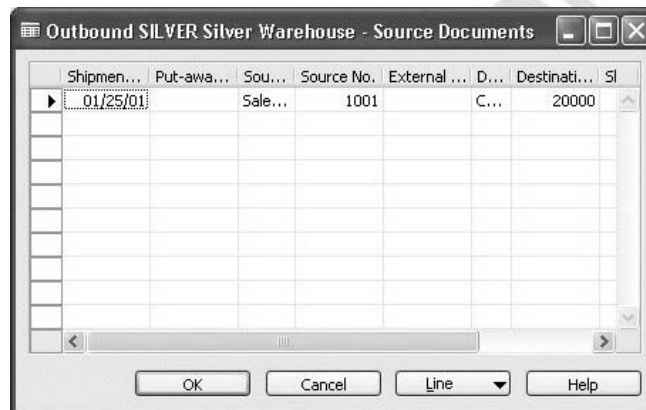
4. In the Navigation Pane, click the **Warehouse** button and click **GOODS HANDLING ORDER BY ORDER**→**INVENTORY PICKS**.
5. When the pick document opens, create a new document by clicking the **No.** field and pressing F3.
6. In the **Location Code** field, select Silver.

The next step is to retrieve the information from the sales order to create the pick lines. You can do this in two ways:

- Select the relevant order details in the fields on the inventory pick document header.
- Use the Get Source Document function.

The following steps describe the second option.

7. In the inventory pick document, click FUNCTIONS→GET SOURCE DOCUMENT.
8. The Outbound Source Documents window opens to display the released outbound orders for the specified location.

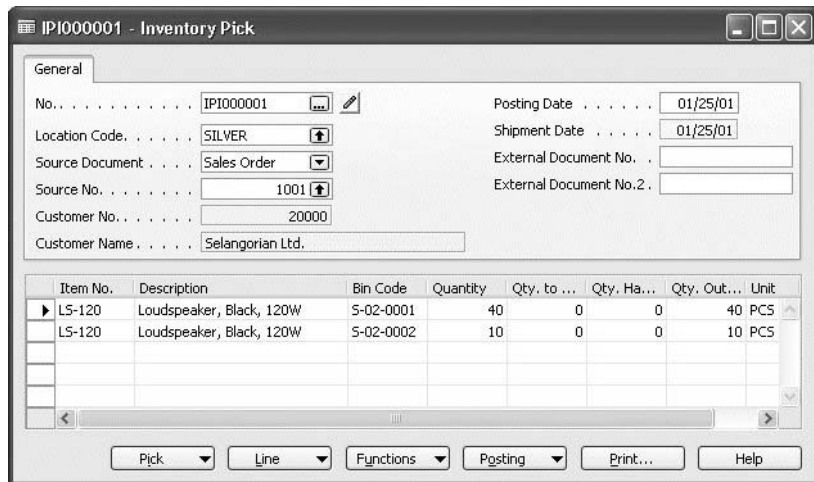


In this window, the **Source Type** field indicates the type of outbound order. In this scenario, the source type is Sales Order. The **Source No.** field contains the document number for the outbound order. The **Destination Type** field indicates that the source document is for a customer, and the **Destination No.** field contains the customer number, if applicable.

The **Put-away/Pick No.** field contains the number of the put-away or pick document that has been created for the order. In this example, no pick document has been created yet. This is the next step.

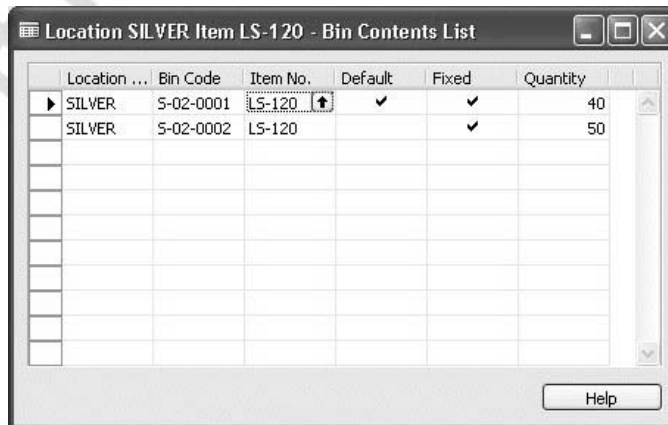
9. Click the line containing the source number for the sales order and click **OK**.

The program now creates the inventory pick lines for item LS-120.



Notice that the document contains two pick lines, specifying that the required quantity must be picked from two different bins. The program automatically split the sales order line into two pick lines because the default bin code for item LS-120 – S-02-0001 – does not contain enough quantity to fulfill the order line. Based on the bin content records (warehouse entries) for the item in question within the specified location, the program has suggested picking the remaining quantity from a bin code with sufficient quantity.

10. Select the first line and click LINE→BIN CONTENTS LIST to view the quantities of item LS-120 at the bin level.



This example shows a pick line being split automatically by the program. Warehouse employees might experience situations where they must split a pick line manually. The need for this could occur when, during the picking process, no sufficient item quantity is found in the bin suggested by the program and the required quantity is actually picked from another bin. To record this handling in the program, the warehouse employee uses the Split Line function available on the inventory pick document.

From the Inventory Pick window, the warehouse employees can print the pick lines and use the printout to pick the items for the shipment to the customer, writing down the actual quantities and recording any deviations from the printed information. When they are finished, the warehouse manager can take the written feedback and record the actual pick information in the inventory pick document.

11. In the **Qty. to Handle** field, enter 40 and 10 for the respective lines.

When the pick lines correctly reflect the picked quantities and bin codes, the manager can post the inventory pick document. As explained earlier, this posting also posts the shipment of the associated sales order.

12. In the Inventory Pick window, click **POSTING**→**POST**.

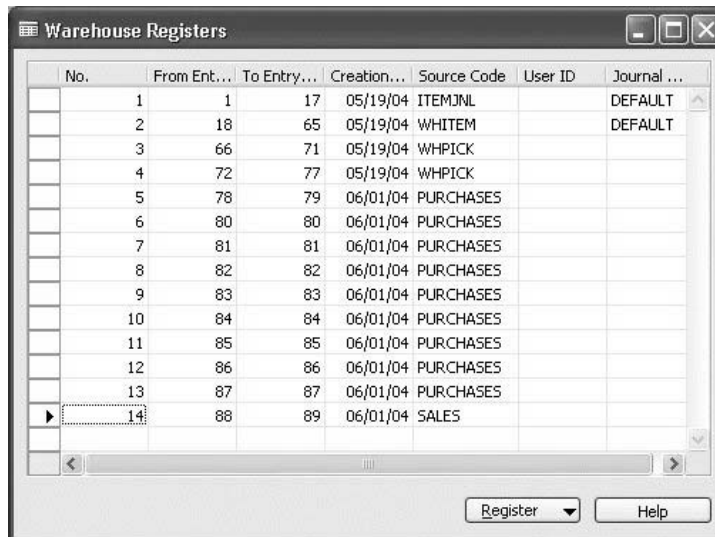


13. Click **Ship** and **OK**.

The program posts the picking information and the shipment. Notice that the option of posting the order as invoiced is also available for the warehouse employees. This could be relevant in situations where the invoice document serves as a shipment note to be handed over to the shipping agent.

Now, view the inventory records at the bin level by looking at the warehouse registers created by the posting.

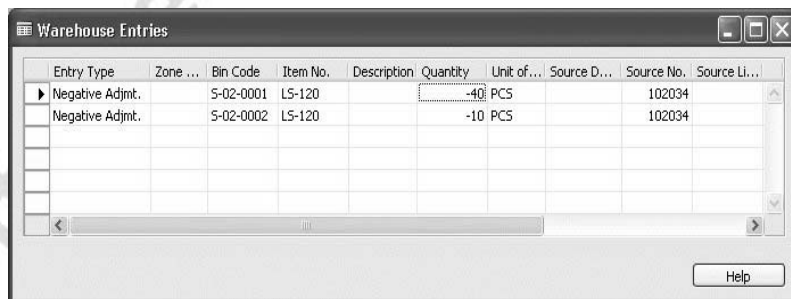
14. In the Navigation Pane, click the **Warehouse** button and click HISTORY→REGISTERS→REGISTERS.



No.	From Ent...	To Entry...	Creation...	Source Code	User ID	Journal ...
1	1	17	05/19/04	ITEMJNL		DEFAULT
2	18	65	05/19/04	WHITEM		DEFAULT
3	66	71	05/19/04	WHPICK		
4	72	77	05/19/04	WHPICK		
5	78	79	06/01/04	PURCHASES		
6	80	80	06/01/04	PURCHASES		
7	81	81	06/01/04	PURCHASES		
8	82	82	06/01/04	PURCHASES		
9	83	83	06/01/04	PURCHASES		
10	84	84	06/01/04	PURCHASES		
11	85	85	06/01/04	PURCHASES		
12	86	86	06/01/04	PURCHASES		
13	87	87	06/01/04	PURCHASES		
14	88	89	06/01/04	SALES		

Notice that the last entry has a source code of SALES. This is the register for the pick just posted.

15. Select the last line and click REGISTER→WAREHOUSE ENTRIES to see the warehouse entries that correspond to the pick.



Entry Type	Zone ...	Bin Code	Item No.	Description	Quantity	Unit of ...	Source D...	Source No.	Source Li...
Negative Adjmt.		5-02-0001	LS-120		-40	PCS		102034	
Negative Adjmt.		5-02-0002	LS-120		-10	PCS		102034	

The pick and shipment of the items is now complete.

The program's warehousing functionality also supports the practice used by some customers of creating order documents with negative lines. A negative order line, in essence, represents a transaction opposite to the one associated with the order in question, for example, a negative sales order line stands for an inbound order of sales return. This means that, when processing warehouse activities, the program ensures:

- The corresponding warehouse entries reflect the corresponding inventory movement at the bin level. In the example of a negative sales line, the warehouse entry represents an increase in the bin contents.

- Where separate inventory warehouse documents are used to process warehouse activities, the program creates an appropriate warehouse document. In the example of a negative sales line, the program creates a put-away document.

***NOTE:** The Undo Quantity function is not available when the process of putting away/picking is performed by means of using the separate warehouse documents of inventory put-aways and inventory picks respectively. The Undo Quantity function is also not available when you post a shipment from a warehouse shipment document (using the Shipment granule).*

Picking and Shipping with Warehouse Documents

The fourth method of handling picking and shipping allows companies to plan shipping and picking tasks for multiple orders by means of using a separate warehouse shipment document and warehouse pick document. This option requires the Shipment granule and requires that the **Require Shipment** field on the location card contains a check mark.

A released outbound order represents a request to the warehouse to ship items to customers, or to another warehouse or to production, as appropriate. By creating warehouse shipment documents based on the released orders, companies get an accurate picture of the expected work load and thus can manage the shipping process in the most efficient way.

If the location has been set up for processing picks separately from the shipment document (the **Require Pick** field on the location card contains a check mark), the user must create a warehouse pick document as based on the shipment document. This document is an instruction to the warehouse personnel to remove items from the shelves and move them to the packing and shipping area. They also use this document to register the handled quantities and the bin information.

If the location has not been set up for separate pick processing but the bin usage is mandatory, the warehouse employee must record the bin information on the warehouse shipment lines. The document can be printed to help warehouse employees in the picking process. Posting the shipment then at the same time registers the pick information.

A document with ship lines is an instruction to the warehouse personnel to pass the picked items to the shipping agent. They also use this document to register the handled quantities. The warehouse personnel post the ship lines when the items leave the warehouse.

When the warehouse completes handling the shipping process, the associated order document (sales order or purchase return order) is ready for invoicing. If the order document is an outbound transfer order, the program creates a posted transfer shipment.

The following scenario describes the processes of creating shipment for items to pick, picking the items and shipping them to customers using Cronus. In this example, you must set up the Silver location for both pick and ship processing. For simplicity, only a sales order is used as an outbound source document.

Scenario 4: Pick Using the Warehouse Pick Document and Ship Using the Warehouse Shipment Document

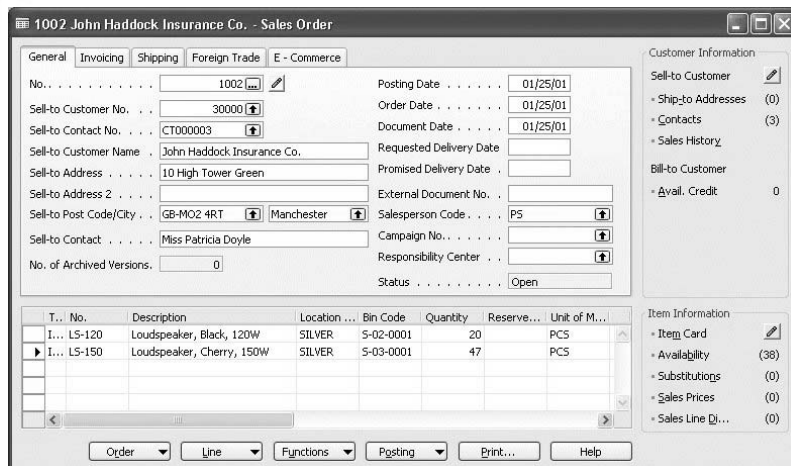
A salesperson at Cronus creates a sales order for 20 units of item LS-120 and 47 units of item LS-150 for customer 30000. The order must be shipped from the Silver warehouse. The warehouse personnel must perform a series of activities to ship items to the customer.

The first step is to ensure that the Silver location requires shipment processing through warehouse documents.

1. Open the location card for the Silver warehouse. Click the **Warehouse** tab.
2. Insert a check mark in the **Require Shipment** field.



3. Now, create and release the sales order:



Creating a Shipment

Creating a shipment document is the first stage in the flow of items out of the warehouse. At this stage, a warehouse manager assigns quantities of items from available inventory to outbound source document lines.

Based on the list of all released outbound orders, managers create shipment documents, that is, make specific lists of items to be picked for shipment. To make the picking process more efficient, they can sort the lines in various ways by setting certain parameters, such as who should do the picking and what sorting method to apply. As in the case of receiving, a shipment line can also be sent to the warehouse shipment document directly from an order document by clicking FUNCTIONS→CREATE WHSE. SHIPMENT.

The procedure for creating a shipment is as follows:

1. In the Navigation Pane, click the **Warehouse** button and click PLANNING & EXECUTION→SHIPMENTS. The Warehouse Shipment window appears.
2. Press F3 to create a new warehouse shipment. In the **No.** field, press enter to assign a number to the document.
3. In the **Location Code** field, select the Silver location.

***NOTE:** If you do not select a location code for a specific warehouse shipment, then the program retrieves source document lines from all locations that require warehouse shipment processing.*

Now, since the Silver location is set up for mandatory bin usage as well as to require both shipment and picking documents, the program regards the item movement from the shelves to the shipping dock as a movement from a picking bin to a shipping bin. The program automatically suggests the bin code from which to pick the items, but the user must specify on the warehouse shipment header the bin code to which items are placed after being picked and from which they are shipped.

Assume that bin code S-09-0001 has been selected as a shipping bin for the shipment in question:

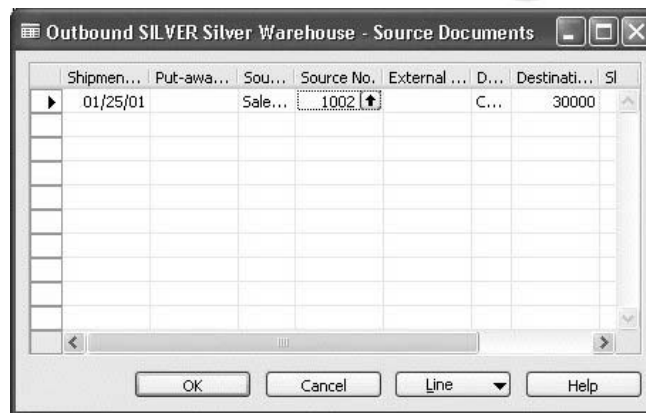
4. In the **Bin Code** field on the shipment header, select S-09-0001.

The manager must now fill in the shipment document with lines of the released outbound source documents (in our example, sales orders), for which quantities have not yet been assigned. To do this, the manager has two options:

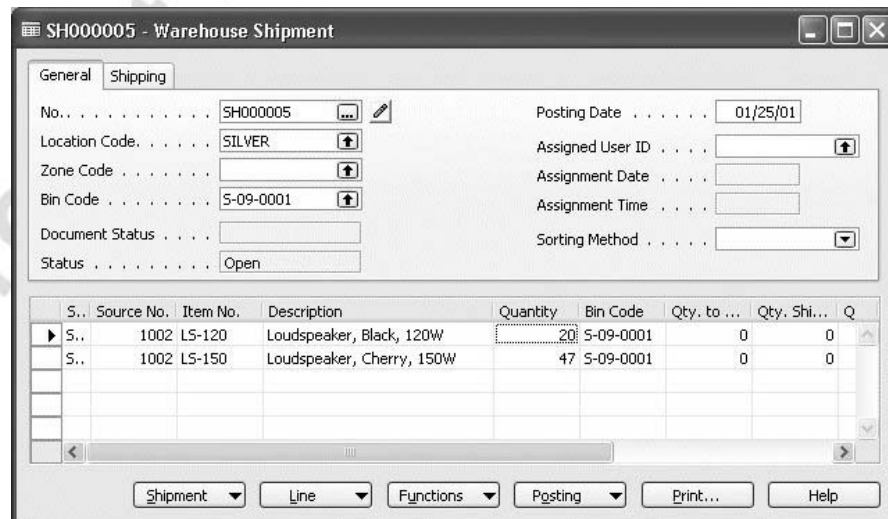
- Click FUNCTIONS→GET SOURCE DOCUMENTS. The manager can view a list of all released orders with lines to be shipped at the selected warehouse. The manager can then select the order to retrieve, and the program copies the information from the source document(s) into the shipment lines.
- Click FUNCTIONS→USE FILTERS TO GET SRC. DOCS. The manager can use filters to select the source documents that are necessary to retrieve lines according to the specified criteria.

Suppose that the manager decides to use the Get Source Documents function to create a warehouse shipment document

5. Click FUNCTIONS→GET SOURCE DOCUMENTS.



The program retrieves the source documents and creates the lines in the Warehouse Shipment window. Use the Show Column function to make the **Bin Code** field visible.



For locations not requiring a separate pick processing, the warehouse employees can print the shipping document with bin code information and use it as an instruction for where in the warehouse to find the items. When they post the picking information, the program creates warehouse entries with bin information.

***NOTE:** Handling a picking task only with the warehouse shipment document is based on the assumption that the shipping bin code information is irrelevant and therefore must not be selected on the document header. Analogous to the other warehousing scenarios, in this case, the program suggests a default bin code as a picking bin for each shipment line.*

Since the Silver location has been set up to require pick documents, the picking document must now be created from the warehouse shipment document.

Picking the Items

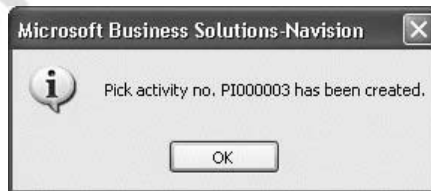
The warehouse manager now creates a picking document for the items required to fulfill the order.

1. Click **FUNCTIONS**→**CREATE PICK**.

In the Whse.-Shipment – Create Pick window, the user can assign a user ID in the **Assigned User ID** field. They can choose a sorting method for the pick lines in the **Sorting Method for Activity Lines** field. The **Set Breakbulk Filter** field is only applicable when the program is set up to use warehouse management systems. A check mark in the **Do Not Fill Qty. to Handle** field tells the program that the **Qty. to Handle** field should be set to zero initially, so that the warehouse employee filling in the pick document must enter the quantity manually. The warehouse employee can print the pick list by placing a check mark in the **Print Document** field.

2. Click **OK**.

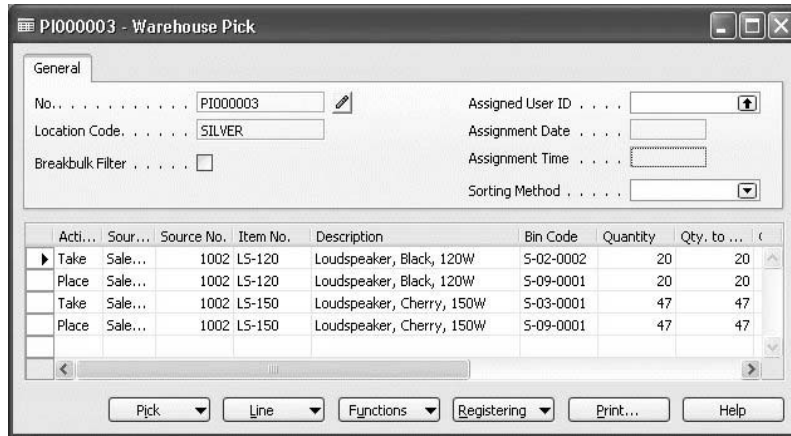
The program gives the following message:



3. Click **OK**.

The program creates a picking document.

4. In the Navigation Pane, click the **Warehouse** button and click GOODS HANDLING MULTIPLE ORDERS→PICKS and browse to the picking document you just created. Use the Show Column function to make the **Action Type** and the **Bin Code** fields visible.



Notice that in the pick document, the program creates two pick lines for each shipment line – a Take and a Place line for each item. The Take line is, in essence, a pick line indicating from where the items are to be picked, while the Place line specifies a shipping bin to which the picked items are to be placed before shipping.

Notice that the program suggested bin S-02-0002 instead of the default bin S-02-0001 on the Take line for item LS-120. This is because the default bin is currently empty, and the program detected that bin S-02-0002 contains the required picking quantity.

Upon moving items to the shipping dock, the warehouse employee must record this action in the program through the Register function. Registering essentially differs from the posting function in that it does not affect inventory availability but simply recognizes the fact that the items have been moved from one place to another within the same warehouse.

5. Click REGISTERING→REGISTER PICK. Click **Yes** to confirm that you want to register the document.

As a result, the program has now created:

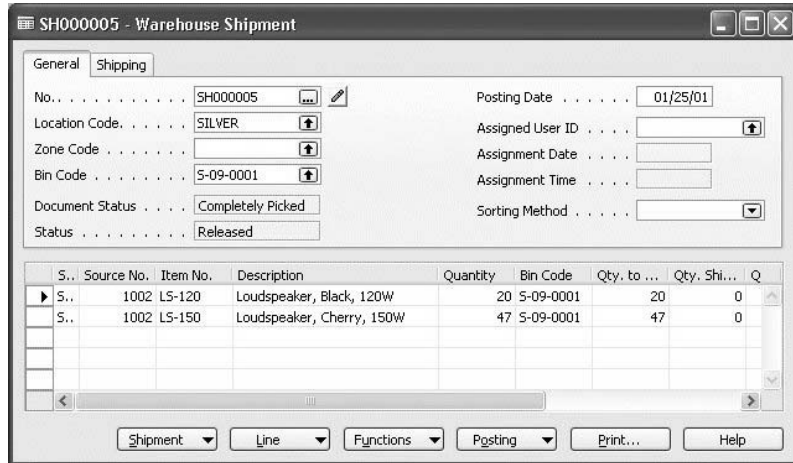
- A registered pick document.
- The warehouse entries to record the pick information at the bin level.

The warehouse employee must now pass the picked items to the shipping agent and post the shipment lines when the items leave the warehouse.

Shipping Items

To proceed with the shipping process:

1. Browse to the shipment document created in scenario 4.



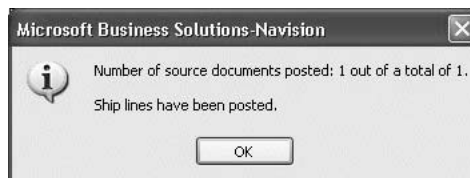
In the warehouse shipment document, the program has updated the **Qty. to Ship** fields and set the document status to Completely Picked. To complete the shipping process:

2. Click POSTING→POST SHIPMENT.



The program offers the possibility of posting the shipment and at the same time invoicing the associated outbound order document(s).

3. Select **Ship**, and click **OK**.



The shipment has now become both a posted warehouse shipment and a posted sales shipment.

Test Your Skills – Picking and Shipping with Inventory Pick Documents

Scenario: A salesperson enters a sales order for 50 PCS of item LS-75 for customer 30000 to be shipped from the Orange location.

The warehouse manager creates inventory picks from the released source documents and ensures that the pick is completed and that the shipment is posted.

All Skill Levels

Your task is as follows:

1. Change the warehouse settings of the Orange location created in a previous exercise so that the location now requires pick processing.
2. Create and release the sales order.
3. Process the pick and shipment, which encompasses:
 - Creating the inventory pick
 - Ensuring that the picked quantity is recorded
 - Posting the pick and shipment

Test Your Skills – Shipping with Warehouse Pick and Ship Documents

Scenario: A salesperson at Cronus creates a sales order for 30 units of item 1900-S and 52 units of item 1908-S for customer 30000. The requested delivery date for this order is 01/28/01.

The order must be shipped from the Green warehouse.

The warehouse personnel must perform a series of activities to ship items to the customer.

All Skill Levels

Your task is as follows:

1. Create and release the sales order.
2. Process the pick and shipment, which encompasses:
 - Creating a warehouse shipment document
 - Creating a warehouse pick document
 - Registering the pick
 - Posting the shipment

Movements and Adjustments

In the course of daily activity, users occasionally need to move items from bin to bin or to adjust the quantity recorded in the program for a bin. A company may need to move items to different bins to re-organize a section of the warehouse. Adjustments might be necessary if a real gain or loss of items occurs, such as items being found which were previously thought lost or items becoming broken or unusable.

Movements and quantity adjustments in warehousing are simple processes to learn and to perform because they are in principle parallel to those of other regular inventory movements and adjustments, such as transfers between locations or quantity adjustments within the same location. The important difference is, however, that the movement of items from one bin to another within the same warehouse represents a change in the physical placement of items but essentially does not affect the inventory quantity in that warehouse. For this reason, when the user posts a warehouse movement, the program only creates warehouse entries but no item ledger entries.

When the user adjusts quantities in a warehouse that is set up for mandatory bin usage, the program creates both item ledger entries and warehouse entries when the user posts the journal.

The following scenario describes how movements and adjustments are performed with warehousing in Microsoft Navision.

Scenario 5: Make a Movement and an Adjustment in Bins

The warehouse manager discovers that the bin usually used to store item LS-120, S-02-0001, is running low and wants to replenish it with the contents of bin S-02-0002.

The manager must perform a series of steps to ensure that the movement of items from one bin to another is recorded accurately in the program.

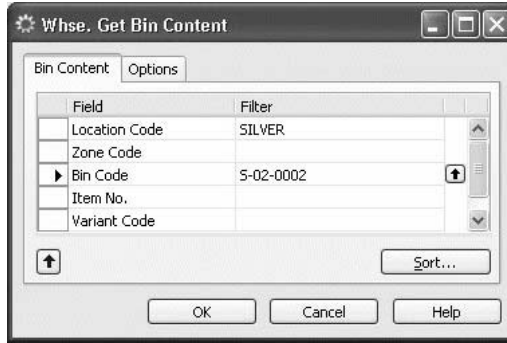
You create a movement using the item reclassification journal.

1. In the Navigation Pane, click the **Warehouse** button and click **PLANNING & EXECUTION**→**ITEM RECLASS. JOURNALS** to open the item reclassification journal. Use the Show Column function to make the **Location Code**, **Bin Code**, and **New Bin Code** fields visible.

Now that all the necessary fields are visible, fill in the fields of the journal. The fields can be filled in individually but, for an example like this one where the full content of one bin should be moved to another bin, the user can use the Get Bin Content function to speed up the process.

2. Click **FUNCTIONS**→**GET BIN CONTENT** to open the Whse. Get Bin Content window.

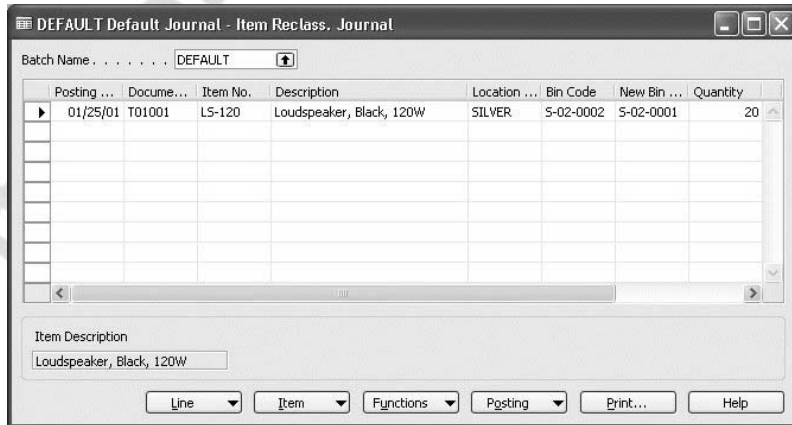
3. In the **Location Code** field, select the Silver location and in the **Bin Code** field, click the **AssistButton** to open the Bin List window.
4. Select the line for bin code S-02-0002 – the bin whose contents should be moved and click **OK**.



5. Click **OK**.

The journal now contains a line for the item LS-120 specifying the bin code from which the item is to be moved and the quantity currently contained in that bin.

6. In the **New Bin Code** field, enter S-02-0001 – the bin code to which the contents should be moved.



The item reclassification journal is now ready to be posted.

7. Click **POSTING→POST**. Click **Yes** to confirm the posting.

The program posts the movement by creating two warehouse entries – one indicating the decrease in contents in bin code S-02-0002 and another indicating increase in bin code S-02-0001 – without creating item ledger entries.

Suppose that in the course of moving the items, a warehouse employee discovers that 5 of the items have been broken. The warehouse manager determines that they are unsuitable for sale and that the quantity must be reduced in the program.

Routinely, you perform an adjustment to item quantity using the item journal.

1. Open an item journal. Use the Show Column function to make the **Bin Code** field visible.
2. In the **Entry Type** field, select Negative Adjustment, and in the **Item No.** field, enter LS-120. In the **Location Code** field, select the Silver location.

The program fills in the **Bin Code** field with the item's default bin. To make sure that this bin contains the quantity to be adjusted, check the bin contents by clicking the **AssistButton** on the field.

3. In the **Quantity** field of the item journal, enter 5 – the quantity to be adjusted.

E.. Docume...	Item No.	Description	Location ...	Bin Code	Quantity	Unit of M...
N.. START	LS-120	Loudspeaker, Black, 120W	SILVER	S-02-0001	5	PCS

4. Post the item journal. Click **Yes** to confirm the posting.

The program creates item ledger entries and warehouse entries that adjust the quantity in the bin to reflect the change.

Test Your Skills – Moving and Adjusting Bin Contents

Scenario: In the course of reviewing the warehouse inventory levels for the Orange location, the warehouse manager notices that the default bin for item LS-75 in the Orange location, O-01-0001, is empty, and he decides to replenish the bin with items from another bin.

He finds, however, in moving the items, that the quantity of LS-75 in the bin is four units fewer than what is recorded in the program. He therefore must adjust the quantity recorded in the program.

All Skill Levels

Your task is as follows:

1. Find a bin with a quantity of the item LS-75.
2. Move the items to the default bin for item LS-75.
3. After the move, adjust the quantity in bin O-01-0001 to reflect the loss of 4 units of the item.

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Physical Inventory

At some point in the year, every company must perform a physical counting of the inventory in the warehouse to ensure that the quantities of items that are recorded in the warehousing system are the same as what physically resides in the warehouse.

The physical inventory process with bins in Microsoft Navision is similar to the physical inventory process with locations, with a few key differences. When a company performs a physical counting in a warehouse that uses bins, they generate a report showing all of the items in bins in the location. The warehouse employees use this printed report to perform the counting of the items in the bins and record any discrepancies. The warehouse employee can then enter the differences into the program in the physical inventory journal and post the journal.

The main difference between the physical inventory posting with locations and with bins is that, when performing the physical inventory with bins, the program does not carry dimensions over to the new entries when posting adjustments. The dimensions can be added later, but they are not initially carried over. This also means that when running the Calculate Inventory function to create physical inventory journal lines, it is not possible to filter by dimensions.

The following example illustrates the physical inventory process in Microsoft Navision when a location uses bins.

Scenario 6: Perform a Physical Inventory Count

Cronus is ready to perform their annual physical counting of the inventory in the Silver location.

At Cronus, the job of performing the physical counting is split up by areas of the warehouse. The warehouse manager assigns each warehouse employee to a section of the warehouse. Once all employees have completed the counting, the warehouse manager records in the program any discrepancies between the quantities counted and the quantities recorded.

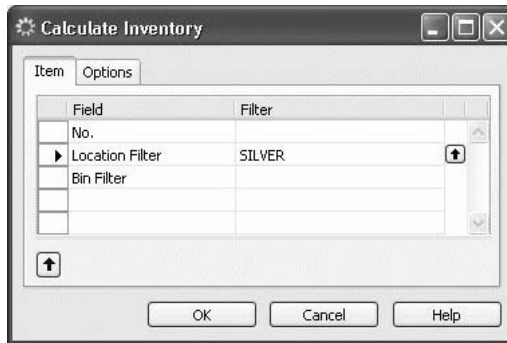
The warehouse manager's first job is to assign the sections of the warehouse to the employees and provide them with a printed report of the bins and items to be counted where they can write down the actual quantities in the bins.

1. In the Navigation Pane, click the **Warehouse** button and click INVENTORY→PHYS. INVENTORY JOURNALS.

The warehouse manager creates the physical inventory journal lines.

2. Click FUNCTIONS→CALCULATE INVENTORY. The request form for the Calculate Inventory function opens.

- On the **Item** tab, in the **Location Filter** field, select the Silver location.



- Click the **Options** tab.

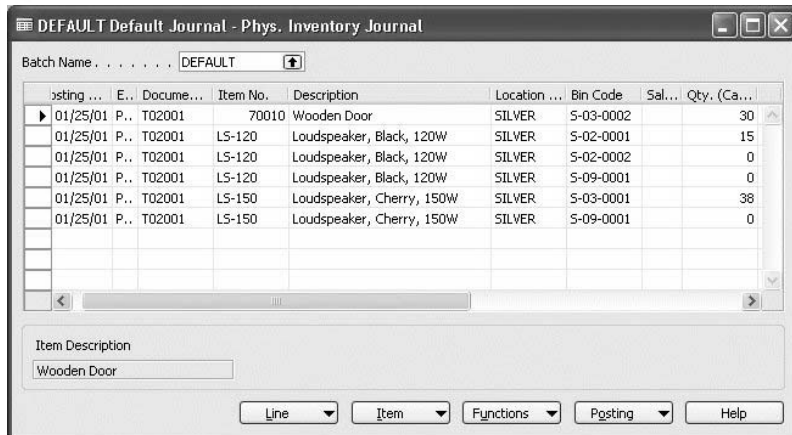
The **Posting Date** field contains the date that appears on the entries as the date when the entries were posted. The document number in the **Document No.** field also appears on all entries.

A check mark in the **Items Not On Inventory** field means that the program creates lines for the items which are not currently on inventory, in other words, where the **Qty. (Calculated)** field would be 0 for the item. This might be useful if a quantity of an item that was not on inventory is found during the count.

- Place a check mark in the **Items Not On Inventory** field.

Notice that you cannot enter a value in the **By Dimensions** field.

- Click **OK** in the Calculate Inventory window. The physical inventory journal lines are then filled with a line per location, bin, item, variant, and unit of measure combination. Use the Show Column function to make the **Bin Code** field visible.



The **Qty. (Calculated)** field shows the quantity that is currently recorded in the program. This field is not editable. The **Qty. (Phys. Inventory)** field initially contains the same quantity as the **Qty. (Calculated)** field. This is the field that should be updated with new quantities when a different quantity has been counted for a bin.

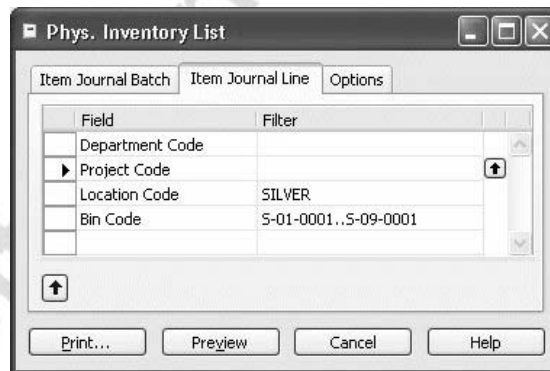
When the value in the **Qty. (Phys. Inventory)** field changes, the value in the **Quantity** field also changes. This is the quantity that is posted to update the program quantity.

The warehouse manager is now ready to assign the sections of the warehouse and print the physical inventory lists to distribute to the employees for the counting.

7. In the Navigation Pane, click the **Financial Management** button and click INVENTORY→REPORTS→PHYSICAL INVENTORY LIST. The Phys. Inventory List window opens.
8. Click the **Item Journal Line** tab, and in the **Location Code** field, select the Silver location.

Suppose that the warehouse manager is first going to assign the warehouse section with bins S-01-0001 to S-09-0001.

9. In the **Bin Code** field, enter S-01-0001..S-09-0001 as the range of bins to be included on the report.



10. Click the **Options** tab.

In this window, you have the option of showing the program's quantities on the physical inventory report by placing a check mark in the **Show Qty. (Calculated)** field. A manager may elect not to show the program's quantities so that the person performing the count is not influenced by what is recorded in the program. Not showing the calculated quantity on the report means that the warehouse manager must check every line of the warehouse employee's feedback on the printed report against the recorded quantities in the program, rather than simply scanning the feedback for discrepancies.

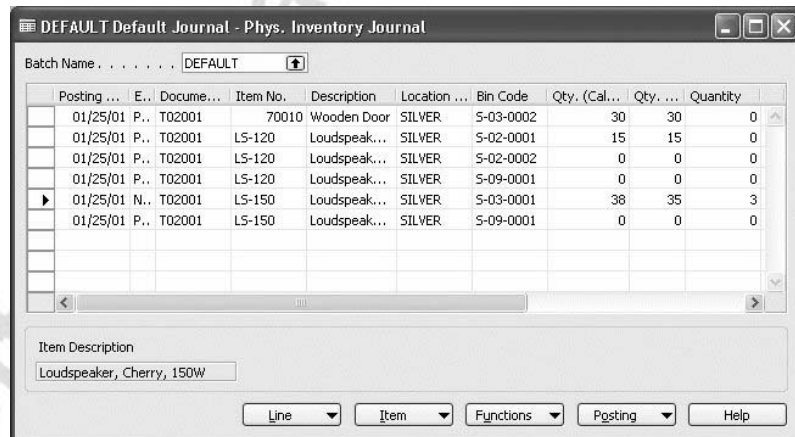
- Click **Preview** to see a copy of the report.

The report shows the item number and bin code and gives a space where the warehouse employee can record the actual quantity counted.

Once all the areas of the warehouse have been assigned to an employee, the counting can begin. When the employees have finished the counting, they return the feedback on the printed reports to the warehouse manager to be entered into the program.

Suppose that in the feedback on the printout of the Phys. Inventory List report, the warehouse employee has indicated that three fewer units of item LS-150 were found in bin S-03-0001 than are recorded in the program. The warehouse manager nows record this difference in the physical inventory journal line.

- Open the Phys. Inventory Journal window, and click on the line for item LS-150 and bin S-03-0001.
- In the **Qty. (Phys. Inventory)** field, record the quantity that is 3 fewer than the quantity in **Qty. (Calculated)** field.

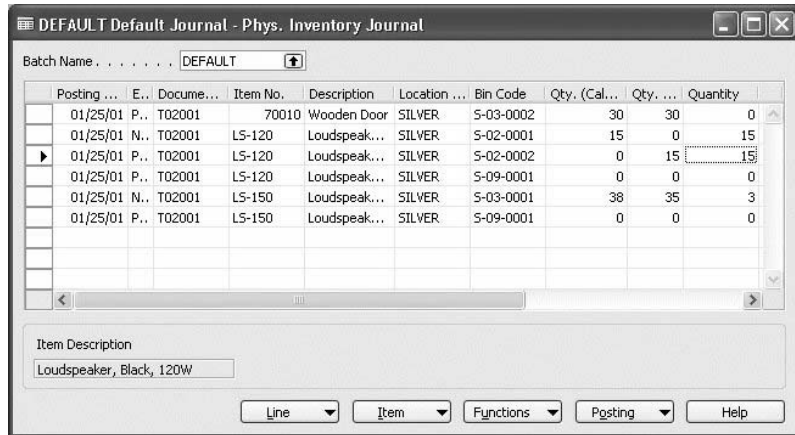


Notice that the **Entry Type** field for the line has changed to Negative Adjustment. The **Quantity** field should now reflect the change of three. The **Unit Amount**, **Amount**, and **Unit Cost** fields also reflect the change in the inventory value.

Suppose that the warehouse employee has also reported that the quantity of item LS-120 that is recorded to be in bin S-02-0001 is actually in bin S-02-0002.

- Click the line for the item LS-120 and bin S-02-0001.
- Change the **Qty. (Phys. Inventory)** field to 0 to indicate that no quantity of item LS-120 was found in this bin.

- Click on the line for the item LS-120 and bin S-02-0002.
- Enter in the **Qty. (Phys. Inventory)** field for this bin, the quantity that was originally in the first bin, 15.



The lines in the physical inventory journal are now ready to post.

- Click **POSTING**→**POST**. Click **Yes** to confirm the posting.

The program has now created physical inventory ledger entries, item ledger entries, and warehouse entries to reflect the changes.

Test Your Skills – Performing the Physical Inventory with Bins

Scenario: It is time to conduct a physical inventory for the Orange location at Cronus.

The first section assigned by the warehouse manager is from bin number O-01-0001 to O-01-0005. When conducting the physical count, the warehouse employee discovers four additional units of item LS-75 in bin O-01-0002.

All Skill Levels

Your task is as follows:

1. Create the physical inventory journal lines.
2. Create the physical inventory list report for the warehouse section.
3. Record and post the correct amount in the journal lines.

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Test Your Knowledge – Warehousing

1. Where in Microsoft Navision do you set up the warehousing options that trigger the different warehousing features, such as receipt handling or pick handling?
2. In the Bin Content window, what do the **Fixed** and **Default** fields mean?
3. Suppose that you have the Put-away granule and the Bin granule, but not the Receipt granule. What documents would you use to post the receipt and put-away of a purchase order?
 - a. Post receipt from the purchase order and post put-away from the warehouse put-away document.
 - b. Post both receipt and put-away from the inventory put-away document.
 - c. Post both receipt and put-away from the warehouse receipt document.
 - d. Post both receipt and put-away from the purchase order.
4. When you use the Bin granule and post a transaction such as a receipt of an item to a bin, the program creates _____ entries in addition to item ledger entries and value entries.
5. If you used the Bin granule, how would you record a movement from one bin to another bin in Microsoft Navision?
6. True or False: When running the Calculate Inventory function to create physical inventory journal lines for a location with bins, it is not possible to filter by dimensions.

Quick Interaction: Lessons Learned

Take a moment to write down three Key Points you have learned from this chapter:

1.

2.

3.

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CHAPTER 5: ITEM TRACKING

This chapter contains the following sections:

- Overview
- Objectives
- Setting up Item Tracking
- Handling Items with Serial and Lot Numbers
- Tracking Items with Serial and Lot Numbers
- Handling and Tracking Items with Warranty and Expiration
- Transferring Items with Serial and Lot Numbers

Objectives

By the end of this chapter, you should be able to:

- Set up item tracking in Microsoft Navision.
- Set up items to be tracked by serial or lot number.
- Assign serial or lot numbers to items on transactions, including purchases, sales, BOM journals, and transfers.
- Track transactions with serial or lot numbers using item entries.

Overview

As the flow of goods in the modern supply chain becomes more and more complex, the ability to keep track of items also increases in importance to the companies in the supply chain. While monitoring an item's transaction flow can be obligatory in certain businesses (for instance, those dealing with hazardous products), other businesses may find it advantageous to monitor products that are associated with warranties or have expiration dates.

The Item Tracking granule in Microsoft® Business Solutions–Navision® provides a company with an easy-to-use tracking system, which can take into account each unique piece of merchandise: when it was received, where it was placed, what it cost, and which customer bought it and when. It also provides a foundation on which companies can develop functionality to control warranty and expiration dates.

The functionality is based on using serial and lot numbers and allows the user to receive and ship multiple quantities with serial and lot numbers from a single order line entry. Item tracking entries, which represent the transaction history of each individual item with serial and/or lot numbers, are the records used to track an item along its movement through the supply chain.

The functionality of the Item Tracking granule is flexible enough to allow companies to handle all aspects of their item tracking system in a way that reflects their specific practices. For instance, some companies register and use serial and lot numbers on items from their vendors, while others set up and use their own system of serial and lot numbers.

In this chapter you should learn how to:

- Set up item tracking.
- Handle and track items with serial and lot numbers as well as with warranties and expirations.
- Handle the transfer of items with serial and lot numbers.

The principles and flexibility of the item tracking functionality are demonstrated through a number of scenarios based on the case of Cronus.

NOTE: *Simultaneous use of reservation and specific item tracking is uncommon as they both create a coupling between supply and demand. Except for situations where a customer or production planner requests a specific lot, it rarely makes sense to reserve inventory items that already carry item tracking numbers for specific application.*

More detailed information about how to use item tracking in manufacturing and warehouse management systems areas can be found in the Manufacturing and Warehouse Management Systems training manuals.

Setting up Item Tracking

This section explains how to set up item tracking.

The item tracking setup consists of three elements:

- **Item Tracking Codes setup:** An item tracking code defines which item parameters (serial number, lot number, or both) the program uses to track the items and in which operational areas.
- **Serial and Lot Number setup:** When a company wants to assign serial and lot numbers to items automatically, they must set up a number series for the program to use. The process of setting up these number series is similar to that of other number series and is part of the General Ledger Setup.
- **Item setup:** To be able to track a specific item, a company must first set it up for item tracking by applying a particular item tracking code. The setup may also include a serial/lot number series and expiration formula.

Setting up Item Tracking Codes

The item tracking codes reflect the different considerations that a company has in respect to the item tracking parameters and areas where the tracking is applied.

Based on careful planning, Cronus has set up a number of item tracking codes that are applied to certain items.

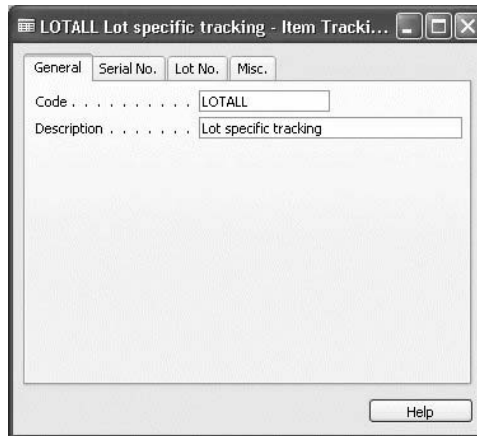
Let's look at the item tracking codes set up at Cronus.

1. In the Navigation Pane, click the **Administration** button and click APPLICATION SETUP→WAREHOUSE→SETUP-INVENTORY→ITEM TRACKING CODES.



The Item Tracking Codes window contains a list of six item tracking codes created at Cronus. The details of each tracking code are specified on the item tracking code card.

2. Select the LOTALL code, click ITEM TRACKING CODE→CARD.



The fields on the **General** tab specify the code name and the description for the item tracking code. As the contents of these fields indicate, items to which this code is applied are tracked by a lot number.

3. Click the **Serial No.** tab.

Since this tracking code is applied only to items with lot numbers, the **Serial No.** tab is not set up for this code.

In the following scenarios, we use item tracking for warehousing. Therefore, we must set this up in the item tracking codes we are using.

4. Click the **Lot No.** tab and place a check mark in the field **Lot Warehouse Tracking**.



The fields on the **Lot No.** tab specify the details of the item tracking by lot number as well as the operational area where the tracking is applied.

A check mark in the **Lot Specific Tracking** field indicates that when handling an outbound unit of the item in question, you must always specify which existing lot number to handle. This means that when selling a unit of the item, it must be applied against a specific pool of lot numbers in inventory. In other words, a lot number assigned to the item when entering into inventory must follow that item type out of inventory.

***NOTE:** The program does not allow a user to remove a check mark from this field if the program detects that item tracking entries exist for items to which this tracking code is applied.*

In the remaining check mark fields, the user can define in which operational area(s) and on what stage of the item flow (inbound, outbound, or both) the program must apply lot tracking. This is done by placing check marks in the corresponding field(s).

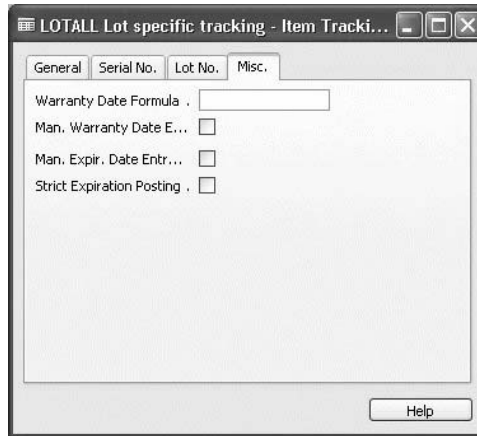
For instance, for the item tracking code in question, Cronus has decided to require lot tracking on inbound and outbound documents in all areas. This means that the user must enter a lot number on the item tracking line before posting any purchase, sale, positive or negative adjustment entries for items with this item tracking code setting. This decision is reflected in the setup, where the corresponding fields contain check marks.

A check mark in the **Lot No. Info. Must Exist** field (inbound or outbound) indicates that documents with any positive entry for items that require lot numbers cannot be posted before lot number information is created.

A check mark in the **Lot Warehouse Tracking** field indicates that a lot number is required for every warehouse activity.

A check mark in the **Lot Transfer Tracking** field indicates that a lot number is required on the item tracking line before item transfer lines can be posted. The check mark in this field cannot be deleted once a check mark is placed in the **Lot Specific Tracking** field.

5. Click the **Misc.** tab:



The fields on this tab define two additional parameters related to a specific item tracking code: warranty date and expiration date.

In the **Warranty Date Formula** field, the user can enter a formula that the program uses to calculate the warranty date on the item tracking line entries for items that require a serial or lot number.

A check mark in the **Man. Warranty Date Entry Reqd.** field indicates that a warranty date on the item tracking line for items with serial or lot numbers must be entered manually before a document with entries for these items can be posted.

A check mark in the **Man. Expir. Date Entry Reqd.** field indicates that an expiration date on the item tracking line for items with serial or lot numbers must be entered manually before a document with entries for these items can be posted.

A check mark in the **Strict Expiration Posting** field indicates that an expiration date assigned to the item tracking number as it entered inventory must be respected when it exits inventory. This option is mostly used for items that cannot be used after they expire. This field relates to the **Expiration Calculation** field on the **Item Tracking** tab of an item card. The program does not allow posting of a document with entries for the items when it detects that the posting takes place after the expiration date.

Because warranties and expiration dates are irrelevant to the items to which the LOTALL item tracking code is applied, the fields on the **Misc.** tab are not activated.

We have now looked at the setup of one of the item tracking codes – LOTALL. We recommend that you now have a look at the setup of the other item tracking codes created at Cronus, because these codes have been applied to some existing items that are used in examples presented in the following sections.

Setting up Number Series for Serial and Lot Numbers

Companies set up the number series for serial and lot numbers when they need to assign serial and lot numbers to the items. The practice of assigning serial and lot numbers is typically used where:

- Items are supplied by vendors without serial/lot numbers but are sold with serial/lot numbers.
- The company manufactures and sells items that must have serial/lot numbers.

The procedure for setting up the number series for serial/lot numbers is similar to that for setting up any other number series in Microsoft Navision. To recall the procedure, read the corresponding topic in online Help.

Cronus has created three number series related to item serial/lot numbers with the corresponding codes SN1, SN2 and LOT:

In the Navigation Pane, click the **Administration** button and click APPLICATION SETUP→GENERAL→NO. SERIES.

Code	Description	Starting ...	Ending No.	Last Dat...	Last N...	Default ...	Manual ...
SM-QUOTE	Service Quotes	SQ000001		01/25/01		✓	✓
SM-TRO...	Trouble List	TR000001		01/25/01	TR00005	✓	✓
▶ SN1	SN Numbering	SN000001	SN999999			✓	✓
SN2	SN Numbering	XYZ00001	XYZ999999			✓	✓
S-BLK	Blanket Sales Order	1001	1999			✓	
S-CR	Sales Credit Memo	1001	1999			✓	
S-CR+	Posted Sales Credit Memo	104001	104999	01/19/01	104005	✓	
S-FIN	Finance Charge Memo	1001	1999			✓	
S-FIN+	Issued Finance Charge Memo	106001	106999			✓	
S-INV	Sales Invoice	1001	1999	01/15/01	1003	✓	

In the No. Series window, you can browse to one of the codes, for example SN1, and look at the setup details. Notice that the **Manual Nos.** field for each item tracking number series is selected. This indicates that the program permits the entry of numbers manually instead of using the specified number series.

The following section explains how the item tracking codes and number series for serial/lot numbers can be applied to items in order to use the item tracking functionality.

Setting up Items for Item Tracking

Item tracking code, serial/lot numbers and expiration calculation are item properties that are a part of every posting record for that item. Therefore, these properties must be set up before the item has been involved in any transaction. In other words, a company must set up item tracking information when they add items to their inventory file (that is, while creating item cards).

If a company wants to start tracking an item for which posting records already exist, they must create a new item card and on that new card set up the relevant item tracking information.

Consider the following scenario.

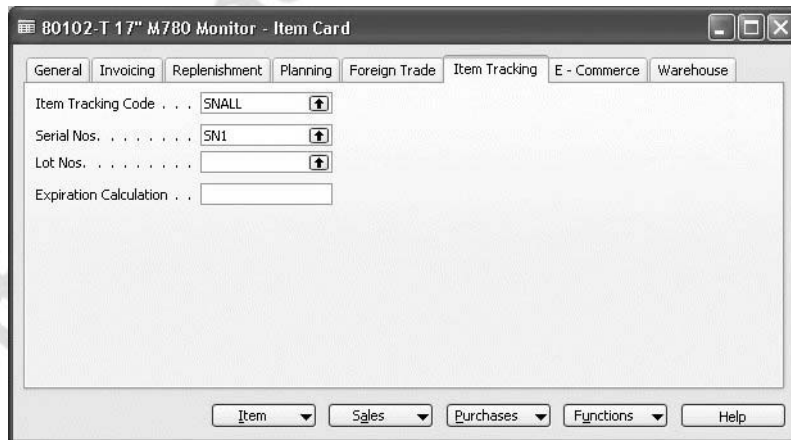
Scenario 1: Set up an item with item tracking

Cronus has a number of items on their inventory file that are set up for item tracking. Depending on the type of each specific item, the company has chosen to apply different tracking methods. For example, some items are to be tracked only by serial numbers, others only by lot numbers and still others by both numbers. Similarly, for some items, serial/lot numbers are required at each stage of their handling throughout the company, while for others, only at the point of sale.

Among the items that have been set up for item tracking are items 80102-T and 80218-T.

Take a close look at the setup details for these items.

1. In the Navigation Pane, click the **Warehouse** button and click PLANNING & EXECUTION→ITEMS. Browse to item 80102-T.
2. Click the **Item Tracking** tab.



Notice that the SNALL item tracking code is selected for this item. This means that the program requires the user to apply serial numbers to this item at all stages of item handling, except warehousing, before the posting of the corresponding entries is allowed. Open the item tracking code card for the SNALL code to see the setup details. The number series for the serial numbers when assigned to this item is SN1. The item is not tracked by lot number.

3. Go to the item tracking code card for SNALL code and place a check mark in the **SN Warehouse Tracking** field.

- Browse to item 80218-T and click the **Item Tracking** tab.

The screenshot shows a window titled "80218-T Hard disk Drive - Item Card". It has several tabs: General, Invoicing, Replenishment, Planning, Foreign Trade, Item Tracking (selected), E - Commerce, and Warehouse. Under the "Item Tracking" tab, there are four fields: "Item Tracking Code" with the value "LOTSNSALES", "Serial Nos." which is empty, "Lot Nos." with the value "LOT", and "Expiration Calculation" which is empty. At the bottom of the window, there are five buttons: "Item", "Sales", "Purchases", "Functions", and "Help".

The selection of LOTSNSALES in the **Item Tracking Code** field indicates that serial numbers are required for this item when posting the sales entries and that lot numbers are required when posting all entries (except warehouse documents). Open the item tracking code card for the LOTSNSALES code to see the setup details. The number series for the lot numbers assigned to this item is LOT. There is no number series for serial numbers set for this item.

- Go to the item tracking code card for LOTSNSALES code and place a check mark in the **Lot Warehouse Tracking** field.

Handling Items with Serial and Lot Numbers

This section explains how the item tracking functionality of Microsoft Navision can support companies in managing the task of handling items throughout inbound and outbound transaction processes.

Depending on the business relationships with vendors and customers as well as types of items handled, companies may have different internal processes for handling and tracking serial and lot numbers. For instance, some companies may want to start the tracking process from the moment that items arrive at the company's warehouse. In that case, depending on whether or not items already have serial/lot numbers assigned, they can choose to:

- Manually record the vendor's original item serial/lot numbers.
- Manually or automatically assign new serial/lot numbers.
- Define and automatically assign customized serial/lot numbers.

Microsoft Navision Inventory Management

The following table summarizes the alternatives provided in Microsoft Navision for how to handle the receipt of items that require item tracking at the point of purchase. The alternatives depend on whether or not the purchased items already have the vendor's serial/lot numbers.

	Items with vendors' SN	Items with vendors' LN	Items with no SN/LN
Enter numbers manually:			
Vendors' numbers	✓	✓	
New numbers	✓	✓	✓
Enter numbers automatically:			
Assign new numbers	✓	✓	✓
Define and assign customized numbers	✓		✓

Other companies may want item tracking applied to items only when they are sold to the customers, rather than from the moment they arrive at a warehouse. Still others may choose to be able to track items from the moment they are purchased up to the moment when they are sold. The way of handling the shipment of items with item tracking required at the point of sale depends on a company's decision concerning item tracking on the purchase side.

The following table summarizes the alternatives provided in Microsoft Navision for how to handle the shipment of items that require item tracking at the point of sale. The alternatives depend on whether or not the items have already been assigned serial/lot numbers.

	Items with assigned SN	Items with assigned LN	Items with no SN/LN
Enter numbers automatically:			
Assign own numbers			✓
Create and assign customized numbers			✓
Select from already existing numbers	✓	✓	
Enter numbers manually:			
Enter numbers manually			✓

The following sections explain some of the most common processes through the use of scenarios.

Barcode Registration of Item Tracking Information

Company processes often require the use of automatic registration of goods information, including item tracking information. This is often handled with barcode readers/scanners placed physically where registration takes place.

Such automatic registration is typically used in warehouse pick and put-away processes, where it is important that warehouse workers can register the movement of the goods quickly and easily. At this point in the process, assignment of serial/lot numbers has already taken place, and the system is therefore designed in such a way that new numbers cannot be assigned automatically.

Assigning Serial/Lot Numbers on Purchase Orders

As described in previous chapters, companies have different procedures when handling purchase orders. The way to assign serial/lot numbers is almost the same in the program, no matter what procedure the company chooses. The following two scenarios demonstrate the difference between assigning item tracking numbers:

- From the purchase and warehouse documents.
- From the put-away document.

Consider the following scenario:

Scenario 2: Assign item tracking on a purchase order

A purchaser at Cronus places an order with vendor 50000 for 5 units of item 80103-T, 5 units of item 80218-T and 7 units of item 80208-T. The vendor usually ships item 80103-T with serial numbers, item 80218-T with lot number(s) and item 80208-T without serial or lot numbers. The order is shipped to the Blue location.

The person receiving the items must enter the serial/lot numbers for the arrived items in the program.

Microsoft Navision Inventory Management

1. Create a purchase order for 5 units of item 80103-T, 5 units of item 80218-T and 7 units of item 80208-T for vendor 50000, to be received at the BLUE location:

106024 Service Electronics Ltd. - Purchase Order

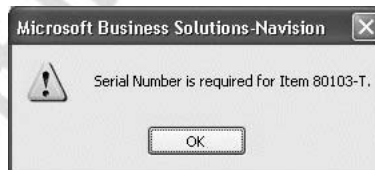
General Invoicing Shipping Foreign Trade E - Commerce

No. 106024 [icon] Posting Date 01/25/01
Buy-from Vendor No. 50000 [icon] Order Date 01/25/01
Buy-from Contact No. CT000070 [icon] Document Date 01/25/01
Buy-from Vendor Name Service Electronics Ltd. Vendor Order No.
Buy-from Address 172 Field Green Vendor Shipment No.
Buy-from Address 2 Vendor Invoice No.
Buy-from Post Code/City GB-WD2 4RG [icon] Watford [icon] Order Address Code.
Buy-from Contact Mr. Marc Zimmerman Purchaser Code RL [icon]
No. of Archived Versions. 0 Responsibility Center
Status Open

T. No.	No.	Description	Location ...	Quantity	Reserve...	Unit of M...	Direct U...
I...	80103-T	19" M009 Monitor	BLUE	5		PCS	12.00
I...	80218-T	Hard disk Drive	BLUE	5		PCS	18.70
I...	80208-T	Microsoft Intellimouse	BLUE	7		PCS	2.00

Order Line Functions Posting Print... Help

Because of the item tracking codes that are applied to the first two items, SNALL, and LOTSNSALES, the program requires the entry of serial numbers on the item tracking lines for the first item and the entry of lot numbers for the second item before the receipt can be posted. If a purchaser attempts to post the receipt without entering the serial numbers, the program gives the following message:



NOTE: You cannot use negative quantities in sales and purchase when you are using item tracking.

To enter serial numbers for item 80103-T:

2. In the Purchase Order window, select the first line and click LINE→ITEM TRACKING LINES.

The screenshot shows the 'Item Tracking Lines' window. At the top, there are three columns: 'Purchase ...', 'Item Trac...', and 'Undefined'. Below these are fields for 'Quantity', 'Qty. to Handle', and 'Qty. to Invoice', each with a value of 5, 0, and 5.00 respectively. There is also an 'Item Tracking Code' field with the value 'SNALL' and a description 'SN specific tracking'. Below this is a table with columns: 'Serial No.', 'Lot No.', 'Quantity', 'Qty. to ...', and 'Qty. to I...'. The first row has a right-pointing arrow in the 'Serial No.' column and zeros in the other columns. At the bottom right, there are 'Functions' and 'Help' buttons.

Purchase ...	Item Trac...	Undefined
Quantity	5	0
Qty. to Handle	5	0
Qty. to Invoice	5	0

Serial No.	Lot No.	Quantity	Qty. to ...	Qty. to I...
*→		0	0	0

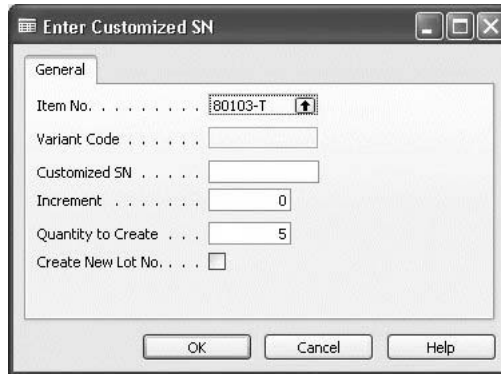
The Item Tracking Lines window is used to record detailed information for an item concerning serial/lot numbers. The top panel of this window contains a summary of the information on the lines, including the name and description of the item tracking code applied to a particular item.

The user can enter serial numbers for the item in the following ways:

- Automatically, by running the **Assign Serial No.** function, so that the program assigns serial numbers to the items based on the number series specified for a specific item.
- Automatically, by running the Create Customized SN function, so that the program assigns serial numbers to the items based on the parameters defined by the user specifically for the arrived items.
- Manually, by entering a specific serial number for each item unit.

Suppose that to handle the receipt of the purchase order described in scenario 2 in an efficient way, a warehouse person chooses to run the Create Customized SN function.

3. Click FUNCTIONS→CREATE CUSTOMIZED SN.



In the Enter Customized SN window, the user can specify the parameters that define a certain pattern in the serial numbers of the arrived items.

4. In the **Customized SN** field, enter S/N-85C31. This is the starting number in the number series assigned by vendor 50000 to the items.

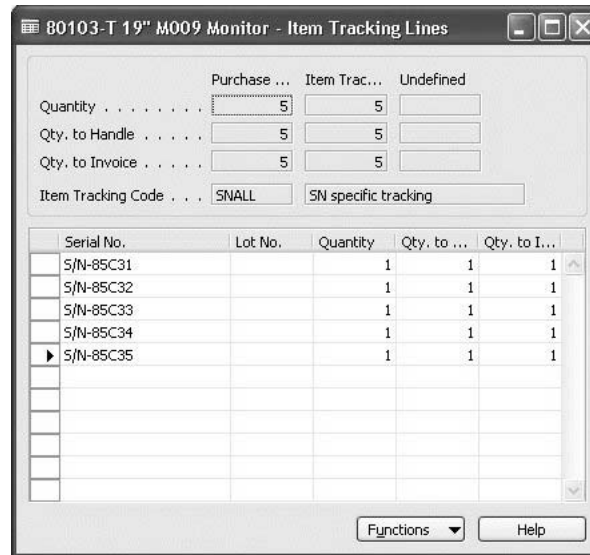
By entering a number in the **Increment** field, the user defines the increase between values of two sequential numbers in the number series.

5. In the **Increment** field, enter 1. This number reflects the fact that the serial numbers assigned by vendor 50000 to 5 units of item 80103-T increase by one.

The **Quantity to Create** field contains the quantity on the line by default. The user can modify it, if necessary.

6. Click **OK**.

The program creates 5 individual serial numbers starting from S/N-85C31 and ending at S/N-85C35 and creates corresponding item tracking lines:



Notice that the **Undefined** fields on the top panel are blank. This is because all individual items on the purchase line have been assigned an item tracking line. If the user created item tracking lines with less quantity than the quantity in the **Qty. to Receive** field on the purchase line, then there would be an undefined quantity, and the purchase order would not be posted until the full quantity was assigned.

7. Close the Item Tracking Lines window.

Now, enter the lot number of item 80218-T:

8. In the Purchase Order window, select the second line, click LINE→ITEM TRACKING LINES.
9. In the **Lot No.** field, enter LOT-TD5. This is the lot number assigned to the items by the vendor.

Suppose that all 5 units of item 80218-T are part of the same lot:

10. In the **Quantity** field, enter 5.

Serial No.	Lot No.	Quantity	Qty. to ...	Qty. to I...
	LOT-TD5	5	5	5

Close the Item Tracking Lines window and post the purchase order.

NOTE: For purchase orders with more than one line, if item tracking lines have not been created for at least one line, the purchase order is not posted. To post the order, the quantity in the **Qty. to Receive** field for the line(s) with missing item tracking lines must be zero.

The program posts in the Item Ledger Entry table the information about serial/lot numbers that was recorded for the items in the posted purchase order.

Assigning Serial/Lot Numbers when Receiving and Putting Away Partial Receipts

Companies often have to receive order quantities in separate portions. If such partial receipts require item tracking, then serial/lot numbers can be assigned to the received quantities only.

The following scenario shows how to assign serial/lot numbers partially during receipt/put-away process using an inventory put-away document (requires the Put-away granule).

NOTE: Partial handling of item tracking numbers is possible from any type of order or warehouse document.

Scenario 3: Assign item tracking for a partial receipt and put-away

A purchaser at Cronus places an order with vendor 10000 for three units of item 80102-T. The vendor ships this item with serial numbers and always delivers one unit a day. The warehouse employee does not have access to the purchase order and therefore handles the receipt and put-away using an inventory put-away document.

The units should be placed at Silver location, bin number S-02-0001. The purchase order should not be invoiced until it is completely received.

To perform this scenario you must make sure that Silver location is set up to require Put-away and not Receive.

1. Create a purchase order for Silver location for three units of item 80102-T and release the order.

The screenshot shows the SAP Purchase Order window for document 106025. The 'General' tab is active, displaying various fields for vendor information, dates, and status. Below the fields is a table with one line item.

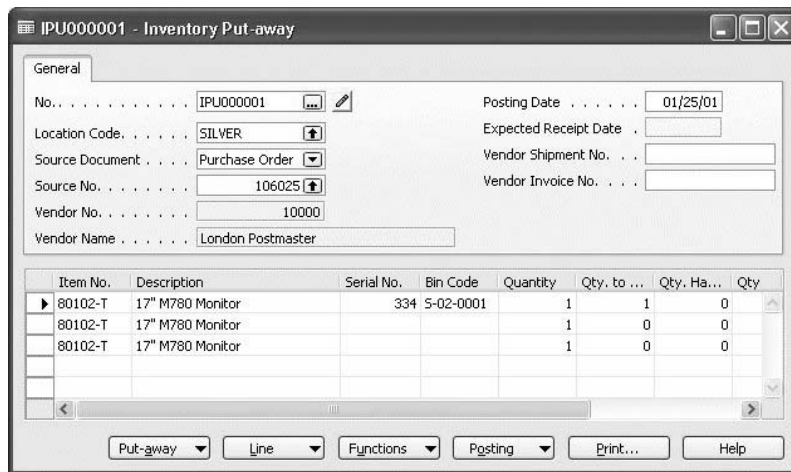
T...	No.	Description	Location ...	Quantity	Reserve...	Unit of M...	Direct U...
I...	80102-T	17" M780 Monitor	SILVER	3		PCS	6.30

2. In the Navigation Pane, click the **Warehouse** button and click GOODS HANDLING ORDER BY ORDER→INVENTORY PUT-AWAYS and create a new document for the Silver location.
3. Get the source document by clicking FUNCTIONS→GET SOURCE DOCUMENT. Use Show Column to make the **Serial No.** field visible.

The screenshot shows the SAP Inventory Put-away window for document IPU000001. The 'General' tab is active, showing source document details. Below the fields is a table with three line items.

Item No.	Description	Bin Code	Quantity	Qty. to ...	Qty. Ha...	Qty. Out...	Due
80102-T	17" M780 Monitor		1	0	0	1	01
80102-T	17" M780 Monitor		1	0	0	1	01
80102-T	17" M780 Monitor		1	0	0	1	01

4. In the first line, enter serial number 334, bin S-02-0001 and 1 as quantity to receive.



Item No.	Description	Serial No.	Bin Code	Quantity	Qty. to ...	Qty. Ha...	Qty
▶ 80102-T	17" M780 Monitor	334	S-02-0001	1	1	0	0
80102-T	17" M780 Monitor			1	0	0	0
80102-T	17" M780 Monitor			1	0	0	0

5. Post the document as received.

When the next receipt is to be handled, the warehouse worker repeats step 4 and step 5 with the remaining lines.

Assigning Serial/Lot Numbers on Sales Orders

Companies assign serial/lot numbers to the items they sell to customers so that they can track down individual items for returns and service contracts.

Depending on the established internal policies and business relationships with customers, companies may have different processes for tracking sold items. Examples of these processes are:

- Buying items from vendors without serial/lot numbers and then assigning the company's own numbers when selling the items.
- Buying items from vendors with the serial/lot numbers already assigned and using the same numbers when selling the items.

In the situation where a company chooses to assign their own serial and lot numbers, it is important to emphasize that the more consistently a company sets up their number series for serial and lot numbers, the more efficient the process.

The principles of assigning item tracking numbers from a pick document are similar to those of a put-away document. This is described in the previous scenario and is not covered further.

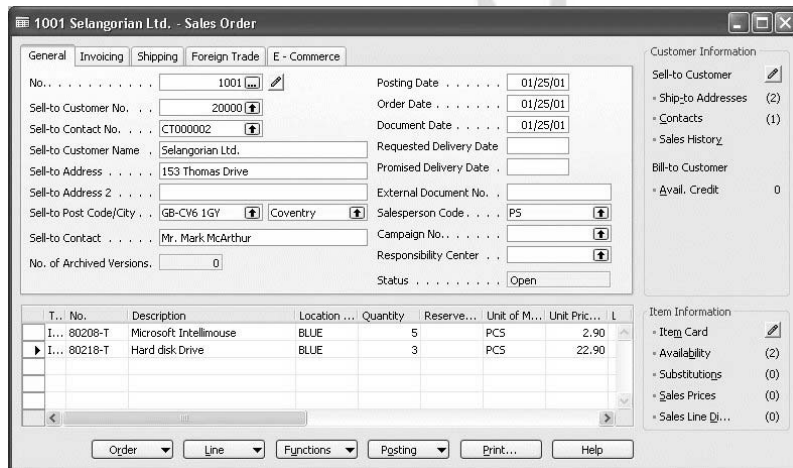
Consider the following scenario:

Scenario 4: Assigning item tracking numbers on a sales order

Cronus customer 20000 places an order for five units of item 80208-T and three units of item 80218-T. The order should be shipped from the Blue warehouse.

The salesperson must create a sales order and make sure that the serial/lot numbers are recorded in the program according to the rules set up for those items in the item tracking codes.

1. Create the sales order for five units of item 80208-T and three units of item 80218-T for customer 20000 to be shipped from Blue location:



Because of the item tracking code applied to the items, SNSALES and LOTSNALES, the program requires the entry of serial numbers on the item tracking lines for item 80208-T and the entry of serial/lot numbers for item 80218-T before the order can be posted.

2. Select the sales line for item 80208-T and click LINE→ITEM TRACKING LINES.

This item is usually purchased without serial/lot numbers but it is required (by the item tracking code applied to this item) to be sold with serial numbers. The person shipping the order must therefore enter the serial numbers for this item. Because there is a number series for serial numbers set up for this item, entry of the serial numbers can be done automatically:

3. Click **FUNCTIONS**→**ASSIGN SERIAL NO.** The Enter Quantity to Create window appears:

Enter Quantity to Create

General

Item No. 80208-T

Variant Code

Quantity to Create 5

Create New Lot No.

OK Cancel Help

By default, the **Quantity to Create** field contains the quantity copied from the sales line. If necessary, the user can modify this quantity.

4. Click **OK**.

The program automatically assigns serial numbers to each individual unit of the item:

80208-T Microsoft Intellimouse - Item Tracking Lines

Sales Line	Item Trac...	Undefined
Quantity	5	5
Qty. to Handle	5	5
Qty. to Invoice	5	5
Item Tracking Code	SNSALES	SN Sales tracking

Serial No.	Lot No.	Quantity	Qty. to ...	Qty. to I...
XYZ00001		1	1	1
XYZ00002		1	1	1
XYZ00003		1	1	1
XYZ00004		1	1	1
▶ XYZ00005		1	1	1

Functions Help

5. Close the Item Tracking Lines window.

The person shipping the order must now enter the serial and lot numbers for three units of item 80218-T.

6. Select the sales line for item 80218-T and click **LINE**→**ITEM TRACKING LINES**.

When both serial and lot numbers are required to be entered at the point of sale, we recommend starting by entering the serial number and then proceeding to lot numbers.

To enter the lot (serial) number(s) for items that already have item tracking entries, the user can choose to either:

- Enter the number automatically by opening the item tracking summary form and selecting the appropriate number from the available records.
- Enter the number manually.

NOTE: *It is not possible to run the **Assign Lot/Serial No.** function to enter the lot (serial) numbers if all the items on inventory already have item tracking entries.*

Serial numbers must now be assigned to the three units of the item. Because this item does not have serial numbers entered for it at the point of purchase, to enter the serial numbers the user can choose to either:

- Run the **Assign Serial Numbers** function, so that the program assigns serial numbers automatically based on the number series specified for this item.
- Run the **Create Customized SN** function, so that the program assigns serial numbers to the items based on the parameters defined by the user specifically for the items.
- Enter the serial numbers manually.

Suppose that the person shipping the sales order in scenario 3 chooses to create customized serial numbers:

7. Click FUNCTIONS→CREATE CUSTOMIZED SN.

- In the Enter Customized SN window, in the **Customized SN** field, enter S/N-66CA1 and in the **Increment** field, enter 1. Click **OK**.

Serial No.	Lot No.	Quantity	Qty. to ...	Qty. to I...
S/N-66CA1		1	1	1
S/N-66CA2		1	1	1
S/N-66CA3		1	1	1

The program assigns three individual serial numbers to item 80218-T.

Suppose that the person shipping the sales order in scenario 3 chooses to select the lot number from the available item tracking entries:

- In the **Lot No.** fields, enter LOT-TD5.

Serial No.	Lot No.	Quantity	Qty. to ...	Qty. to I...
S/N-66CA1	LOT-TD5	1	1	1
S/N-66CA2	LOT-TD5	1	1	1
S/N-66CA3	LOT-TD5	1	1	1

- Close the Item Tracking Lines window and post the sales order.

NOTE: Remember that a sales order with items that require item tracking from the point of purchase cannot be posted if the items' quantity on the sales lines exceeds available quantity on hand in inventory.

Assigning Serial/Lot number during Drop Shipment

Companies selling goods that are delivered directly from the vendor to the customer may need to assign item tracking numbers to the delivered goods. Depending on the process in the company, the item tracking numbers can be assigned either to the sales order line or to the purchase order line.

Using the drop shipment functionality ensures that the item tracking information is synchronized between the sales order and the purchase order.

Scenario 5: Assign item tracking for a drop shipment

Customer 50000 has placed an order for five units of item 80103-T. When selling this item, the vendor delivers the goods directly to the customer. Use the drop shipment functionality to make sure that the sales order information is linked to the purchase order. The vendor confirms that the goods should be assigned serial numbers 01-457 to 01-461.

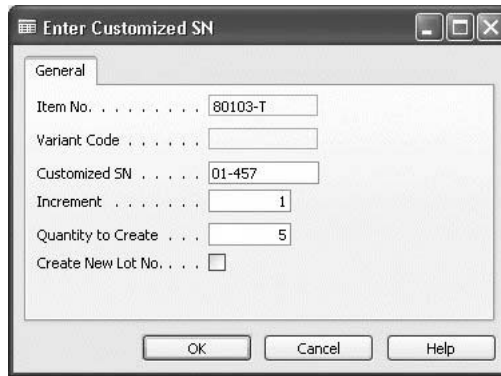
1. Create a sales order for customer 50000 for five units of item 80103-T, blank location.
2. Use Show Column to make the **Purchasing Code** field visible. Select the DROP SHIP code as the purchasing code.

The screenshot shows the '1002 Guildford Water Department - Sales Order' window. The 'General' tab is active. Key fields include: No. 1002, Sell-to Customer No. 50000, Sell-to Customer Name 'Guildford Water Department', Sell-to Address '25 Water Way', Sell-to Post Code/City 'GB-GU7 5GT Guildford', and Sell-to Contact 'Mr. Jim Stewart'. The 'Posting Date' is 01/25/01. The 'Order Date' and 'Document Date' are also 01/25/01. The 'Requested Delivery Date' and 'Promised Delivery Date' are blank. The 'Salesperson Code' is 'PS', 'Campaign No.' is blank, and 'Responsibility Center' is 'LONDON'. The 'Status' is 'Open'. The 'Customer Information' pane on the right shows 'Sell-to Customer' and 'Ship-to Addresses (0)'. The 'Item Information' pane shows 'Item Card', 'Availability (-5)', 'Substitutions (0)', 'Sales Prices (0)', and 'Sales Line Qi... (0)'. A table at the bottom contains one line item:

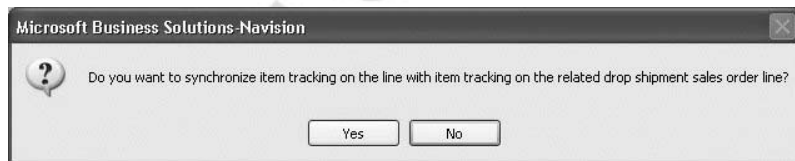
T... No.	Purchasi...	Description	Location...	Quantity	Reserve...	Unit of M...
I... 80103-T	DROP SHIP	19" M009 Monitor		5		PCS

3. Create a purchase order for vendor 50000. On the **Shipping** tab, select customer 50000 in the **Sell-to Customer No.** field.
4. Click ORDER→DROP SHIPMENT→GET SALES ORDER to get the sales order we just created.

- From the new purchase order line, click **LINE**→**ITEM TRACKING LINES** and create the serial numbers 01-457 to 01-461 using the Enter Customized SN function.



- When closing the Item Tracking Lines window, click **Yes** to confirm that you want to synchronize item tracking with the sales order line.



- You can now post the purchase order as received and the sales order as shipped.

Correcting Serial and Lot Numbers Entries

When a company chooses to have item tracking on items from the point of purchase, the serial/lot numbers become the items' property and must be used every time the items are handled as they move along different stages in the company's operations, ending with sales. Situations where information about serial/lot numbers, as recorded in the program, is different from the actual serial/lot numbers on the items in inventory may cause difficulties.

To correct serial/lot numbers on items, companies must use an item reclassification journal.

Consider the following scenario:

Scenario 6: Correct item tracking information

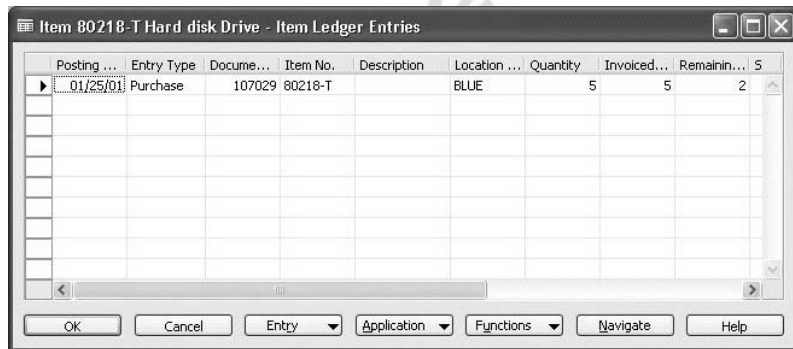
Warehouse personnel at Cronus have found out that the two available units of item 80218-T belong to two different lots.

The employee responsible for resolving problems such as this must correct the corresponding records in the program.

1. In the Navigation Pane, click the **Warehouse** button and click PLANNING & EXECUTION→ITEM RECLASS. JOURNALS.
2. In the **Item No.** field, enter 80218-T and in the **Location Code** field, select Blue.

NOTE: The **Location Code** field is not shown in the standard layout. To insert the field, use the Show Column function.

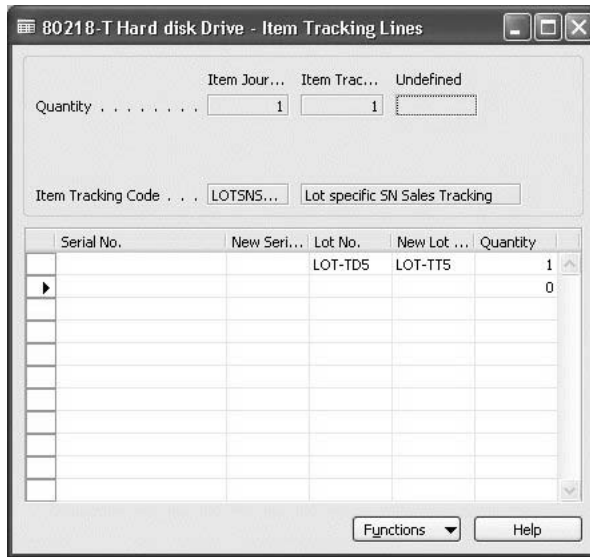
3. In the **Quantity** field, enter 1.
4. In the **Applies-to Entry** field, click the **Assist** button and select the item ledger entry for the purchase order for which the incorrect lot number record was made.



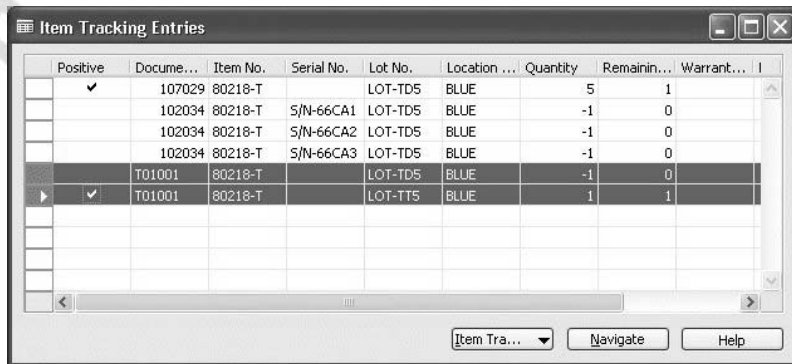
Now you must enter the lot number of the selected unit of item 80218-T, as described in the online Help:

5. Click LINE→ITEM TRACKING LINES.

- In the Item Tracking Lines window, click the **AssistButton** in the **Lot No.** field and select the corresponding lot number.



- In the **New Lot No.** field, enter LOT-TT5. Close the Item Tracking Lines window.
- Post the journal.
To verify the corrections introduced for the item:
- Open the item card for item 80218-T. Click ITEM→ENTRIES→ITEM TRACKING ENTRIES.
- Sort the records by the **Entry No.** field.



The changes are recorded in the last two lines.

Assigning Serial/Lot numbers to BOM Journals

When a company produces bill of material items, they may need to assign item tracking numbers to the finished goods.

In the BOM journal, you can assign serial/lot numbers to the top-level items when posting the adjustment to the inventory.

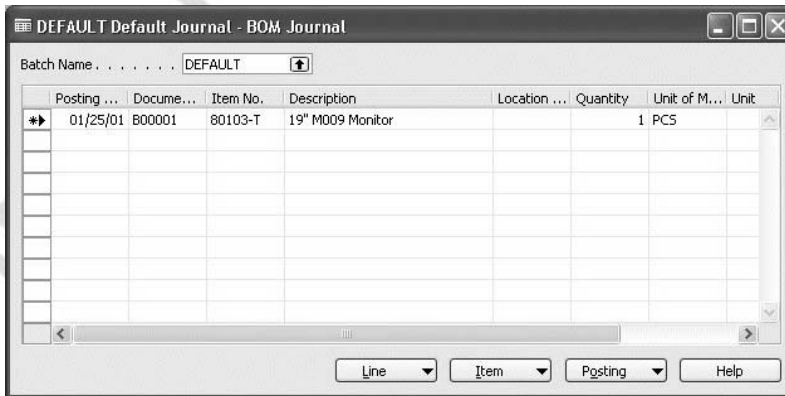
NOTE: For information about assigning item tracking numbers to manufactured items and their components, please see the Manufacturing training manual.

Scenario 7: Assigning item tracking to a BOM journal line

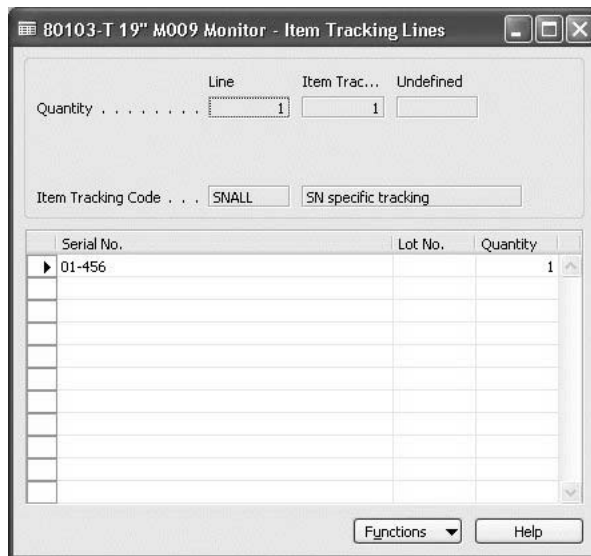
The item 80103-T is packed together with item 80217 and a serial number is required for the finished item. On blank location, produce one unit of item 80103-T using the BOM journal and assign serial number 01-456.

To perform this scenario, you must create a bill of material for item 80103-T with one unit of item 80217. You must also create inventory for item 80217 by posting one unit as a positive adjustment.

1. In the Navigation Pane, click the **Purchase** button and click INVENTORY & COSTING→BOM JOURNAL and create one line with one unit of item 80103-T, blank location.



2. Click LINE→ITEM TRACKING LINES and enter serial number 01-456, with quantity of one unit.



3. Close the window and post the BOM journal.

Test Your Skills – Handling Items with Serial and Lot Numbers

Scenario: A purchaser at Cronus places an order with vendor 10000 for 20 units of item 80216-T. The vendor usually ships this item with lot numbers. This time they shipped the order with two lots – 8 units in lot L/N-HW301 and 12 units in lot L/N-HW320. The order must be shipped to the Blue location.

Cronus customer 10000 places an order for 15 units of item 80216-T. The order should be shipped from the Blue warehouse.

All Skill Levels

Your tasks are as follows:

1. Create a purchase order for 20 units of item 80216-T for vendor 10000.
2. Handle the purchase order according to the rules set up for the item in the item tracking code. Register the vendor's lot numbers for the arrived items.
3. Receive and invoice the order.
4. Create a sales order for 15 units of item 80216-T for customer 10000.
5. Handle the sales order according to the rules set up for the item in the item tracking code. Enter the lot numbers by clicking the **AssistButton** and selecting the available lot numbers.
6. Ship and invoice the order.

Tracking Items with Serial and Lot Numbers

In the previous section, we looked at a number of situations where the company wanted to apply item tracking. It was shown that individual item handling depended on the company's general item tracking policy, reflected in the item tracking code applied to a specific item.

This section illustrates how a company applying an item tracking policy can actually use the functionality in Microsoft Navision to track items by using their serial and lot numbers.

Whenever a document is posted that registers a transaction of items for which item tracking lines have been created, the program records the information in the Item Ledger Entry table. By using these records, companies can track each individual item being purchased and sold throughout the system, including through planning, manufacturing and the warehouse.

Tracking Items per Transaction

Check the transaction history for item 80218-T.

1. In the Navigation Pane, click the **Warehouse** button and click PLANNING & EXECUTION→ITEMS. Browse to the item card for item 80218-T.
2. Click ITEM→ENTRIES→ITEM TRACKING ENTRIES.

Positive	Docume...	Item No.	Serial No.	Lot No.	Location ...	Quantity	Remainin...	Warrant...	
<input checked="" type="checkbox"/>	107029	80218-T		LOT-TD5	BLUE	5	1		
	102034	80218-T	S/N-66CA1	LOT-TD5	BLUE	-1	0		
	102034	80218-T	S/N-66CA2	LOT-TD5	BLUE	-1	0		
	102034	80218-T	S/N-66CA3	LOT-TD5	BLUE	-1	0		
	T01001	80218-T		LOT-TD5	BLUE	-1	0		
<input checked="" type="checkbox"/>	T01001	80218-T		LOT-TT5	BLUE	1	1		

The lines in the Item Tracking Entries window specify the transaction details, including serial and lot numbers, of the item in question. The **Entry No.** field contains the item ledger entry number for the transaction. You can also track items with serial and lot numbers from the item ledger entries table.

1. From the item card for item 80218-T, click ITEM→ENTRIES→LEDGER ENTRIES.

- To see the serial and lot numbers, use the Show Column function to make the **Serial No.** and **Lot No.** fields visible.

Posting ...	Entry Type	Docume...	Item No.	Description	Serial No.	Lot No.	Location ...	Quantity	It
01/25/01	Purchase	107029	80218-T			LOT-TD5	BLUE	5	
01/25/01	Sale	102034	80218-T		S/N-66CA1	LOT-TD5	BLUE	-1	
01/25/01	Sale	102034	80218-T		S/N-66CA2	LOT-TD5	BLUE	-1	
01/25/01	Sale	102034	80218-T		S/N-66CA3	LOT-TD5	BLUE	-1	
01/25/01	Transfer	T01001	80218-T			LOT-TD5	BLUE	-1	
01/25/01	Transfer	T01001	80218-T			LOT-TT5	BLUE	1	

Tracking Items per Customer/Vendor

The ability to track items sold to a particular customer or purchased from a particular vendor becomes critical in a number of situations. Examples of such situations may be where:

- An entire lot is defective and the items from this lot should be recalled.
- There is a need to determine the vendor of a particular (for instance, defective) item, in case the same items were purchased from different vendors.
- A company follows a policy of only accepting returned items sold by that company.
- A company follows a policy of only servicing items that are covered by a service contract with specific customers.

In Microsoft Navision, item tracking entries associated with a specific customer or vendor can be accessed from the corresponding customer or vendor card.

- In the Navigation Pane, click the **Sales & Marketing** button and click SALES→CUSTOMERS. Browse to the customer card for customer 20000.

2. Click SALES→ITEM TRACKING ENTRIES.

Positive	Docume...	Item No.	Serial No.	Lot No.	Location ...	Quantity	Remainin...	Warrant...	
	102034	80208-T	XYZ00001		BLUE	-1	0		
	102034	80208-T	XYZ00002		BLUE	-1	0		
	102034	80208-T	XYZ00003		BLUE	-1	0		
	102034	80208-T	XYZ00004		BLUE	-1	0		
	102034	80208-T	XYZ00005		BLUE	-1	0		
	102034	80218-T	S/N-66CA1	LOT-TD5	BLUE	-1	0		
	102034	80218-T	S/N-66CA2	LOT-TD5	BLUE	-1	0		
	102034	80218-T	S/N-66CA3	LOT-TD5	BLUE	-1	0		

The lines in the Item Tracking Entries window specify serial and lot numbers of the items sold to customer 20000.

Test Your Skills – Tracking the Items

All Skill Levels

Check the transaction history (including the item tracking entries) for item 80216-T.

NOTE: Fulfillment of tasks in the previous exercise is a precondition for this exercise.

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Handling and Tracking Items with Warranty and Expiration

For companies operating in certain industries and trading certain types of items, warranties and expiration dates may represent relevant item tracking parameters – in addition to serial and lot numbers. In Microsoft Navision, companies also have the possibility of expanding the use of the item tracking functionality to include these two parameters.

When companies sell items with warranties, they may want to ensure that their customers can only return items for which the warranty has not expired (for replacement or repair). To implement this policy in the program, the user must, in addition to entering serial and/or lot number, also enter the warranty expiration date on the item tracking lines. The setup specified on the **Misc.** tab of the item tracking code card determines whether the warranty date is generated automatically by the program or must be entered manually by the user.

In handling perishable goods, supplementing item lot number information with the expiration dates may be particularly relevant. In this case, a company is able to manage items with expiration dates in an efficient way. Besides, the rule (if chosen) of not being able to post an order for expired items may significantly improve the quality of a company's operations.

The user must enter the expiration date, in addition to lot numbers, on the item tracking lines. The setup specified on the **Misc.** tab of the item tracking code card and on the **Item Tracking** tab of the item card determines whether the expiration date is generated automatically by the program or must be entered manually by the user.

Transferring Items with Serial and Lot Numbers

Procedures for handling and tracking items with serial and lot numbers that are being transferred between different locations are similar to those applied when items are purchased and sold, as described in the previous sections.

However, certain principles of handling transfer orders that distinguish transfer functionality from other application areas mean that tracking items in transfer has some distinct features. One of those principles defines that shipment and receipt is done from one and the same transfer line. Therefore, the two transactions share the same Item Tracking Lines window.

NOTE: The detailed procedures for how to transfer items between locations are described in the chapter on location transfers in this training manual.

The procedure for transferring items with serial and lot numbers are explained in the following scenario.

Scenario 8: Assign item tracking on a transfer order

A Cronus employee creates a transfer order for five units of item 80103-T from the Blue to the Red warehouse. The item tracking code applied to this item specifies that the item must be transferred with serial numbers.

Although shipped complete from the Blue warehouse, the order arrives at the Red warehouse in two shipments of two and three units, respectively.

Warehouse persons shipping the order from the Blue location and receiving it at the Red location must ensure that the information concerning serial numbers is recorded correctly.

1. Create a transfer order for five units of item 80103-T for the Blue to the Red locations:

Item No.	Description	Quantity	Res...	Res...	Reserve...	Unit of M...	Qty. to S...
80103-T	19" M009 Monitor	5				PCS	5

Now, before shipping the order, the warehouse person must enter the serial numbers of the individual items to be shipped:

2. Click LINE→ITEM TRACKING LINES→SHIPMENT.

To enter serial numbers, the warehouse person can follow one of the procedures applicable when handling the shipment of items with serial numbers assigned.

3. In the Item Tracking Lines window, click in the **AssistButton** in the **Serial No.** field, select the serial number and enter the quantity.

Serial No.	Lot No.	Quantity	Qty. to ...
S/N-85C31		1	1
S/N-85C32		1	1
S/N-85C33		1	1
S/N-85C34		1	1
S/N-85C35		1	1

4. Close the Item Tracking Lines window and post the shipment of the transfer order.

Five units of item 80103-T are currently in transit. Suppose now that the first two units arrive at the Red location. When receiving the items, the warehouse person must enter the serial numbers of the arrived items:

5. In the **Qty. to Receive** field, enter 2.
6. Click **LINE**→**ITEM TRACKING LINES**→**RECEIPT**.

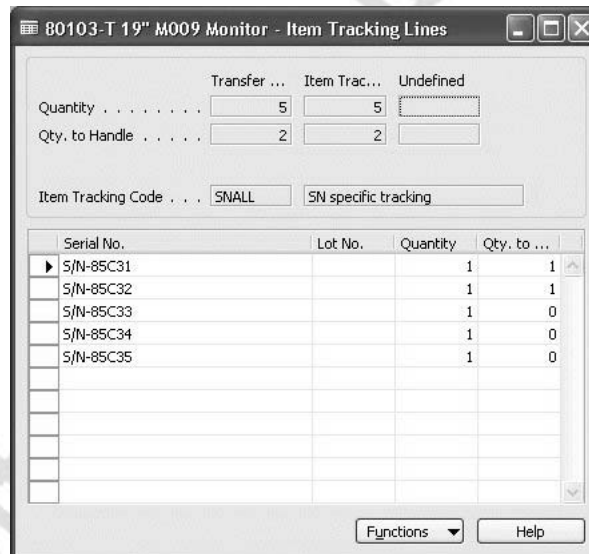
Serial No.	Lot No.	Quantity	Qty. to ...
S/N-85C31		1	1
S/N-85C32		1	1
S/N-85C33		1	1
S/N-85C34		1	1
S/N-85C35		1	1

The fields in the top panel of the Item Tracking Lines window specify order quantity and quantity to receive on both the transfer order and the associated item tracking lines. The lines specify individual serial numbers and quantities entered when the order was shipped.

The warehouse person can handle the task of entering the serial numbers of the arrived items by changing the quantities in the **Qty. to Handle (Base)** field to zero for those item serial numbers that have not yet arrived and ensuring that the serial numbers on the lines correspond to the serial numbers of the arrived items.

Suppose that items with serial numbers from S/N-85C33 to S/N-85C35 are not among the two units that arrived at the Red warehouse.

7. In the **Qty. to Handle (Base)** field for lines with serial numbers from S/N-85C33 to S/N-85C35, enter 0.



8. Close the Item Tracking Lines window and post the receipt of the transfer order.
As in the case of sales and purchase orders, the posting of transfer orders results in the program posting records containing serial or lot numbers to the item tracking entries table.
9. Open the item card for item 80103-T and click ITEM→ENTRIES→ITEM TRACKING ENTRIES.

The records in the Item Tracking Entries window reflect the transaction history of each individual unit of the item.

Notice that three items with serial numbers from S/N-85C33 to S/N-85C35 are still in transit, as indicated by the corresponding quantities in the **Remaining Quantity** field at the in-transit location OUT. LOG.

NOTE: When receiving a transfer, all the other fields of the Item Tracking Lines form are locked for writing. This is to ensure that item tracking numbers remain unchanged.

Positive	Docume...	Item No.	Serial No.	Lot No.	Location ...	Quantity	Remainin...	Warrant...	Expirat
<input type="checkbox"/>		108006	80103-T	S/N-85C35	BLUE	-1	0		
<input checked="" type="checkbox"/>		108006	80103-T	S/N-85C35	OUT. LOG.	1	1		
<input type="checkbox"/>		108006	80103-T	S/N-85C34	BLUE	-1	0		
<input checked="" type="checkbox"/>		108006	80103-T	S/N-85C34	OUT. LOG.	1	1		
<input type="checkbox"/>		108006	80103-T	S/N-85C33	BLUE	-1	0		
<input checked="" type="checkbox"/>		108006	80103-T	S/N-85C33	OUT. LOG.	1	1		
<input type="checkbox"/>		108006	80103-T	S/N-85C32	BLUE	-1	0		
<input checked="" type="checkbox"/>		108006	80103-T	S/N-85C32	OUT. LOG.	1	0		
<input type="checkbox"/>		108006	80103-T	S/N-85C31	BLUE	-1	0		
<input checked="" type="checkbox"/>		108006	80103-T	S/N-85C31	OUT. LOG.	1	0		

10. Return to the transfer order.

Suppose that the remaining three units of item 80103-T arrive at the Red warehouse. The warehouse person must enter the serial numbers of the arrived items.

11. In the Item Tracking Lines window, in the **Qty. to Handle (Base)** field for lines with serial numbers from S/N-85C33 to S/N-85C35, enter 1 as suggested by default.

Serial No.	Lot No.	Quantity	Qty. to ...
S/N-85C31		1	0
S/N-85C32		1	0
S/N-85C33		1	1
S/N-85C34		1	1
S/N-85C35		1	1

If the user tries to change the quantity in the **Qty. to Handle (Base)** field for lines with serial numbers which have already been received, the program gives the warning message:



12. Close the Item Tracking Lines window and post receipt of the transfer order.

Tracking of the transferred items is performed in the same manner as for sold and purchased items.

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Test Your Skills – Transferring Items with Lot Numbers

Scenario: A Cronus employee creates a transfer order for four units of item 80216-T from the Blue to the Red warehouse.

Although shipped complete from the Blue warehouse, the order arrived at the Red warehouse in two shipments of three and one units, respectively.

All Skill Levels

Your task is to make the transfer and to ensure that the information concerning lot numbers is recorded correctly.

***NOTE:** Fulfillment of tasks in the previous exercises is a precondition for this exercise.*

Test Your Knowledge – Item Tracking

1. To set up an item to be tracked by serial number, you first specify an _____ on the item card, which specifies which transactions should contain a serial number for the item.

2. True or False: It is not possible to define or automatically assign customized item tracking numbers, such as lot numbers or serial numbers.

3. You can check on the serial or lot number transactions that have been posted by looking at what kind of entries?
 - a. value entries
 - b. item tracking entries or item ledger entries
 - c. general ledger entries

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Quick Interaction: Lessons Learned

Take a moment to write down three Key Points you have learned from this chapter:

- 1.

- 2.

- 3.

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APPENDIX A: ANSWERS TO TEST YOUR KNOWLEDGE QUESTIONS

The following sections contain the answers to the questions that appear in the Test Your Knowledge sections throughout the manual.

Chapter 1 – Overview

1. Available Inventory = Quantity On Hand + Outstanding Inbound Orders – Allocations
2. True: It is possible to reserve a quantity of an item from a purchase order that has been created but not yet received.
3. Order tracking is the linking of demand to a corresponding supply. The links between demand and supply that the program creates serve to inform the user about possible fulfillment.

Chapter 2 – Multiple Locations

1. In Microsoft Navision, a location is defined as a physical place where items are produced, handled, and stored before being sold, such as a production plant, a warehouse, or a distribution center.
2. Locations are defined as physical locations where items are handled whereas responsibility centers are not necessarily physical places or can reflect larger categories such as regions.
3. You can associate a customer with a location by specifying the location on the **Shipping** tab of the customer card.
4. c. The correct hierarchy of priorities is User Setup card, Company Information card, Customer card.
5. The Stockkeeping Unit feature allows you to set up specific inventory handling for items and variants of items in certain locations.

Chapter 3 – Location Transfers

1. Before you can use location transfers, you must set up in-transit locations and transfer routes.
2. You specify that a location is an in-transit location by placing a check mark in the **Use as In-Transit** field on the location card.
3. The warehouse employee must first post the receipt for the full quantity into the destination warehouse and then, using the item journal, post a negative adjustment for the quantity of broken items.
4. False. It is not possible to check what quantity of an item is in transit by using the Item Availability by Period window. However, it is possible to check on in-transit quantities by using the Items by Location window or the Item Availability by Location window.

Chapter 4 – Warehousing

1. In Microsoft Navision, you set up the warehousing options for a location on the location card.
2. In the Bin Content window, the **Fixed** field indicates that the bin should normally contain the item. The **Default** field indicates that the program should always suggest this bin when the user performs a transaction for the item.
3. b. If you have the Put-away granule and the Bin granule, but not the Receipt granule, you post both the receipt and put-away of the purchase order from the inventory put-away document. order.
4. When you use the Bin granule and post a transaction such as a receipt of an item to a bin, the program creates warehouse entries in addition to item ledger entries and value entries.
5. If you used the Bin granule, you would record a movement of items from one bin to another by using the item reclassification journal.
6. True: When running the Calculate Inventory function to create physical inventory journal lines for a location with bins, it is not possible to filter by dimensions.

Chapter 5 – Item Tracking

1. To set up an item to be tracked by serial number, you first specify an item tracking code on the item card, which specifies which transactions should contain a serial number for the item.
2. False: It *is* possible to define or automatically assign customized item tracking numbers, such as lot numbers or serial numbers.
3. b. You can check on the serial or lot number transactions that have been posted by looking at item tracking entries or item ledger entries.

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APPENDIX B: TERMINOLOGY LIST

This appendix contains the terminology list for the inventory application area in Microsoft Navision.

Microsoft Navision Inventory Terminology List

available inventory

The on-hand inventory balance minus allocations. Such allocations can include items being inspected or quarantined, reservations and backorders.

bin

A physical storage unit in which items are placed and stored. This can be anything from a small container box to an open space on a pallet rack. The smallest unit of the warehouse logical structure.

bin content

Information that states all items contained in a specific bin

cross-dock

To move items directly from the receiving area to the shipping area, thereby minimizing handling and storage and allowing sales orders to be shipped sooner.

NOTE: The program systematically compares inventory receipts with outstanding sales orders and indicates that a cross docking opportunity is available.

Noun and adjective forms: cross dock

delivery note

A note that accompanies a shipment and that lists the items in the shipment
Synonyms: advice note, accompanying note, dispatch note, covering note

expected receipt date

The date, calculated by the program, on which an inbound item will be available for picking.

inventory

Items held in a store or a warehouse and purchased for resale, items used to support production (raw materials and work-in-process) and items for maintenance activities (including repair and operating supplies). The program calculates inventory as the quantity of an item available in inventory.

item

A manufactured or purchased article, product, part or material that is part of inventory. If a company has several locations, it stores inventory control information about items or item variants at a particular location in the stockkeeping unit for that item or item variant at that location.

item substitute

An item that can be offered to a customer as a substitute for an item that currently is not available.

lead time

The time between recognition of the need for an order and the receipt of goods. Individual components of lead time can include order preparation time, queue time, processing time, move or transportation time, and receiving and inspection time.

location

A physical structure or place where inventory is received, stored and shipped. A location can be a warehouse, service car, showroom, plant or area within a plant.

negative adjustment

A reduction in inventory that is not due to a sale.

nonstock item

An item that a company sells but does not carry in inventory. A nonstock item is often an item in a vendor catalog, also called a catalog item.

order date

The date on which the vendor must ship the items in order to meet the planned receipt date.

physical inventory**Abbreviation: Phys. Invt.**

The determination of inventory quantity by the counting of items, which is performed on a continuous, periodic or annual basis.

pick

To physically withdraw from inventory items to be shipped or components of items to be assembled and shipped.

positive adjustment

An increase in inventory that is not due to a purchase.

put away

To remove the item from the receiving area, transport it to a specific location in a storage area, and record the movement and the exact location of the item. Noun and adjective form: put-away

receipt

The physical acceptance of an item at a location. A warehouse person immediately registers the receipt of an item in the program, but the item is not a part of available to pick inventory until it has been put away.

receiving

The function encompassing the physical receipt of items, the inspection of the items for conformance to the purchase order (quantity and damage), the putting away of the items, and the preparation of the receiving report.

registering

Creating an entry in the program that records an action completed in the warehouse. For example, you can register the put-away, picking or movement of an item into or from a specific bin. Registering differs from posting in that it does not create any entries in the general ledger or the inventory item ledger.

release

To send a document to the next stage of processing without posting the document. You cannot change information on a released document unless you reopen the document.

Example: You can release a sales order to the warehouse. The order is then among the source documents from which the warehouse can retrieve lines to be assigned, picked and shipped.

reservation

The designation of a quantity of inventory on a purchase order for a specific sales order or production schedule.

responsibility center

Abbreviation: Resp. Ctr.

An organizational unit to which a company assigns duties or activities.

NOTE: A responsibility center can be a cost center or a profit center. Examples are a sales office that sells items from one or more locations, a purchasing office for one or several locations, a service unit, a production-planning unit, and a branch office with responsibility for sales, purchases and cost accounting. A responsibility center that has been assigned responsibility for a location accounts for location inventory in monetary terms, while the location is responsible for the physical inventory count.

safety lead time

An element of time added to normal lead time to protect against fluctuations in lead time so that an order can be completed before its real need date.

shipment date

The date a shipment leaves your location for delivery to a customer, either with a shipping agent or your own means of transportation.

source document

The original evidence of a transaction that supports journal entries in the accounting system.

Example: Vouchers and contracts, but also internal documents that create journal entries, such as sales, transfer or purchase orders or internal freight charges.

specific item

An individual item that is distinguished by a unique identification number.

stockkeeping unit

Abbreviation: SKU

A unit for inventory control that concerns items and item variants at specific locations.

transfer order

An order to move items from one location to another.

warehouse**Abbreviation: Whse.**

A building or part of a building where items are received, stored, and shipped. As such, it is a particular kind of location.

Synonyms: distribution center, branch warehouse, field warehouse

warehouse activity

An activity in the Warehouse Management application area. Each activity has its own menu item.

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APPENDIX C: RESERVATION VS. ORDER TRACKING

What Can be Reserved and What Can be Tracked?

Microsoft® Business Solutions–Navision® manages order tracking within the reservation system but with a distinct difference from reservations: Reservations are only possible against order network entities that are part of the availability calculation and have a status higher than planned (scheduled availability). Order tracking, on the other hand, is possible against any order network entity that takes part in the net requirement calculation by the planning run. This includes pure order suggestions and planned production orders.

The table below illustrates which order network entities can be tracked and which can be reserved:

Name	Option
Item Ledger Entry	Reserve / Track
Sales Quote	Can only be tracked to a simulated production order and vice versa. The order tracking only applies to those two simulated entities. It is not be possible to track anything else to a sales quote or simulated production order.
Sales Order	Reserve / Track
Purchase Order	Reserve / Track
Requisition line	Track (Only if resulting from a planning run)
Planned Prod. Order line	Track
Firm Planned Prod. Order line	Reserve / Track
Released Prod. Order Line	Reserve / Track
Simulated Prod. Order Line	See Sales Quote
Prod. Order Component	Reserve / Track (Reservation only against firm planned and released components)
MRP Line	Track (Only if resulting from a planning run)
MRP Component	Track (Only if resulting from a planning run)

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APPENDIX D: GRANULES

This appendix contains information about the granules that make up Microsoft® Business Solutions–Navision® for inventory management, including the functional area that a granule belongs to, its description and the requirements.

Inventory Management Granules in Microsoft Navision

Multiple Locations

Functional area: Inventory

Description: This feature provides basic functionality that allows the user to manage inventory in multiple locations. The feature is broad enough to include locations in plants or production facilities as well as distribution centers, warehouses and service cars.

Requirements: Basic Inventory

Stockkeeping Units

Functional area: Inventory

Description: This feature provides basic functionality that allows the user to manage stockkeeping units (SKUs), meaning that identical items with the same item number can be stored in different locations and managed individually at each location. The user can add cost prices, replenishment and manufacturing information, and so on, based on the location.

Requirements: Multiple Locations

Responsibility Centers

Functional area: General Ledger

Description: You use this granule to handle Cost Centers or Profit Centers.

Requirements: Multiple Locations

Location Transfers

Functional area: Inventory

Description: This granule enables you to track inventory effectively as it is moved from one location to another. You can also better account for the value of inventory in transit and at various locations.

Requirements: Multiple Locations

Bin

Functional area: Inventory

Description: You use this granule to organize your warehouse by assigning items to bins, the smallest unit in the warehouse logical structure. This is done on the item journals or directly on the document lines (does not only apply to order lines).

Requirements: Basic Inventory and Multiple Locations

Put-Away

Functional area: Inventory

Description: You use this granule to enable your warehouse employees to carry out their dedicated tasks. This is done from a separate user interface when receiving items in an order-by-order environment. Here the put away is created from the released order.

Requirements: Basic Inventory

Warehouse Receipt

Functional area: Warehouse Management

Description: You use this granule to enable your warehouse employees to carry out their dedicated tasks. This is done from a separate user interface when receiving items in a multi-order environment. Here the put away is created from the receipt.

Requirements: Basic Inventory

Pick

Functional area: Inventory

Description: You use this granule to enable your warehouse employees to carry out their dedicated tasks. This is done from a separate user interface when shipping items in an order-by-order environment. Here the pick is created from the released order.

Requirements: Basic Inventory

Warehouse Shipment

Functional area: Warehouse Management

Description: You use this granule to enable your warehouse employees to carry out their dedicated tasks. This is done from a separate user interface when shipping items in a multi-order environment. Here the pick is created from the shipment.

Requirements: Basic Inventory

Bin Setup

Functional area: Warehouse Management

Description: You use this granule to easily set up and maintain your bins. This is done by defining both the layout of your warehouse and dimensions of your racks, columns, and shelves. Furthermore, you use the granule to easily set up and maintain your planning parameters. This is done by defining the limitations and characteristics of each bin.

Requirements: Bin

Item Tracking

Functional area: Inventory

Description: With this granule, you can handle and track serial and lot numbers. Serial and lot numbers can be assigned manually or automatically. The feature allows the user to receive and ship multiple-quantities with serial/lot numbers from a single order line entry.

Requirements: Basic Inventory, Sales Order Management, Purchase Order Management.

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