

Guide
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Manufacturing and Distribution Planning

Release A7.3

JDEdwards®



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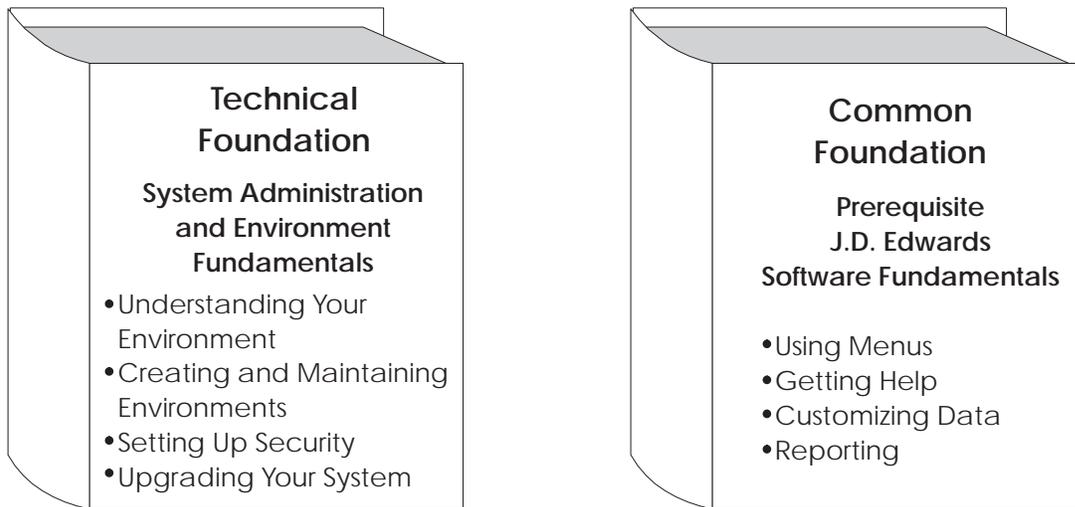
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Where Do I Look?



Guides



Important Note for Students in Training Classes

This guide is a source book for online helps, training classes, and user reference. Training classes may not cover all the topics contained here.

Welcome

About this Guide

This guide provides overviews, illustrations, procedures, and examples for release A7.3 of J.D. Edwards software. Forms (screens and windows) shown are only examples. If your company operates at a different software level, you might find discrepancies between what is shown in this guide and what you see on your screen.

This guide includes examples to help you understand how to use the system. You can access all of the information about a task using either the guide or the online help.

Before using this guide, you should have a fundamental understanding of the system, user defined codes, and category codes. You should also know how to:

- Use the menus
- Enter information in fields
- Add, change, and delete information
- Create and run report versions
- Access online documentation

Audience

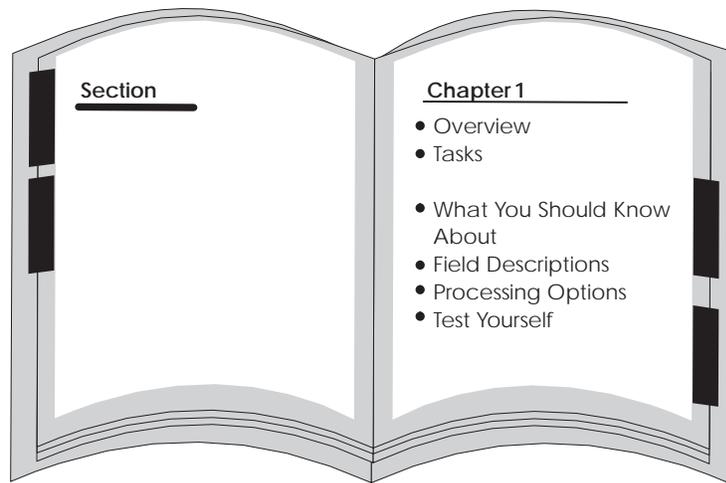
This guide is intended primarily for the following audiences:

- Users
- Classroom instructors
- Client Services personnel
- Consultants and implementation team members

Organization

This guide is divided into sections for each major function. Sections contain chapters for each task or group of related tasks. Each chapter contains the information you need to accomplish the task, run the program, or print the

report. Chapters normally include an overview, form or report samples, and procedures.



When it is appropriate, chapters also might explain automatic accounting instructions, processing options, and warnings or error situations. Some chapters include self-tests for your use outside the classroom.

This guide has a detailed table of contents and an index to help you locate information quickly.

Conventions Used in this Guide

The following terms have specific meanings when used in this guide:

- *Form* refers to a screen or a window.
- *Table* generally means “file.”

We assume an “implied completion” at the end of a series of steps. That is, to complete the procedure described in the series of steps, either press Enter or click OK, except where noted.

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Overview

Manufacturing and Distribution Planning Overview

Manufacturing and Distribution Planning consists of the following systems, as well as the execution of those plans.

- Resource and Capacity Planning
- Material Planning Operations

The Manufacturing and Distribution Planning system is a part of Enterprise Requirements Planning and Execution (ERP_x). ERP_x allows you to coordinate your inventory, raw materials, and labor resources to deliver products according to a managed schedule. This closed-loop manufacturing system helps manage your data and optimize resources across your entire manufacturing and distribution logistics environment. ERP_x formalizes the activities of company and operations planning.

Resource and Capacity Planning

Resource and Capacity Planning allows you to prepare a feasible production schedule that reflects your demand forecasts and production capability. Resource and Capacity Planning consists of:

Resource Requirements Planning (RRP)

Uses a summary forecast to estimate the time and resources that are needed to make a product family.

Rough Cut Capacity Planning (RCCP)

Compares the master production scheduling resource requirements to the capacity available in critical work centers.

You use RCCP to determine if you should revise the master schedule to create feasible work loads or improve utilization of limited resources.

Capacity Requirements Planning (CRP)

Compares the material requirements plans to the capacity available in all work centers.

You use CRP to determine if you should revise the material requirements plan to create feasible work loads or improve utilization of limited resources.



Material Planning Operations

Material Planning Operations provides a short-range plan to cover material requirements that are needed to make a product. Material Planning Operations analyzes demand from all your operations, including:

- Central and satellite distribution centers and warehouses
- Rate-based repetitive manufactured items
- Process and discrete manufactured items
- Engineer-to-order contracted items
- Maintenance, repair, and operational items for plant and equipment maintenance
- Supplier-managed inventory

Material Planning Operations consists of:

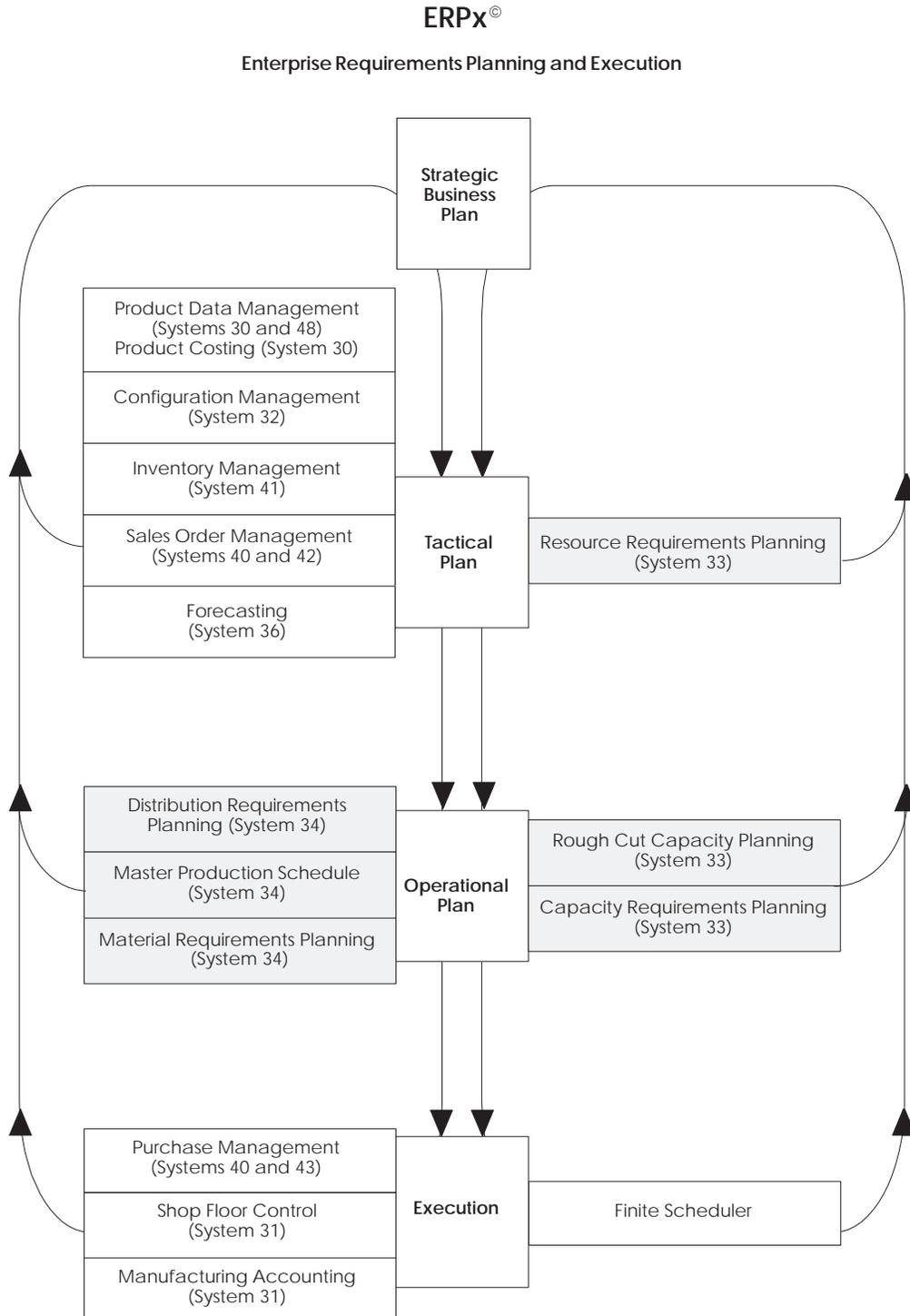
Distribution Requirements Planning (DRP)	Plans and controls the distribution of finished goods based upon demand. In addition, DRP provides centralized control of distribution inventories and creates a coordinated replenishment plan.
Master Production Scheduling (MPS)	A schedule of items and quantities that a company expects to manufacture.
Material Requirements Planning (MRP)	Uses the master production schedule, the bill of materials, and inventory records to calculate time-phased net requirements for every item, and creates a plan for covering material requirements.

System Integration

The Manufacturing and Distribution Planning system integrates with the following systems:

Inventory Management	Supplies the basic information about each item (or ingredient), such as part number, description, unit of measure, stocking type, and location.
Configuration Management	Supplies information for assemble-to-order and make-to-order items.
Forecasting	Generates sales projections that are used to develop the master production schedule.
Shop Floor Control	Uses bills of material and routings to schedule work activity within the plant.
Product Costing	Uses bill of material, routing, and work center information to calculate the standard cost of an item.
Manufacturing Accounting	Calculates costs for labor, overhead, and material for each primary unit of the parent using routing and work center information.
Sales Order Management	Uses bills of material for kit processing and acts as a source of demand for purchased or manufactured items.
Purchase Management	Uses expected delivery dates and recommends replenishment actions.

The following graphic illustrates how Manufacturing and Distribution Planning integrates with other J.D. Edwards systems.



System 33 and System 34 are part of the Manufacturing and Distribution Planning System.

Terms and Concepts

Manufacturing and Distribution Planning encompasses:

Bills of material

The components and relationships required to produce a parent item. Use bills of material to:

- Maintain many configurations for an item without creating additional part numbers
- Define quantities of intermediate products in any unit of measure as they progress through the manufacturing process
- Enter similar items by copying bills of material, routings, and processes

Routings

The operations required to produce the parent item. Use routings to:

- Define each step of the manufacturing process with allowances for anticipated yield and scrap
- Add alternate operations to routings

Work centers

The facilities on the shop floor where the routing operations occur. Use work centers to:

- Define work center number and description
- Define the number of operators or machines
- Define setup, labor, machine, and overhead rates
- Define information for Capacity Planning

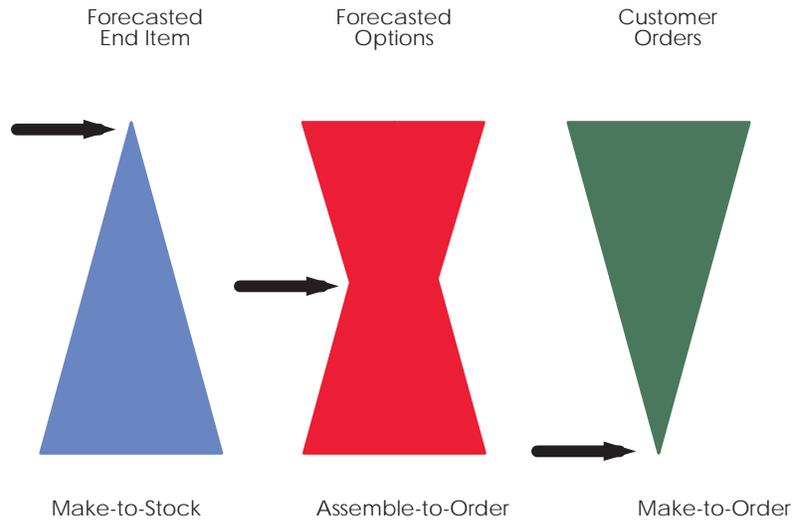
Engineering change orders (ECOs)

The document that you use to define and implement changes to your products structure. Use engineering change orders to:

- Control item changes from a single source
- Incorporate approved changes to bills of material

Planning and Production Environments

Successful planning leads to customer satisfaction. Depending upon when you meet your customer in the production process, the planning systems provide business solutions. As illustrated by arrows in the following graphic, customers impact the product development at different points in the various environments.



Make-to-stock

You meet your customer after the product is completed. This environment generally involves retail items. Forecasting of end items is a crucial factor.

Assemble-to-order

You meet your customer after options are fabricated, but before final assembly of the product. The customer specifies the options in the final end product. Some factors to consider in this environment are:

- Items are configured according to formally set rules
- Items are forecasted and master schedules are created at the option level

Make-to-order

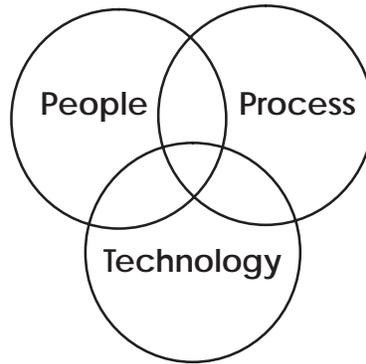
You meet your customer before you begin production at any level in the product structure. This includes the following factors:

- Products are customized for specific needs
- Capacity needs are forecasted
- Production requires longer lead times

Engineer-to-order

You add engineering design time into the lead time. This might use a job cost business solution.

Planning and a Total Business Solution



A total business solution integrates three important elements:

People

For the most important element in your solution, you must provide education and management commitment.

Process

To develop the policies and practices to manage effectively, you can employ:

- Business process re-engineering
- Best manufacturing practices
- Formal documentation of the process that is signed by management

Technology

To acquire the best tools to do the job, you should use:

- J.D. Edwards software
- Complementary products
- AS/400 or open systems platforms

People

People are the keys to success. Involving and empowering people to get the job done are important steps in ensuring the success of your enterprise.

Management commitment

Implementing a successful business solution requires a management involvement that includes:

- Committing the time and financial resources to do it right the first time
- Empowering the implementation team with the authority, responsibility, and accountability to do the job

Implementation team

Effective and thorough work on the front-end ensures good performance in the future. To promote integrated solutions at implementation time and during use, the future owners of the process should participate in the implementation process. In addition, the team should be cross-functional.

Education and training

For knowledge of the broader business issues that are associated with Manufacturing and Distribution implementation, participants in the process should be educated in the American Production and Inventory Control Society (APICS) (or an equivalent). Ideally, this education should precede training in specific J.D. Edwards training courses. Understanding Best Practices in the industry ensures quality solutions.

Managing change

Implementing a broad-scale business solution entails great change in the way that people accomplish their work. To make this paradigm shift without disruption of product deliverance requires skills in helping employees cope with change in the workplace.

Partnership

J.D. Edwards Response Line and consulting, provides continued support. Our relationship is ongoing for your long-term future success. Business partners broaden this relationship through additional worldwide assistance.

Process

Costs, schedule, and quality are the direct outputs of the business process. Quality processes result in a quality product. The product meets customer specifications of design, schedule, and price.

J.D. Edwards supports your business process re-engineering through flexibility. The software can be tailored to reflect new processes as they evolve. Multiple plants can be at different stages of the re-engineering effort, depending upon their maturity or schedule for implementation. Some of the features that J.D. Edwards software provides are:

- User defined codes
- Processing options
- Branch/plant constants
- Manufacturing constants
- Customized menus

J.D. Edwards strongly supports Best Practices as documented by industry experts. As new practices are presented and recommended, J.D. Edwards has made a commitment to evolve the software functionality to support these findings.

Technology

Seamless integration between all the J.D. Edwards systems provides a unified solution to your enterprise planning. J.D. Edwards Inventory, Sales, and Purchasing systems are fully integrated distribution systems that support the Manufacturing and Distribution Planning system.

Tables

The following is a list of the tables that are used throughout Manufacturing and Distribution Planning.

Item Master (F4101)	Stores basic information about each defined inventory item, such as item numbers, description, category codes, and units of measure.
Branch/Plant Master (F4102)	Defines and maintains warehouse or plant level information, such as costs, quantities, physical locations, and branch level category codes.
Bill of Materials Master (F3002)	Contains information at the business unit level about bills of material, such as quantities of components.
Capacity Messages (F3311)	Contains the action messages that are generated by the Resource Requirements Planning regeneration.
Detail Forecast (F3460)	Contains the forecast data that RRP validates. It is also used as input to DRP/MPS/MRP.
Routing (F3003)	Stores routing information, including operator sequence, work center, run, setup, and machine time.
Resource Units (F3007)	Contains the available capacity for each work center by day, month, and year.
Work Center Master (F30006)	Contains detail data about all defined work centers.
Resource Profile (F3303)	Contains all resource profiles used in Resource Requirements Planning.

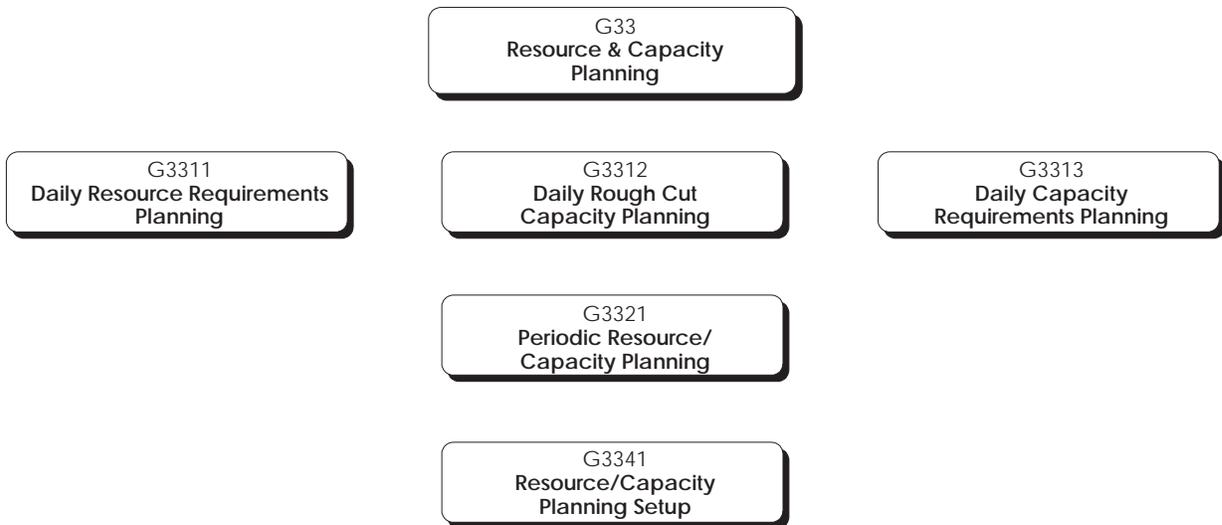
Menu Overview

J.D. Edwards systems are menu-driven. System functions are organized according to their function and frequency of use. Manufacturing and Distribution Planning encompasses two systems:

- Resource and Capacity Planning
- Material Planning Operations

Resource and Capacity Planning Menus

The commonly used menus for Resource and Capacity Planning are listed below.



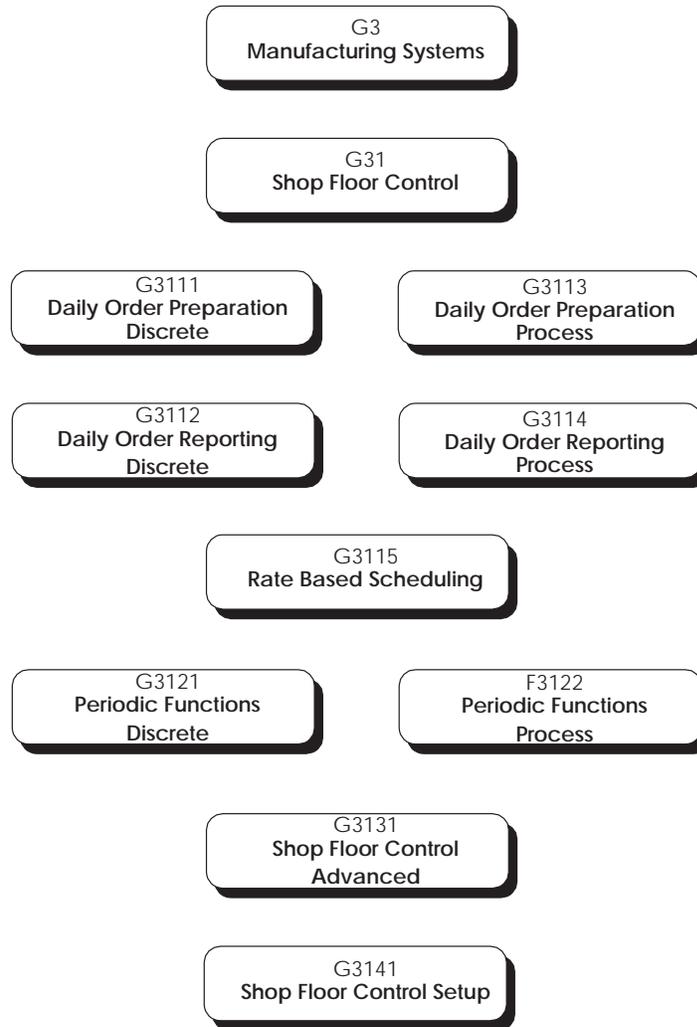
Fast Path Commands

The following table illustrates the fast path commands you can use to move among the Resource and Capacity Planning menus. From any menu, enter the fast path command at the command line.

Fast Path	Menu	Title
DRRP	G3311	Daily Resource Requirements Planning
RCCP	G3312	Daily Rough Cut Capacity Planning
DCRP	G3313	Daily Capacity Requirements Planning
PCAP	G3321	Periodic Resource/Capacity Planning
CAPS	G3341	Resource/Capacity Planning Setup

Material Planning Operations Menus

The commonly used menus for Material Planning Operations are listed below.



Fast Path Commands

The following table illustrates the fast path commands you can use to move among the Material Planning Operations menus. From any menu, enter the fast path command at the command line.

Fast Path	Menu	Title
DOPP	G3111	Daily Order Preparation
DORD	G3112	Daily Order Reporting
DOPP	G3113	Daily Order Preparation Process
DORP	G3114	Daily Order Reporting Process
RBM	G3115	Rate Based Scheduling
DMA	G3121	Periodic Functions Discrete
PSFP	G3122	Periodic Functions Process
ASF	G3131	Shop Floor Control Advanced
SSFC	G3141	Shop Floor Control Setup

Item Master and Branch/Plant Review

Item Master and Branch/Plant Review

Objectives

- To provide the system with details about the items you carry, both stock and non-stock

About Item Entry

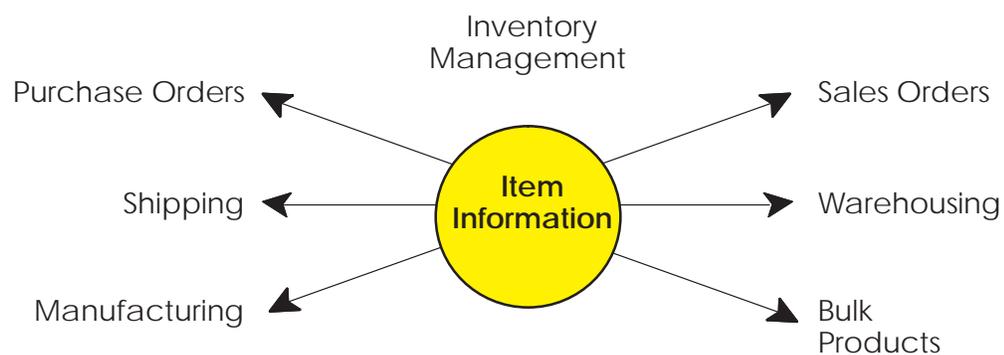
Prior to working with your inventory, the system needs information about the items you carry, both stock and non-stock. As you enter each inventory item, you provide the system with details such as:

- Item identifiers
- Item descriptions (foreign and domestic)
- Item rules
- Item costs and prices
- Item weights and measures

You must also provide the system with information regarding the location of each item, such as:

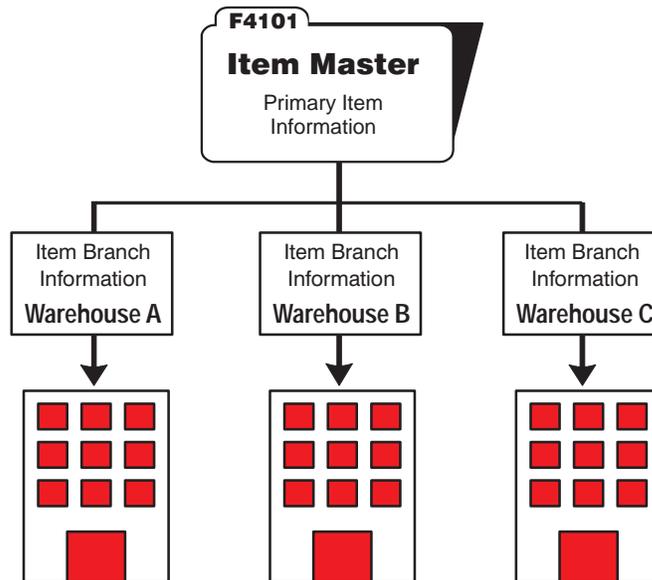
- The branches or plants where each item resides
- The locations used within each branch or plant

The system uses all of the above information to help track and process each item through your distribution and manufacturing systems.

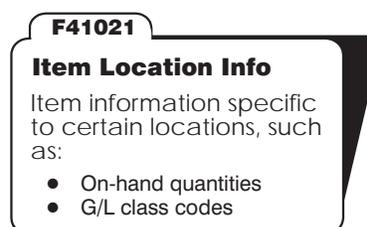
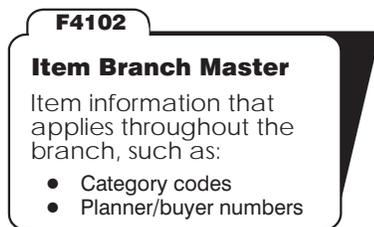


Entering an item requires that you perform two primary steps:

1. Add item master information, which includes basic details about an item.
2. Customize the item master information to suit each branch or plant that the item occupies.



Each time you enter master information for an item, the system creates a record in the Item Master table (F4101). When you add branch/plant information for an item, the system creates records in the Item Branch Master table (F4102) and the Item Location Information table (F41021).



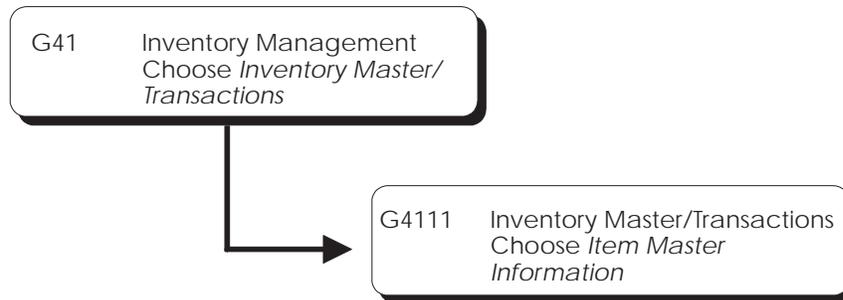
To add item information, complete the following procedures:

- Enter item master information
- Enter branch/plant information

Before You Begin

- Set up G/L class codes
- Review and modify branch/plant constants
- Set up next numbers
- Set up default locations and printers
- Set up applicable user defined code tables, including:
 - G/L posting categories
 - Stocking type codes
 - Units of measure
 - Classification code categories
 - Cost method codes
 - Language preference codes

Enter Item Master Information



Entering Item Master Information

You must enter general information for all stock and non-stock items. The system uses this information to identify and process each item in the distribution and manufacturing systems.

To enter item information, you must complete some or all of the following tasks:

- Enter basic item information
- Enter item text
- Assign item responsibility
- Enter item classification codes
- Enter item units of measure information
- Enter item manufacturing information
- Enter item grade and potency information

Each time you enter a new item, the system creates an item master record in the Item Master Information table (F4101).

Each time you enter a new item, the system creates an item master record in the Item Master Information table.

What You Should Know About

Setting up a template

You might want to set up a template that contains common values for fields. You can enter new items by locating the template and specifying new item numbers.

Deleting item master information

You cannot delete master information for an item if any of the following exists:

- Item branch records
- Bills of material
- Item cross-reference numbers
- Supplier relationships
- Sales prices

Displaying additional item information

You can set processing options to display additional item information forms subsequent to Item Master Information (for example, Item Branch/Plant Information).

See Also

- *Entering Item Cost Information (P4101)* in the *Inventory Management Guide* for details about entering master information pertaining to item costs
- *Entering Sales Price Information (P4101)* for details about entering master information pertaining to item prices

- *Entering Item Cost Information* in the *Inventory Management Guide* for details about entering master information pertaining to item costs
- *Entering Sales Price Information* for details about entering master information pertaining to item prices

Entering Basic Item Information

Before you can work with an item, you must provide the system with basic information about the item. This consists of:

- Entering item identifiers
- Entering item descriptions and search text
- Entering item processing information

Each item can have up to three identifiers. You use the identifiers throughout the system to locate the item. These identifiers can represent universal product codes (UPCs), bar codes, supplier numbers, or whatever you want them to represent.

In Branch/Plant Constants, you must specify a primary item identifier, which is the identifier that you use most often. To locate an item using an identifier other than the primary identifier, you must type a special symbol before the identifier.

You must also enter an item description and the text on which a user is most likely to search when attempting to locate the item. You can translate item descriptions and search text into multiple languages to accommodate those users who must locate items using alternate languages.

After you enter identifiers, a description, and search text for an item, you enter the values that control how the system processes the item. These values pertain to stocking, packaging, accounting transactions, system interfaces, and cost and price levels.

To enter item identifiers

On Item Master Information

Complete one or more of the following fields:

- Item Number – Short
- Product Number
- Catalog Number

Field	Explanation
Item Number – Short	<p>An identifier for an item.</p> <p>..... <i>Form-specific information</i></p> <p>The first of three identifiers you can assign to an item. The system assigns this number if you activate the Next Number program. This field is numeric only.</p> <p>If you leave the other two item identifier fields blank, the system copies this number to those fields.</p>
Product No	<p>The system provides three separate item numbers plus an extensive cross-reference capability to alternate item numbers. These item numbers are:</p> <ol style="list-style-type: none"> <li>1. Item Number (short) – An 8-digit, computer-assigned item number. <li>2. 2nd Item Number – The 25-digit, free-form, user defined, alphanumeric item number. <li>3. 3rd Item Number – Another 25-digit, free-form, user defined, alphanumeric item number. <p>In addition to these three basic item numbers, an extensive cross-reference search capability has been provided (see XRT). Numerous cross-references to alternate part numbers can be user defined (for example, substitute item numbers, replacements, bar codes, customer numbers, or supplier numbers).</p> <p>..... <i>Form-specific information</i></p> <p>The second of three identifiers that you can assign to an item. This field is alphanumeric.</p> <p>If you leave the third identifier field blank, the system copies this number to that field.</p>

Field	Explanation
Catalog No	<p>The system provides three separate item numbers plus an extensive cross reference capability to alternate item numbers. These item numbers are as follows:</p> <ol style="list-style-type: none"> 1. Item Number (short) – An 8-digit, computer assigned item number. 2. 2nd Item Number – The 25-digit, free form, user defined alphanumeric item number. 3. 3rd Item Number – Another 25-digit, free form, user defined alphanumeric item number. In addition to these three basic item numbers, an extensive cross-reference search capability has been provided (see XRT). Numerous cross references to alternate part numbers can be user defined, such as substitute item numbers, replacements, bar codes, customer numbers, or supplier numbers. <p>..... <i>Form-specific information</i></p> <p>The third of three identifiers you can assign to an item. This field is alphanumeric.</p> <p>If you leave the second identifier field blank, the system copies that number to this field.</p>

▶ To enter item identifiers

On Item Master Information

Complete one or more of the following fields:

- Item Number – Short
- Product No (Product Number)
- Catalog No (Catalog Number)

Field	Explanation
	<p>1. Item Number (short) – An eight-digit, computer assigned item number.</p> <p>2. 2nd Item Number – The 25-digit, free form, user defined alphanumeric item number.</p> <p>3. 3rd Item Number – Another 25-digit, free form, user defined alphanumeric item number.</p> <p>..... <i>Form-specific information</i></p> <p>The first of three identifiers you can assign to an item. The system assigns this number if you activate the Next Number program. This field is numeric only.</p> <p>If you leave the other two item identifier fields blank, the system copies this number to those fields.</p>
Product No	<p>The system provides three separate item numbers plus an extensive cross-reference capability to alternate item numbers. These item numbers are:</p> <p>1. Item Number (short) – An 8-digit, computer-assigned item number.</p> <p>2. 2nd Item Number – The 25-digit, free-form, user defined, alphanumeric item number.</p> <p>3. 3rd Item Number – Another 25-digit, free-form, user defined, alphanumeric item number.</p> <p>In addition to these three basic item numbers, an extensive cross-reference search capability has been provided (see XRT). Numerous cross-references to alternate part numbers can be user defined (for example, substitute item numbers, replacements, bar codes, customer numbers, or supplier numbers).</p> <p>..... <i>Form-specific information</i></p> <p>The second of three identifiers that you can assign to an item. This field is alphanumeric.</p> <p>If you leave the third identifier field blank, the system copies this number to that field.</p>

Catalog No	<p>The system provides three separate item numbers plus an extensive cross reference capability to alternate item numbers. These item numbers are as follows:</p> <ol style="list-style-type: none">1. Item Number (short) – An 8-digit, computer assigned item number.2. 2nd Item Number – The 25-digit, free form, user defined alphanumeric item number.3. 3rd Item Number – Another 25-digit, free form, user defined alphanumeric item number. In addition to these three basic item numbers, an extensive cross-reference search capability has been provided (see XRT). Numerous cross references to alternate part numbers can be user defined, such as substitute item numbers, replacements, bar codes, customer numbers, or supplier numbers. <p>..... <i>Form-specific information</i></p> <p>The third of three identifiers you can assign to an item. This field is alphanumeric.</p> <p>If you leave the second identifier field blank, the system copies that number to this field.</p>
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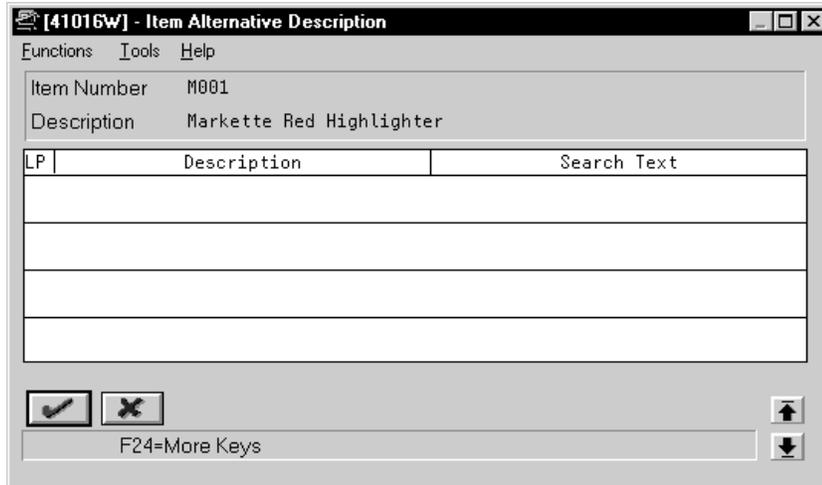
See Also

- *Defining Branch/Plant Constants (P41204)* in the *Inventory Management Guide* for information about specifying your primary item number
- *Defining Branch/Plant Constants* in the *Inventory Management Guide* for information about specifying your primary item number

▶ To enter item descriptions and search text

On Item Master Information

1. To enter descriptions and search text in your native language, complete the following fields:
 - Description
 - Search
2. To enter descriptions and search text in alternate languages, choose Item Alternative Description.



3. On Item Alternative Description, complete the following fields:

- Language Preference
- Descriptions
- Search Text

Field	Explanation
Srch	<p>A field that lets you specify how the system searches for an item. Your entry should be specific and descriptive of the item. Type the words in the order a user is likely to enter them.</p> <p>In single-byte environments, where computer storage space can hold only Latin-based language character sets, the system inserts the first 30 characters from the item's description if you do not enter search text.</p> <p>In double-byte environments, where computer storage space can hold more complex language character sets (in languages such as Japanese, Chinese, and Korean), you must complete this field. It is a single-byte field that you complete with single-byte characters to phonetically represent the item description (which can be single-byte, double-byte, or both).</p>

▶ To enter item descriptions and search text

On Item Master Information

1. To enter descriptions and search text in your native language, complete the following fields:
 - Desc (Description)
 - Srch (Search)
2. To enter descriptions and search text in alternate languages, access Item Alternative Description from Item Master Information.
3. On Item Alternative Description, complete the following fields:
 - LP (Language Preference)
 - Descriptions
 - Search Text

Field	Explanation
Srch	<p>A field that lets you specify how the system searches for an item. Your entry should be specific and descriptive of the item. Type the words in the order a user is likely to enter them.</p> <p>In single-byte environments, where computer storage space can hold only Latin-based language character sets, the system inserts the first 30 characters from the item's description if you do not enter search text.</p> <p>In double-byte environments, where computer storage space can hold more complex language character sets (in languages such as Japanese, Chinese, and Korean), you must complete this field. It is a single-byte field that you complete with single-byte characters to phonetically represent the item description (which can be single-byte, double-byte, or both).</p>

► To enter item processing information

On Item Master Information

Complete the following fields:

- Stocking Type
- G/L Class
- Line Type
- Bulk/Packed Flag
- Backorders Allowed
- Unit of Measure
- Check Availability Y/N
- ABC Codes
- Inventory Cost Level
- Sales Price Level
- Purchase Price Level

Field	Explanation
Stocking Type	A user defined code (system 41/type I) that indicates how you stock an item(for example, as finished goods, or as raw materials). The following stocking types are hard coded and you should not change them: B Bulk Floor Stock C Configured item F Feature K Kit parent item N Non-stock

Field	Explanation
Category – G/L	<p>A code that identifies the general ledger class that you want the system to use when it searches for the account to which it will post the transaction. If you do not want to specify a class code, you can enter **** (four asterisks) in this field.</p> <p>The table of Automatic Accounting Instructions (AAIs) allows you to predefine classes of automatic offset accounts for the Inventory, Purchasing, and Sales Order Management systems. G/L categories might be assigned as follows:</p> <ul style="list-style-type: none"> IN20 Direct Ship Orders IN60 Transfer Orders IN80 Stock Sales <p>The system can generate accounting entries based upon a single transaction. As an example, a single sale of a stock item can trigger the generation of accounting entries similar to these:</p> <ul style="list-style-type: none"> Sales–Stock (Debit) xxxxx.xx A/R Stock Sales (Credit) xxxxx.xx Posting Category: IN80 Stock Inventory (Debit) xxxxx.xx Stock COGS (Credit) xxxxx.xx <p>Although this field is four characters, only the last two characters of the Category and the last character of the Document Type are used to find the AAI.</p>
Line Type	<p>A code that controls how the system treats lines on a transaction. It controls the systems with which the transaction interfaces (General Ledger, Job Cost, Accounts Payable, Accounts Receivable, and Inventory Management). It also specifies the conditions under which a line prints on reports and is included in calculations. For example:</p> <ul style="list-style-type: none"> S Stock item J Job cost N Non-stock item F Freight T Text information M Miscellaneous charges and credits
Unit of Measure	<p>A user defined code (system 00, type UM), that identifies the unit of measure that the system uses to express the quantity of an item, for example, EA (each) or KG (kilogram).</p> <p>..... <i>Form-specific information</i></p> <p>The default for this field is the primary unit of measure you specify in processing options.</p>

Field	Explanation
Backorders Allowed	<p>A code that indicates whether you allow backorders for this item. You can allow backorders by item (through Item Master or Item Branch/Plant), or by customer (through Billing Instructions).</p> <p>Y Yes, allow backorders for this item</p> <p>N No, do not allow backorders for this item, regardless of the backorders code assigned to the customer</p> <p>NOTE: The system does not use this information if you have set the option on Branch/Plant Constants to indicate that you do not allow backorders in your operating environment.</p>
Check Availability Y/N	<p>This field controls whether availability checking is performed throughout the Sales Order Processing system. You might want to check availability for some items. For other items you might want to assume that an adequate supply is available. Valid values are:</p> <p>Y Check Availability</p> <p>N Do Not Check Availability</p>

Field	Explanation
ABC Codes	<p>A code that specifies this item's ABC ranking by sales amount.</p> <p>Valid values are:</p> <ul style="list-style-type: none"> A Assign this item to the first (largest) amount ranking B Assign this item to the second (intermediate) amount ranking C Assign this item to the third (smallest) amount ranking D Do not include this item when you run ABC Analysis <p>There are three types of ABC analysis—sales, margin, and on-hand value. Within each type of analysis, you can have three groups—A, B, and C.</p> <p>The ABC Code fields contain a percentage that tells the system how to define the A, B, and C groups for categorizing items during ABC analysis. Each group measures a total within the type of analysis.</p> <p>For all groups, the system compares the appropriate sales, margin, or on-hand value totals of a single item to the appropriate total for all items and calculates the value of each item. An item's value is its percentage of the appropriate total. The system then arranges the values of all items from highest to lowest value and accumulates the percentages. What happens next depends on the group:</p> <ul style="list-style-type: none"> A group: If an item's value causes the accumulated total to exceed the A accumulated percentage, the system assigns the item to the B group. B group: When the accumulated total reaches the percentage you entered for items in the A group, it continues adding values until it reaches the percentage you entered for items in the B group. The system assigns all items whose value falls between the A and B percentages to the B group. C group: The C group consists of items whose accumulated value exceeds the B percentage. The percentage that you usually enter for the C group is .999.
Inventory Cost Level	<p>A code that indicates whether the system maintains one overall inventory cost for the item, a different cost for each branch/plant, or a different cost for each location and lot within a branch/plant. The system maintains inventory costs in the Inventory Cost table (F4105).</p> <p>Valid codes are:</p> <ul style="list-style-type: none"> 1 Item level 2 Item/Branch level 3 Item/Branch/Location level

Field	Explanation
Sales Price Level	<p>A code that indicates whether the system maintains standard sales prices for an item, different sales prices for each branch/plant, or different sales prices for each location and lot within a branch/plant. The system maintains sales prices in the Base Price file (F4106). Valid codes are:</p> <ol style="list-style-type: none">1 Item level2 Item/Branch level3 Item/Branch/Location level
Purchase Price Level	<p>A code that indicates where to retrieve the purchase price for an item when you enter a purchase order. Valid codes are:</p> <ol style="list-style-type: none">1 Use the supplier/item price from the Purchase Price table (F41061).2 Use the supplier/item/branch price from the Purchase Price table (F41061).3 Use the inventory cost from the Inventory Cost table (F4105). This cost is based on the inventory cost level and the purchasing cost method you specify for the item. <p>The first two codes are applicable only if you set up supplier costs in the Purchase Order Management system. If you do not set up supplier costs, the system uses the inventory cost as the default for the purchase order.</p>

▶ **To enter item processing information**

On Item Master Information

Complete the following fields:

- Stocking Type
- G/L Class
- Line Type
- Bulk/Packed Flag
- Backorders Allowed
- Unit of Measure
- Check Availability Y/N
- ABC Codes
- Inventory Cost Level
- Sales Price Level
- Purchase Price Level

Field	Explanation
Stocking Type	<p>A user defined code (system 41/type I) that indicates how you stock an item(for example, as finished goods, or as raw materials). The following stocking types are hard coded and you should not change them:</p> <p style="margin-left: 40px;">B Bulk Floor Stock C Configured item F Feature K Kit parent item N Non-stock</p>

Field	Explanation
Category – G/L	<p>A code that identifies the general ledger class that you want the system to use when it searches for the account to which it will post the transaction. If you do not want to specify a class code, you can enter **** (four asterisks) in this field.</p> <p>The table of Automatic Accounting Instructions (AAIs) allows you to predefine classes of automatic offset accounts for the Inventory, Purchasing, and Sales Order Management systems. G/L categories might be assigned as follows:</p> <ul style="list-style-type: none"> IN20 Direct Ship Orders IN60 Transfer Orders IN80 Stock Sales <p>The system can generate accounting entries based upon a single transaction. As an example, a single sale of a stock item can trigger the generation of accounting entries similar to these:</p> <ul style="list-style-type: none"> Sales–Stock (Debit) xxxxx.xx A/R Stock Sales (Credit) xxxxx.xx Posting Category: IN80 Stock Inventory (Debit) xxxxx.xx Stock COGS (Credit) xxxxx.xx <p>Although this field is four characters, only the last two characters of the Category and the last character of the Document Type are used to find the AAI.</p>
Unit of Measure	<p>A user defined code (system 00, type UM), that identifies the unit of measure that the system uses to express the quantity of an item, for example, EA (each) or KG (kilogram).</p> <p>..... <i>Form-specific information</i></p> <p>The default for this field is the primary unit of measure you specify in processing options.</p>
Backorders Allowed	<p>A code that indicates whether you allow backorders for this item. You can allow backorders by item (through Item Master or Item Branch/Plant), or by customer (through Billing Instructions).</p> <ul style="list-style-type: none"> Y Yes, allow backorders for this item N No, do not allow backorders for this item, regardless of the backorders code assigned to the customer <p>NOTE: The system does not use this information if you have set the option on Branch/Plant Constants to indicate that you do not allow backorders in your operating environment.</p>

Field	Explanation
Check Availability Y/N	<p>This field controls whether availability checking is performed throughout the Sales Order Processing system. You might want to check availability for some items. For other items you might want to assume that an adequate supply is available. Valid values are:</p> <ul style="list-style-type: none"> Y Check Availability N Do Not Check Availability
ABC Codes	<p>A code that specifies this item's ABC ranking by sales amount.</p> <p>Valid values are:</p> <ul style="list-style-type: none"> A Assign this item to the first (largest) amount ranking B Assign this item to the second (intermediate) amount ranking C Assign this item to the third (smallest) amount ranking D Do not include this item when you run ABC Analysis <p>There are three types of ABC analysis—sales, margin, and on-hand value. Within each type of analysis, you can have three groups—A, B, and C.</p> <p>The ABC Code fields contain a percentage that tells the system how to define the A, B, and C groups for categorizing items during ABC analysis. Each group measures a total within the type of analysis.</p> <p>For all groups, the system compares the appropriate sales, margin, or on-hand value totals of a single item to the appropriate total for all items and calculates the value of each item. An item's value is its percentage of the appropriate total. The system then arranges the values of all items from highest to lowest value and accumulates the percentages. What happens next depends on the group:</p> <ul style="list-style-type: none"> A group: If an item's value causes the accumulated total to exceed the A accumulated percentage, the system assigns the item to the B group. B group: When the accumulated total reaches the percentage you entered for items in the A group, it continues adding values until it reaches the percentage you entered for items in the B group. The system assigns all items whose value falls between the A and B percentages to the B group. C group: The C group consists of items whose accumulated value exceeds the B percentage. The percentage that you usually enter for the C group is .999.

Field	Explanation
Inventory Cost Level	<p>A code that indicates whether the system maintains one overall inventory cost for the item, a different cost for each branch/plant, or a different cost for each location and lot within a branch/plant. The system maintains inventory costs in the Inventory Cost table (F4105).</p> <p>Valid codes are:</p> <ul style="list-style-type: none"> 1 Item level 2 Item/Branch level 3 Item/Branch/Location level
Sales Price Level	<p>A code that indicates whether the system maintains standard sales prices for an item, different sales prices for each branch/plant, or different sales prices for each location and lot within a branch/plant. The system maintains sales prices in the Base Price file (F4106). Valid codes are:</p> <ul style="list-style-type: none"> 1 Item level 2 Item/Branch level 3 Item/Branch/Location level
Purchase Price Level	<p>A code that indicates where to retrieve the purchase price for an item when you enter a purchase order. Valid codes are:</p> <ul style="list-style-type: none"> 1 Use the supplier/item price from the Purchase Price table (F41061). 2 Use the supplier/item/branch price from the Purchase Price table (F41061). 3 Use the inventory cost from the Inventory Cost table (F4105). This cost is based on the inventory cost level and the purchasing cost method you specify for the item. <p>The first two codes are applicable only if you set up supplier costs in the Purchase Order Management system. If you do not set up supplier costs, the system uses the inventory cost as the default for the purchase order.</p>
Line Type	<p>A code that controls how the system treats lines on a transaction. It controls the systems with which the transaction interfaces (General Ledger, Job Cost, Accounts Payable, Accounts Receivable, and Inventory Management). It also specifies the conditions under which a line prints on reports and is included in calculations. For example:</p> <ul style="list-style-type: none"> S Stock item J Job cost N Non-stock item F Freight T Text information M Miscellaneous charges and credits

Entering Item Text

You might want to enter text about an item that others can view or print when they work with the item. When you enter item master information, you can use one of two methods to enter item text:

- Attach messages to an item
- Enter notes for an item

Item messages are pre-defined, so you can attach the same message to multiple items. Before you can attach a pre-defined message to an item, you must create text for the message. Where you create this text depends on the message type.

Unlike item messages, item notes are not predefined. You enter notes for an item in Text Messages. If notes already exist for an item, the words *See Memo* appear at the top of Item Master Information.

► To attach messages to an item

On Item Master Information

Complete the following fields:

- Print Message
- Item Flash Message

Field	Explanation
Item Flash Message	User defined code system 40, type FL, which is used to flash a warning message about a particular item.
Temporary Item Flash Message	User defined code system 40, which is used to flash a temporary warning message about a particular item. (For future use).
Print Message	A code that you assign to each print message. Examples of text messages are engineering specifications, hours of operation during holiday periods, and special delivery instructions.

► To attach messages to an item

On Item Master Information

Complete the following fields:

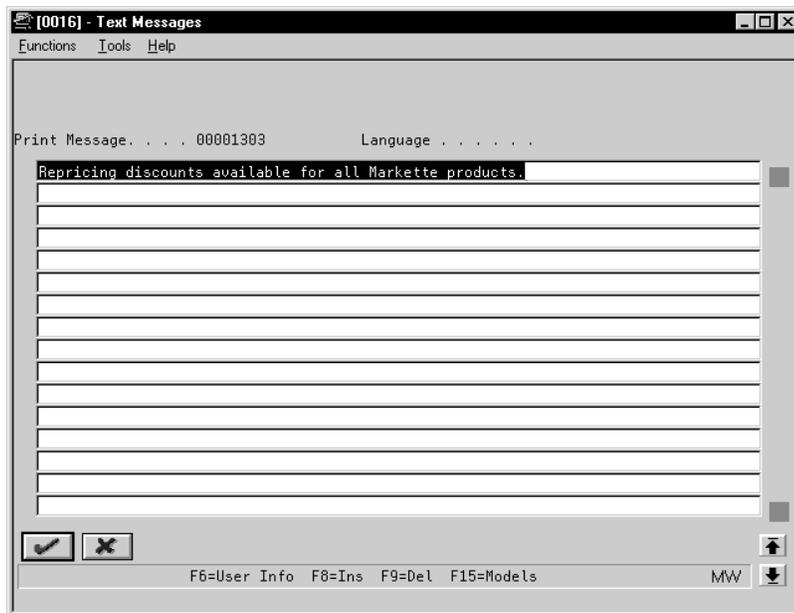
- Print Message
- Item Flash Message

Field	Explanation
Item Flash Message	User defined code system 40, type FL, which is used to flash a warning message about a particular item.
Temporary Item Flash Message	User defined code system 40, which is used to flash a temporary warning message about a particular item. (For future use).
Print Message	A code that you assign to each print message. Examples of text messages are engineering specifications, hours of operation during holiday periods, and special delivery instructions.

► **To enter notes for an item**

On Item Master Information

1. Choose Text Messages.



2. On Text Messages, enter the appropriate text.

▶ To enter notes for an item

On Item Master Information

1. Access Text Messages.
2. On Text Messages, enter the appropriate text.

Assigning Item Responsibility

When you enter master information for an item, you can specify those persons or businesses that are responsible for the item, including the buyer, planner, and preferred carriers.

Before you can assign a responsible person or business to an item, each must have an address book number in the Address Book system.

▶ To assign item responsibility

On Item Master Information

1. Complete the following fields:
 - Planner Number
 - Buyer Number
2. Choose Classification Codes.
3. On Classification Codes, complete the following fields:
 - Sales: Preferred Carrier
 - Purchasing: Preferred Carrier

▶ To assign item responsibility

On Item Master Information

1. Complete the following fields:
 - Planner Number
 - Buyer Number
2. Access Classification Codes.
3. On Classification Codes, complete the following fields:
 - Sales: Preferred Carrier

- Purchasing: Preferred Carrier

See Also

- *Working With Basic Address Book Information (P01051)* in the Address Book system for more information about adding address numbers.
- *Working With Basic Address Book Information* in the Address Book system for more information about adding address numbers.

Entering Item Classification Codes

You might want to group items with similar characteristics so that you can work with the entire group at once. For example, you can group items that are fragile so that the system prints special shipping conditions on invoices for items from that group.

To group items, you assign them classification codes. You can assign classification codes to items when you enter item master information or when you enter item branch/plant information.

There are several categories of classification codes. Each category represents a different item classification or property type, such as shipping conditions. From the shipping conditions category, you can select a code that indicates the condition under which you ship an item, such as fragile.

To group the classification codes into one of the J.D. Edwards systems or other user-defined categories, complete the following tasks:

- Enter sales classification codes
- Enter purchasing classification codes
- Enter inventory classification codes
- Enter warehouse classification codes
- Enter other classification codes

- Sales Category Code 3
- Sales Category Code 4
- Sales Category Code 5
- Preferred Carrier

▶ **To enter purchasing classification codes**

On Item Master Information

1. Choose Classification Codes.
2. On Classification Codes, enter a classification code for each of the following fields:
 - Commodity Class
 - Commodity Sub Class
 - Supplier Rebate Code
 - Master Planning Family
 - Landed Cost Rule

▶ **To enter purchasing classification codes**

On Item Master Information

1. Access Classification Codes.
2. On Classification Codes, enter a classification code for each of the following fields:
 - Commodity Class
 - Commodity Sub Class
 - Supplier Rebate Code
 - Master Planning Family

▶ **To enter inventory classification codes**

On Item Master Information

1. Choose Classification Codes.
2. On Classification Codes, enter a classification code for each of the following fields:

- Shipping Conditions Code
- Shipping Commodity Class
- Cycle Count Category

▶ **To enter inventory classification codes**

On Item Master Information

1. Access Classification Codes.
2. On Classification Codes, enter a classification code for each of the following fields:
 - Shipping Conditions Code
 - Shipping Commodity Class
 - Cycle Count Category

▶ **To enter warehouse classification codes**

On Item Master Information

1. Choose Classification Codes.
2. On Classification Codes, enter a classification code for one or more of the following fields:
 - Item Dimension Group
 - Warehouse Process Group 1
 - Warehouse Process Group 2
 - Warehouse Process Group 3

▶ **To enter warehouse classification codes**

On Item Master Information

1. Access Classification Codes.
2. On Classification Codes, enter a classification code for one or more of the following fields:
 - Item Dimension Group
 - Warehouse Process Group 1
 - Warehouse Process Group 2

- Warehouse Process Group 3

▶ **To enter other classification codes**

On Item Master Information

1. Choose Classification Codes.
2. On Classification Codes, complete one or more of the following fields:
 - Category Code 6
 - Category Code 7
 - Category Code 8
 - Category Code 9
 - Category Code 10

▶ **To enter other classification codes**

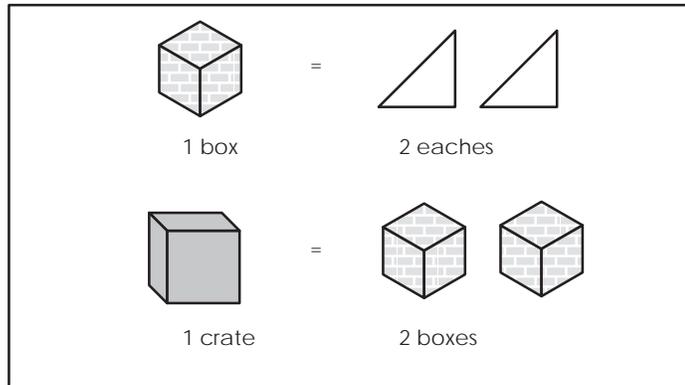
On Item Master Information

1. Access Classification Codes.
2. On Classification Codes, complete one or more of the following fields:
 - Category Code 6
 - Category Code 7
 - Category Code 8
 - Category Code 9
 - Category Code 10

Entering Item Units of Measure Information

You must provide the system with the item units of measure that are most common to each of your distribution processes, such as sales, purchasing, and so on. For example, you might purchase an item in pallets, stock it in boxes, and ship it individually.

If you work with an item in multiple units of measure, you must define how to convert one unit of measure to another. For example, if you stock items in boxes and crates, you must specify the number of individual items in a box and the number of boxes in a crate.



In some instances, the system must work with an item in its smallest (primary) unit of measure. The item conversions you specify must enable the system to trace all units of measure back to the primary unit of measure.

You can set up unit of measure conversions that are specific to an item or to an item and branch/plant combination. You identify whether item conversions are specific to a branch/plant in System Constants. You can also set up units of measure that are standard for all items.

You must set up all units of measure for an item in the item conversion table or the standard conversion table. The system verifies the item unit of measure conversions before using standard unit of measure conversions.

Entering item unit of measure information includes:

- Entering default units of measure for items
- Defining item unit of measure conversions

▶ **To enter default units of measure for items**

On Item Master Information

1. Choose Default Units of Measure.



2. On Default Units of Measure, complete the following field to locate the item:
 - Item Number
3. Complete the following fields:
 - Primary
 - Secondary
 - Purchasing
 - Pricing
 - Shipping
 - Production
 - Component
 - Weight
 - Volume

▶ To enter default units of measure for items

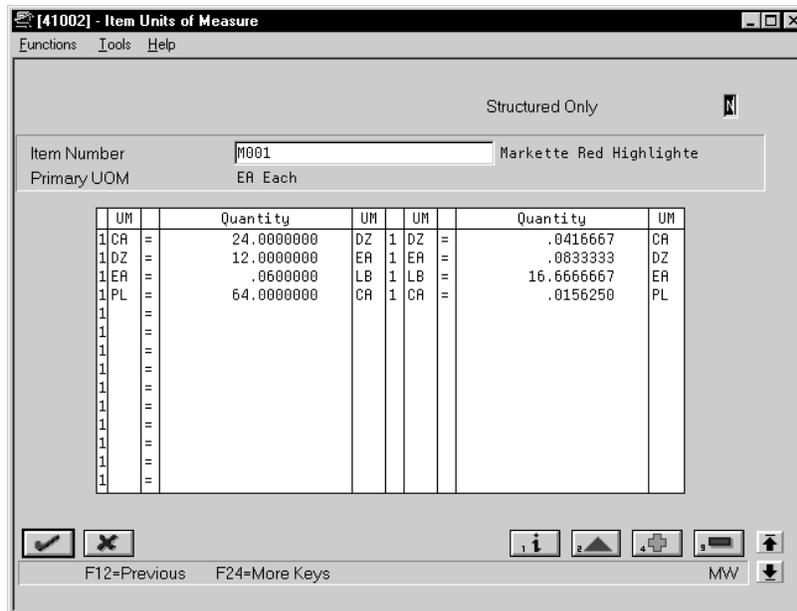
On Item Master Information

1. Access Default Units of Measure.
2. On Default Units of Measure, complete the following field to locate the item:
 - Item Number
3. Complete the following fields:
 - Primary
 - Secondary
 - Purchasing
 - Pricing
 - Shipping
 - Production
 - Component
 - Weight
 - Volume

► To define item unit of measure conversions

On Item Master Information

1. Choose Default Units of Measure.
2. On Default Units of Measure, choose Item Units of Measure.



3. On Item Units of Measure, complete the following fields:
 - Branch
 - Structured Only
 - Item Number
 - Primary Unit Of Measure

The Branch field displays only if item unit of measure conversions are specific to branch/plants.

4. Complete the following fields for each unit of measure that the system must convert for the item:
 - Unit of Measure To
 - Quantity
 - Unit of Measure From

Field	Explanation
Display Structured Units of Measure only	A code that determines whether the system displays all units of measure for an item and branch/plant or only the structured units of measure set up for the Advanced Warehouse Management system.
Conversion Factor	The factor that the system uses to convert one unit of measure to another unit of measure.

To define item unit of measure conversions

On Item Master Information

1. Access Default Units of Measure.
2. On Default Units of Measure, access Item Units of Measure.
3. On Item Units of Measure, complete the following fields:
 - Branch
 - Structured Only
 - Item Number
 - Primary UOM

The Branch field displays only if item unit of measure conversions are specific to branch/plants.

4. Complete the following fields for each unit of measure that the system must convert for the item:

- UM (Unit of Measure To)
- Quantity
- UM (Unit of Measure From)

Field	Explanation
Display Structured Units of Measure only	A code that determines whether the system displays all units of measure for an item and branch/plant or only the structured units of measure set up for the Advanced Warehouse Management system.
Conversion Factor	The factor that the system uses to convert one unit of measure to another unit of measure.

See Also

- *Set Up Standard Units of Measure (P41003)*
- *Set Up Standard Units of Measure*

Entering Item Manufacturing Information

You can define manufacturing information about an item when you enter item master information, including:

Requirements planning information	You enter requirements planning information to help develop a planning forecast for the items that you need to run your distribution and manufacturing operations.
Leadtime information	You enter leadtime information to allow the system to calculate the time frames that are necessary to assemble or manufacture an item.
Engineering information	You enter reference information about the drawing plans for an item so that you can refer back to the plans as necessary.

Complete the following tasks:

- Enter requirements planning information
- Enter leadtime information
- Enter engineering information

Item Number 333 ORK SHELF UNIT

Order Policy Code 1 Issue Type Code I
Value Order policy Planning Code 1
MFG Leadtime Quantity Planning Fence Rule H
Accounting Cost Qty 100 Fixed/Variable F
Round to Whole Number R
Material Status
Planning Fence
Freeze Fence
Message Display Fence
Leadtime Level 3
Leadtime Manufacturing
Leadtime Cumulative
Leadtime Per Unit
Drawing Size
Last Revision No
Drawing Number 12287

Grade/Potency Pricing N
Potency Control N
Standard Potency
From - Thru Potency -
Grade Control N
Standard Grade
From - Thru Grade -

F12=Previous F24=More Keys MW

► To enter requirements planning information

On Item Master Information

1. Choose Manufacturing Values Entry.
2. On Manufacturing Values Entry, complete the following fields:
 - Value Order Policy
 - Planning Code
 - Planning Fence Rule
 - Accounting Cost Quantity
 - Round to Whole Number
 - Planning Fence
 - Freeze Fence
 - Message Display Fence

Field	Explanation
Value Order Policy	<p>A field that the system uses in conjunction with the order policy code. It can show three types of data:</p> <ul style="list-style-type: none"> • The value of the fixed order quantity when order policy code 2 (fixed order quantity) is selected. • The number of additional days of supply after demand is encountered when you select order policy code 4 (periods of supply). • The desired inventory level when you select order policy code 5 (rate scheduled item). If the ending available quantity is below or above the desired inventory level, then MPS/MRP/DRP generation issues an “increase rate to” or a “decrease rate to” message.
Planning Code	<p>A code that indicates how Master Production Schedule (MPS), Material Requirements Planning (MRP), or Distribution Requirements Planning (DRP) processes this item. Valid codes are:</p> <ul style="list-style-type: none"> 0 Not Planned by MPS, MRP, or DRP 1 Planned by MPS or DRP 2 Planned by MRP 3 Planned by MRP with additional independent forecast 4 Planned by MPS, Parent in Planning Bill 5 Planned by MPS, Component in Planning Bill <p>These codes are hard coded.</p>

Field	Explanation
Planning Time Fence Rule	<p>A code (system 34, table TF) that the system uses in conjunction with the Planning Time Fence Days field to determine how forecast demand or actual customer demand is used.</p> <p>For example:</p> <ul style="list-style-type: none"> S tells the system to plan using customer demand before the time fence and forecast after the time fence F tells the system to plan using forecast before the time fence and forecast plus customer demand after the time fence <p>If you enter 5 in the Planning Time Fence Days field and S in this field, then the system uses only customer demand for the regeneration for the first 5 days. After 5 days, the system uses the forecast for the regeneration.</p> <p>Valid codes are:</p> <ul style="list-style-type: none"> C Customer demand before, greater of forecast or customer demand after F Forecast before, forecast plus customer demand after G Greater of forecast or customer demand before, forecast after S Customer demand before, forecast after 1 Zero before, forecast after 3 Zero before, forecast plus customer demand after
Accounting Cost Quantity	<p>An amount the system uses in the cost rollup program to determine the allocation of setup costs. The system totals the setup costs and divides the sum by this quantity to determine a unit setup cost. The default is 1.</p>
Round to Whole Number	<p>A code that determines if an item should be rounded to the closest whole number for planning purposes. Valid codes are:</p> <ul style="list-style-type: none"> R Round to the closest whole number Blank Do not round <p>For example, if the calculated requirements for an item are 4.6 and this field has an R, the system rounds the quantity required to 5. If the calculated requirements are 4.4, the system rounds to 4.</p>

Field	Explanation
Planning Time Fence Days	<p>The number of days that the system uses in conjunction with the time fence rule to determine how the forecast is used. Enter the number of days from the start date, after which the time fence rule changes from the first rule to the second rule.</p> <p>For example, if the time fence rule is S (customer demand before the time fence, forecast after the time fence), and the planning time fence is 5 days, the system plans for the first 5 days using customer demand. After the fifth day, the system plans using the forecast.</p>
Freeze Time Fence Days	<p>The number of days from the generation start date within which the system should not generate order messages.</p> <p>For example, if the generation start date is 01/01/99, and the freeze time fence is 6 days, the planning system does not issue messages with dates less than or equal to 01/07/99.</p>
Message Time Fence Days	<p>The number of days after the generation start date that the system should not generate order messages.</p> <p>For example, if the generation start date is 01/01/99, and the message time fence is 60 days, the system does not issue messages with dates greater than or equal to 03/01/99. However, the planning horizon for orders continues past this date and is reflected in available to promise totals.</p>

► To enter requirements planning information

On Item Master Information

1. Access Manufacturing Values Entry.
2. On Manufacturing Values Entry, complete the following fields:
 - Value Order Policy
 - Planning Code
 - Planning Fence Rule
 - Accounting Cost Quantity
 - Round to Whole Number
 - Planning Fence
 - Freeze Fence
 - Message Display Fence

Field	Explanation												
Value Order Policy	<p>A field that the system uses in conjunction with the order policy code. It can show three types of data:</p> <ul style="list-style-type: none">• The value of the fixed order quantity when order policy code 2 (fixed order quantity) is selected.• The number of additional days of supply after demand is encountered when you select order policy code 4 (periods of supply).• The desired inventory level when you select order policy code 5 (rate scheduled item). If the ending available quantity is below or above the desired inventory level, then MPS/MRP/DRP generation issues an “increase rate to” or a “decrease rate to” message.												
Planning Code	<p>A code that indicates how Master Production Schedule (MPS), Material Requirements Planning (MRP), or Distribution Requirements Planning (DRP) processes this item. Valid codes are:</p> <table><tbody><tr><td>0</td><td>Not Planned by MPS, MRP, or DRP</td></tr><tr><td>1</td><td>Planned by MPS or DRP</td></tr><tr><td>2</td><td>Planned by MRP</td></tr><tr><td>3</td><td>Planned by MRP with additional independent forecast</td></tr><tr><td>4</td><td>Planned by MPS, Parent in Planning Bill</td></tr><tr><td>5</td><td>Planned by MPS, Component in Planning Bill</td></tr></tbody></table> <p>These codes are hard coded.</p>	0	Not Planned by MPS, MRP, or DRP	1	Planned by MPS or DRP	2	Planned by MRP	3	Planned by MRP with additional independent forecast	4	Planned by MPS, Parent in Planning Bill	5	Planned by MPS, Component in Planning Bill
0	Not Planned by MPS, MRP, or DRP												
1	Planned by MPS or DRP												
2	Planned by MRP												
3	Planned by MRP with additional independent forecast												
4	Planned by MPS, Parent in Planning Bill												
5	Planned by MPS, Component in Planning Bill												

Field	Explanation
Planning Time Fence Rule	<p>A code (system 34, table TF) that the system uses in conjunction with the Planning Time Fence Days field to determine how forecast demand or actual customer demand is used.</p> <p>For example:</p> <ul style="list-style-type: none"> S tells the system to plan using customer demand before the time fence and forecast after the time fence F tells the system to plan using forecast before the time fence and forecast plus customer demand after the time fence <p>If you enter 5 in the Planning Time Fence Days field and S in this field, then the system uses only customer demand for the regeneration for the first 5 days. After 5 days, the system uses the forecast for the regeneration.</p> <p>Valid codes are:</p> <ul style="list-style-type: none"> C Customer demand before, greater of forecast or customer demand after F Forecast before, forecast plus customer demand after G Greater of forecast or customer demand before, forecast after S Customer demand before, forecast after 1 Zero before, forecast after 3 Zero before, forecast plus customer demand after
Accounting Cost Quantity	<p>An amount the system uses in the cost rollup program to determine the allocation of setup costs. The system totals the setup costs and divides the sum by this quantity to determine a unit setup cost. The default is 1.</p>
Round to Whole Number	<p>A code that determines if an item should be rounded to the closest whole number for planning purposes. Valid codes are:</p> <ul style="list-style-type: none"> R Round to the closest whole number Blank Do not round <p>For example, if the calculated requirements for an item are 4.6 and this field has an R, the system rounds the quantity required to 5. If the calculated requirements are 4.4, the system rounds to 4.</p>

Field	Explanation
Planning Time Fence Days	<p>The number of days that the system uses in conjunction with the time fence rule to determine how the forecast is used. Enter the number of days from the start date, after which the time fence rule changes from the first rule to the second rule.</p> <p>For example, if the time fence rule is S (customer demand before the time fence, forecast after the time fence), and the planning time fence is 5 days, the system plans for the first 5 days using customer demand. After the fifth day, the system plans using the forecast.</p>
Freeze Time Fence Days	<p>The number of days from the generation start date within which the system should not generate order messages.</p> <p>For example, if the generation start date is 01/01/99, and the freeze time fence is 6 days, the planning system does not issue messages with dates less than or equal to 01/07/99.</p>
Message Time Fence Days	<p>The number of days after the generation start date that the system should not generate order messages.</p> <p>For example, if the generation start date is 01/01/99, and the message time fence is 60 days, the system does not issue messages with dates greater than or equal to 03/01/99. However, the planning horizon for orders continues past this date and is reflected in available to promise totals.</p>

 **To enter leadtime information**

On Item Master Information

1. Choose Manufacturing Values Entry.
2. On Manufacturing Values Entry, complete the following fields:
 - Manufacturing Leadtime Quantity
 - Fixed/Variable
 - Leadtime Level
 - Leadtime Manufacturing
 - Leadtime Cumulative
 - Leadtime Per Unit
 - Issue Type Code

Field	Explanation
Issue Type Code	<p>A code that defines how each component in the bill of material is issued from stock. In shop floor control, it indicates how a part is issued to a work order. Valid codes are:</p> <ul style="list-style-type: none"> I Manual issue (default) F Floor stock (no issue) B Backflush (when part is reported as complete) P Preflush (when parts list is generated) U Super backflush (at pay-point operation) S Sub-contract item (send to supplier) Blank Shippable end item <p>You can issue a component in more than one way within a specific branch/plant by using a different code on the bill of material and work order parts list. The bill of material code overrides the branch/plant value.</p>
Quantity – MFG Leadtime	<p>The quantity that determines the leadtime level for a manufactured item. Each of the routing steps for the item are extended by this quantity. For the system to calculate the leadtime level, the quantity in this field must be a value other than zero.</p>
Fixed or Variable Leadtime	<p>A code that determines whether the system uses fixed or variable leadtimes. This code works in conjunction with the value from either the Level Leadtime field or the Leadtime Per Unit field. Valid codes are:</p> <ul style="list-style-type: none"> F Fixed leadtime – The system calculates work order start dates using the value from the Leadtime Level field. V Variable leadtime – The system calculates work order start dates using the value from the Leadtime Per Unit field.
Leadtime Level	<p>The leadtime for an item at its assigned level in the production process as defined on Plant Manufacturing Data. The system uses this value to calculate the start dates for work orders using fixed leadtimes. Level leadtime is different for purchased and manufactured items:</p> <ul style="list-style-type: none"> • Purchased – The number of calendar days required for the item to arrive at your branch/plant after the supplier receives your purchase order. • Manufactured – The number of workdays required to complete the fabrication or assembly of an item once all the components are available. <p>You can enter level leadtime manually on Manufacturing Values Entry, or you can let the Leadtime Rollup program calculate it. To calculate level leadtime using the Leadtime Rollup program, you must first enter a quantity in the Manufacturing Leadtime Quantity field in the Item Branch table (F4102).</p>

Field	Explanation
Leadtime Manufacturing	<p>The total number of days required to build an item from its lowest level components to the final assembly. This value is the total of the level leadtimes for all manufactured items, plus the highest manufacturing leadtime for all its components.</p> <p>If all components are purchased, the manufacturing leadtime equals the item's level leadtime. Purchased item leadtimes are not included in the calculation of manufacturing leadtimes.</p> <p>You can enter the manufacturing leadtime manually or you can have the system calculate it when you run the Leadtime Rollup program.</p>
Leadtime Cumulative	<p>The total number of days required to build an item from its lowest level components to the final assembly. The system calculates the value differently for manufactured and purchased items.</p> <p>Manufactured – The total of all level leadtimes for all manufactured items, plus the highest cumulative leadtime of all its components.</p> <p>Purchased – The item's level leadtime. Purchased item leadtimes are included in the calculation of cumulative leadtimes.</p> <p>You can enter this value manually or you can have the system calculate it when you run the Leadtime Rollup program.</p>
Leadtime Per Unit	<p>The total number of hours required to build one unit as specified on the routing. This value is factored by the time basis code.</p> <p>You can enter this value manually, or you can have the system calculate it when you run the Leadtime Rollup program. The system overwrites this value when you run the Leadtime Rollup program.</p> <p>The system uses this field to calculate start dates for work orders when you use variable leadtimes.</p>

To enter leadtime information

On Item Master Information

1. Access Manufacturing Values Entry.
2. On Manufacturing Values Entry, complete the following fields:
 - Manufacturing Leadtime Quantity
 - Fixed/Variable

- Leadtime Level
- Leadtime Manufacturing
- Leadtime Cumulative
- Leadtime Per Unit
- Issue Type Code

Field	Explanation
Issue Type Code	<p>A code that defines how each component in the bill of material is issued from stock. In shop floor control, it indicates how a part is issued to a work order. Valid codes are:</p> <ul style="list-style-type: none"> I Manual issue (default) F Floor stock (no issue) B Backflush (when part is reported as complete) P Preflush (when parts list is generated) U Super backflush (at pay-point operation) S Sub-contract item (send to supplier) Blank Shippable end item <p>You can issue a component in more than one way within a specific branch/plant by using a different code on the bill of material and work order parts list. The bill of material code overrides the branch/plant value.</p>
Quantity – MFG Leadtime	<p>The quantity that determines the leadtime level for a manufactured item. Each of the routing steps for the item are extended by this quantity. For the system to calculate the leadtime level, the quantity in this field must be a value other than zero.</p>
Fixed or Variable Leadtime	<p>A code that determines whether the system uses fixed or variable leadtimes. This code works in conjunction with the value from either the Level Leadtime field or the Leadtime Per Unit field. Valid codes are:</p> <ul style="list-style-type: none"> F Fixed leadtime – The system calculates work order start dates using the value from the Leadtime Level field. V Variable leadtime – The system calculates work order start dates using the value from the Leadtime Per Unit field.

Field	Explanation
Leadtime Level	<p>The leadtime for an item at its assigned level in the production process as defined on Plant Manufacturing Data. The system uses this value to calculate the start dates for work orders using fixed leadtimes. Level leadtime is different for purchased and manufactured items:</p> <ul style="list-style-type: none">• Purchased – The number of calendar days required for the item to arrive at your branch/plant after the supplier receives your purchase order.• Manufactured – The number of workdays required to complete the fabrication or assembly of an item once all the components are available. <p>You can enter level leadtime manually on Manufacturing Values Entry, or you can let the Leadtime Rollup program calculate it. To calculate level leadtime using the Leadtime Rollup program, you must first enter a quantity in the Manufacturing Leadtime Quantity field in the Item Branch table (F4102).</p>
Leadtime Manufacturing	<p>The total number of days required to build an item from its lowest level components to the final assembly. This value is the total of the level leadtimes for all manufactured items, plus the highest manufacturing leadtime for all its components.</p> <p>If all components are purchased, the manufacturing leadtime equals the item's level leadtime. Purchased item leadtimes are not included in the calculation of manufacturing leadtimes.</p> <p>You can enter the manufacturing leadtime manually or you can have the system calculate it when you run the Leadtime Rollup program.</p>
Leadtime Cumulative	<p>The total number of days required to build an item from its lowest level components to the final assembly. The system calculates the value differently for manufactured and purchased items.</p> <p>Manufactured – The total of all level leadtimes for all manufactured items, plus the highest cumulative leadtime of all its components.</p> <p>Purchased – The item's level leadtime. Purchased item leadtimes are included in the calculation of cumulative leadtimes.</p> <p>You can enter this value manually or you can have the system calculate it when you run the Leadtime Rollup program.</p>

Field	Explanation
Leadtime Per Unit	<p>The total number of hours required to build one unit as specified on the routing. This value is factored by the time basis code.</p> <p>You can enter this value manually, or you can have the system calculate it when you run the Leadtime Rollup program. The system overwrites this value when you run the Leadtime Rollup program.</p> <p>The system uses this field to calculate start dates for work orders when you use variable leadtimes.</p>

► To enter engineering information

On Item Master Information

1. Choose Manufacturing Values Entry.
2. On Manufacturing Values Entry, complete the following fields:
 - Drawing Size
 - Last Revision Number
 - Drawing Number

Field	Explanation
Drawing Size	<p>A code that represents the engineering drawing size. For example:</p> <p style="margin-left: 40px;">A A-size drawing</p> <p style="margin-left: 40px;">D D-size drawing</p>
Last Revision No.	<p>This number is a subset to the drawing number. It provides an additional description of the drawing and is useful should the system use an engineering drawing as a reference for this item.</p>
Drawing Number	<p>An engineering drawing number that might be the same as the part or item number.</p>

► To enter engineering information

On Item Master Information

1. Access Manufacturing Values Entry.
2. On Manufacturing Values Entry, complete the following fields:
 - Drawing Size
 - Last Revision No
 - Drawing Number

Field	Explanation
Drawing Size	A code that represents the engineering drawing size. For example: A A-size drawing D D-size drawing
Last Revision No.	This number is a subset to the drawing number. It provides an additional description of the drawing and is useful should the system use an engineering drawing as a reference for this item.
Drawing Number	An engineering drawing number that might be the same as the part or item number.

Entering Item Grade and Potency Information

When you enter item master information or item branch/plant information, you specify whether grade or potency applies to an item. Grades enable you to classify items, such as grade A eggs and grade B eggs. Potency allows you to specify the active ingredient in a product, such as the percentage of alcohol in liquor.

When you turn on grade or potency control for an item, you can enter a standard grade or potency for the item and a range of acceptable values. If you receive or issue items that are less than or exceed the range, the system provides a warning message. You cannot perform sales on items that are not within the range.

Item grade and potency are only applicable to items that are produced in lots. You cannot use both grade control and potency control for the same item.

► **To enter item grade and potency information**

On Item Master Information

1. Choose Manufacturing Values Entry.
2. On Manufacturing Values Entry, complete one or more of the following optional fields:
 - Grade/Potency Pricing
 - Potency Control
 - Standard Potency
 - From Potency
 - Thru Potency
 - Grade Control
 - Standard Grade
 - From Grade
 - Thru Grade

Field	Explanation
Grade/Potency Pricing OT1Y	A code that indicates if you price the item by grade or potency range. You must control the item by grade to price it by grade. Likewise, you must control the item by potency to price it by potency. Valid values are: Blank No potency or grade pricing 1 Potency pricing 2 Grade pricing
Potency Control	A code that indicates whether you control the item by potency.
Grade Control	A code that indicates whether you control the item by grade.
Standard Potency	The percentage of active ingredients normally found in an item.
Standard Grade	A code (table 40/LG) that represents the normal grade for an item.
From Potency	A number that indicates the minimum potency, or percentage of active ingredients, acceptable for an item. The system displays a warning message if you try to purchase or issue items that fall below the minimum acceptable potency. The system does not allow you to sell items that fall below the minimum acceptable potency.

Field	Explanation
Thru Potency	<p>A number that indicates the maximum potency, or percentage of active ingredients, acceptable for an item.</p> <p>The system displays a warning message if you try to purchase or issue items that have a potency above the maximum potency acceptable. The system does not allow you to sell items that have a potency above the maximum potency acceptable.</p>
From Grade	<p>A code (system 40, type LG) that indicates the minimum grade acceptable for an item.</p> <p>The system displays a warning message if you try to purchase or issue items that have a grade below the minimum grade acceptable. The system does not allow you to sell items that have a grade below the minimum acceptable level.</p>
Thru Grade	<p>A code (system 40, type LG) that indicates the maximum grade acceptable for an item.</p> <p>The system displays a warning message if you try to purchase or issue items that have a grade above the maximum grade acceptable. The system does not allow you to sell items that have a grade above the maximum grade acceptable.</p>

► To enter item grade and potency information

On Item Master Information

1. Access Manufacturing Values Entry.
2. On Manufacturing Values Entry, complete one or more of the following optional fields:
 - Grade/Potency Pricing
 - Potency Control
 - Standard Potency
 - From Potency
 - Thru Potency
 - Grade Control
 - Standard Grade
 - From Grade
 - Thru Grade

Field	Explanation
Grade/Potency Pricing OT1Y	<p>A code that indicates if you price the item by grade or potency range. You must control the item by grade to price it by grade. Likewise, you must control the item by potency to price it by potency. Valid values are:</p> <ul style="list-style-type: none"> Blank No potency or grade pricing 1 Potency pricing 2 Grade pricing
Potency Control	A code that indicates whether you control the item by potency.
Grade Control	A code that indicates whether you control the item by grade.
Standard Potency	The percentage of active ingredients normally found in an item.
Standard Grade	A code (table 40/LG) that represents the normal grade for an item.
From Potency	<p>A number that indicates the minimum potency, or percentage of active ingredients, acceptable for an item.</p> <p>The system displays a warning message if you try to purchase or issue items that fall below the minimum acceptable potency. The system does not allow you to sell items that fall below the minimum acceptable potency.</p>
Thru Potency	<p>A number that indicates the maximum potency, or percentage of active ingredients, acceptable for an item.</p> <p>The system displays a warning message if you try to purchase or issue items that have a potency above the maximum potency acceptable. The system does not allow you to sell items that have a potency above the maximum potency acceptable.</p>
From Grade	<p>A code (system 40, type LG) that indicates the minimum grade acceptable for an item.</p> <p>The system displays a warning message if you try to purchase or issue items that have a grade below the minimum grade acceptable. The system does not allow you to sell items that have a grade below the minimum acceptable level.</p>
Thru Grade	<p>A code (system 40, type LG) that indicates the maximum grade acceptable for an item.</p> <p>The system displays a warning message if you try to purchase or issue items that have a grade above the maximum grade acceptable. The system does not allow you to sell items that have a grade above the maximum grade acceptable.</p>

What You Should Know About

- | | |
|--|---|
| Lots | You can specify the grade or potency of all items in a particular lot on Lot Master Revisions. If you do not specify a grade or potency, the system uses the standard grade or potency from Item Master or Item Branch Information. |
| Grade and potency ranges for sales purposes | You can specify an acceptable grade or potency range for each of your customers using preference profiles.

See <i>Set Up Preference Profiles</i> in the <i>Sales Order Management Guide</i> . |

See Also

- *Entering Information for Lots (P4108)* in the *Inventory Management Guide* for information about specifying grade and potency values for lots
- *Entering Information for Lots* in the *Inventory Management Guide* for information about specifying grade and potency values for lots

Processing Options for Item Master Information – Revisions

- DEFAULT VALUES :
- | | |
|--|-------|
| 1. Primary Unit of Measure (Blanks=EA) | _____ |
| 2. Weight Unit of Measure (Blanks=LB) | _____ |
- PROCESS CONTROL :
- | | |
|---|-------|
| 3. Specify the from and thru dates to be used for effective dates in the Item Notes File : | |
| - From Date (Blank = System date) | _____ |
| - Thru Date (Blank = 12/31 with the year = to the default value for the data dictionary item Century Change Year (#CYR)) | _____ |
| 4. Enter a '1' for each additional Item Master information screen to display when performing an add or change. If blank, the screen will not display. | |
| Classification Codes | _____ |
| Cost Revisions (Conditional) . . | _____ |
| Price Revisions (Conditional) . | _____ |
| Units & Measures | _____ |
| Manufacturing Values | _____ |
| Bulk Product Information | _____ |
| 5. Enter a '1' to use the window version of the screens selected above. If left blank, the full | _____ |

screen versions will be displayed.

6. Enter a '1' to automatically call the Item Branch Program (P41026) when adding a new item number and return to the Item Master Screen. Enter a '2' to call the Item Branch program automatically and remain on the Item Branch Screen. If left blank, the Item Branch Program will not be called.

GLOBAL UPDATE:

7. Enter a '1' to transfer changes made to the 2nd (LITM) and the 3rd (AITM) item numbers to the Item Branch (F4102) item records.

(F19 from Item Master Revisions allows you to update other files).

or

- Enter a '2' to transfer changes to records in the selected files (see User Defined Codes 40/IC).

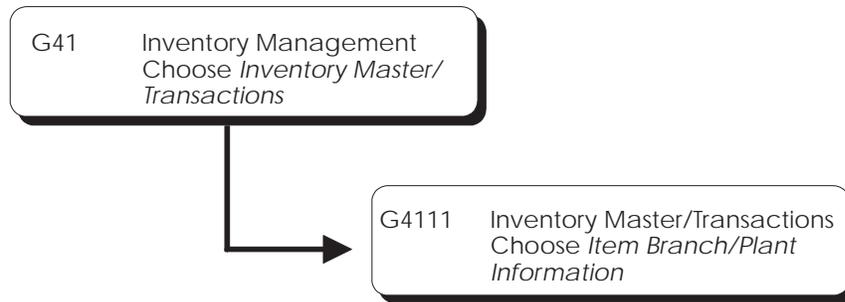
Press F1 to display the selected files.

DREAM WRITER VERSIONS:

Enter the version to be used for each program. If left blank, ZJDE0001 is used.

8. Item Availability (P41202)
9. Item Branch (P41026)

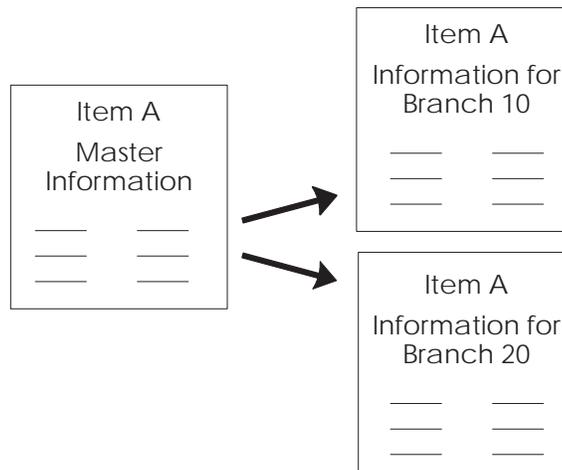
Enter Branch/Plant Information



Entering Branch/Plant Information

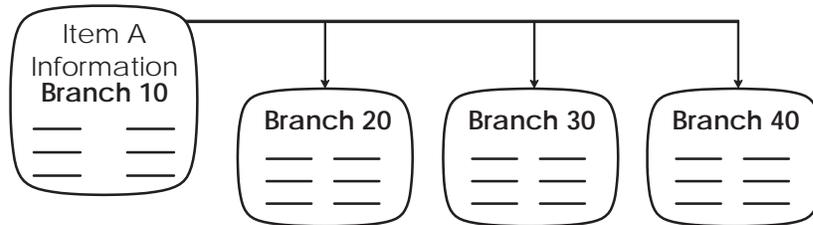
Information about an item might differ from warehouse to warehouse. For example, taxes might be applicable to an item in one warehouse but not in another. You might also have different quantity requirements for each item based on the warehouse.

After you add master information for an item, you can assign the item to different warehouses, or branch/plants. You can then customize the item master information for each branch/plant. You can also specify the locations in the branch/plant in which the item is stored.



The J.D. Edwards system applications that retrieve item information search for an item's branch/plant information before using an item's master information.

You can enter item information for one branch/plant at a time, or you can copy existing item information for a branch/plant and duplicate it for multiple branch/plants.



To enter item branch/plant information, you must complete some or all of the following tasks:

- Assign an item to a branch/plant
- Work with item locations
- Enter item tax information
- Assign item sources
- Enter item reorder quantities
- Enter item manufacturing information
- Duplicate item information across multiple branch/plants

Each time you enter item information for a specific branch/plant, the system creates a record in the Item Branch table (F4102).

What You Should Know About

Default values

Most fields on Item Branch/Plant Information are identical to those on Item Master Information. The system uses default values from Item Master Information. The only fields that do not exist on Item Master Information are:

- Branch/Plant
- Sales Taxable
- Purchasing Taxable
- Country of Origin
- Supplier
- Margin Maintenance (%)

Accessing other branch/plant information

Use processing options to specify that other item information forms display subsequent to Item Branch/Plant Information, such as Item/Location Information.

Assigning an Item to a Branch/Plant

After you enter master information for an item, you can assign the item to a specific branch/plant. After assigning the branch/plant, you can locate the item and branch/plant to customize the master information.

▶ To assign an item to a branch/plant

On Item Branch/Plant Information

Branch/Plant: 30

Item Number: TS001 Issel Pump Court Shoes

Stocking Type: S Line Type:

G/L Class: IN30

Item Price Group: Sales Taxable: Y

Basket Reprice Group: Purchasing Taxable: Y

Order Reprice Group:

Backorders Allowed: Y Serial No. Required: N

Check Availability Y/N: Y Lot Status Code:

Shelf Life Days: Lot Process Type:

ABC Codes: B - A - C Commitment Method: I

Margin Maintenance (%):

Country of Origin: USA

Planner Number:

Buyer Number:

Supplier: 4343 Vector Manufacturing Co

Print Message:

F5=Codes F6=Cost F9=Price F10=Manufacturing F15=Bulk Info F24=Keys MW

Complete the following fields:

- Branch/Plant
- Item Number

▶ To assign an item to a branch/plant

On Item Branch/Plant Information

Complete the following fields:

- Branch/Plant
- Item Number

Working with Item Locations

After you assign an item to a branch/plant, you can indicate multiple locations in which the item resides. For each branch/plant, you can assign:

- One primary location
- Multiple secondary locations

The system usually processes an item through its primary location. For example, when you receive an item, the system assigns the item to its primary location unless you specify a secondary location.

The system prompts you for a primary location immediately after you assign an item to a branch/plant. You can assign secondary locations to an item when you enter branch/plant information. The system assigns secondary locations for you if you enter a new location for an item when you receive it.

If you specify Location Control in Branch/Plant Constants, you can assign an item to only those locations set up on Branch/Plant Location Master. If you do not specify Location Control, you can assign an item to any location.

Each time you assign a location for an item, the system creates a record in the Item Location table (F41021).

In addition to assigning locations to an item and branch/plant, you can assign multiple lot numbers to each location. You can enter lot numbers manually when you enter item locations, or you can assign lot numbers to items upon receipt.

To work with item locations, you can:

- Assign a primary location to an item
- Change the primary location for an item
- Assign secondary locations to an item

See Also

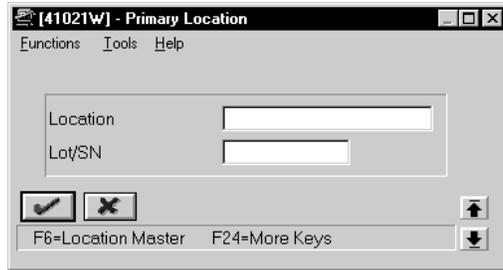
- *Creating Lots (P4108)* in the *Inventory Management Guide* for information about defining lot details
- *Working With Lot Statuses (P4108)* in the *Inventory Management Guide* for information about putting lots and locations on hold
- *Creating Lots* in the *Inventory Management Guide* for information about defining lot details
- *Working With Lot Statuses* in the *Inventory Management Guide* for information about putting lots and locations on hold



To assign a primary location to an item

On Item Branch/Plant Information

1. Assign a branch/plant to an item.
2. Choose Primary Location.



3. On Primary Location, complete the following fields:
 - Location
 - Lot/Serial Number

▶ To assign a primary location to an item

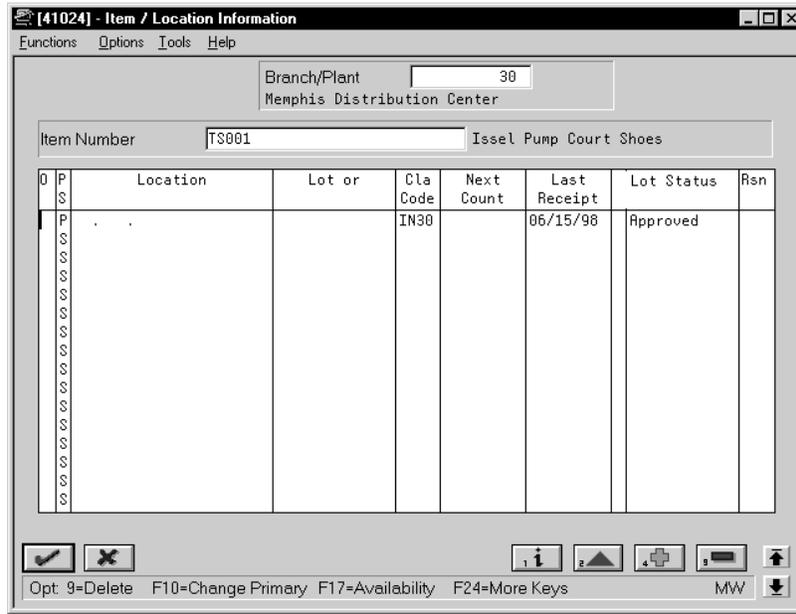
On Item Branch/Plant Information

1. Assign a branch/plant to an item.
2. Access Primary Location.
3. On Primary Location, complete the following fields:
 - Location
 - Lot/SN

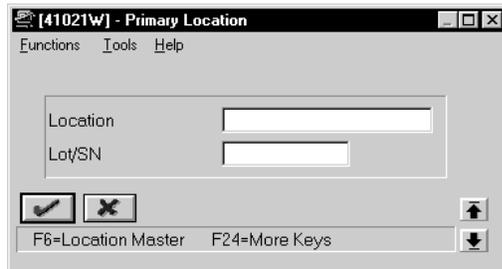
► **To change the primary location for an item**

On Item Branch/Plant Information

1. Choose Item/Location Information.



2. On Item/Location Information, identify the primary (P) location for the item in the following field:
 - Primary/Secondary
3. Choose Primary Location.



4. On Primary Location, complete the following fields:
 - Location
 - Lot
5. Return to Item/Location Information.
6. Identify the new primary location for the item in the following field:

2. On Item/Location Information, identify the secondary (S) locations for an item in the following field:
 - Primary/Secondary
3. Complete the following fields for each secondary location and lot:
 - Location
 - Lot
 - Lot Status

▶ **To assign secondary locations to an item**

On Item Branch/Plant Information

1. Access Item/Location Information.
2. On Item/Location Information, identify the secondary (S) locations for an item in the following field:
 - P/S
3. Complete the following fields for each secondary location and lot:
 - Location
 - Lot
 - Lot Status

What You Should Know About

Changing a primary location

If you change an item's primary location and any of the following quantities exist, the system transfers the quantities to the new primary location:

- Quantity on backorder
- Quantity on purchase order
- Quantity on purchase order – other
- Quantity on work order receipt
- Quantity on soft commit

When you change the primary location for an item, the previous primary location becomes a secondary location.

Deleting a primary location

To delete a primary location, you must first change it to a secondary location. No quantities can exist in the locations you delete.

Entering Item Tax Information

You must specify whether an item is subject to tax for the system to calculate taxes for purchases and sales. You specify tax information for an item when you enter branch/plant information.

► **To enter tax information**

On Item Branch/Plant Information

Complete the following fields:

- Sales Taxable
- Purchasing Taxable

Field	Explanation
Sales Taxable	A code that indicates whether the item is subject to sales tax when you sell it. The system calculates tax on the item only if the customer is also taxable.
Purchasing Taxable	A code that indicates whether the item is subject to sales tax when you purchase it. The system calculates tax on the item only if the supplier is also taxable.

▶ To enter tax information

On Item Branch/Plant Information

Complete the following fields:

- Sales Taxable
- Purchasing Taxable

Field	Explanation
Sales Taxable	A code that indicates whether the item is subject to sales tax when you sell it. The system calculates tax on the item only if the customer is also taxable.
Purchasing Taxable	A code that indicates whether the item is subject to sales tax when you purchase it. The system calculates tax on the item only if the supplier is also taxable.

Assigning Item Sources

You can assign the country in which an item originates and the preferred supplier for an item. Identifying these sources allows you to distinguish items based on a country or supplier. You enter this information when you enter branch/plant information for an item.

The screenshot shows the 'Item Branch/Plant Information' window for item TS001. The window title is '[41026] - Item Branch/Plant Information'. The 'Branch/Plant' field is set to 30. The 'Item Number' is TS001, and the item name is 'Issel Pump Court Shoes'. The 'Stocking Type' is S, and the 'G/L Class' is IN30. The 'Line Type' checkbox is unchecked. The 'Item Price Group', 'Basket Reprice Group', and 'Order Reprice Group' fields are empty. The 'Sales Taxable' and 'Purchasing Taxable' checkboxes are checked. The 'Backorders Allowed' checkbox is checked, and 'Check Availability Y/N' is also checked. The 'Shelf Life Days' field is empty. The 'ABC Codes' are B - A - C. The 'Margin Maintenance (%)' field is empty. The 'Country of Origin' is USA. The 'Planner Number', 'Buyer Number', and 'Supplier' (4343) fields are empty. The 'Print Message' field is empty. The status bar at the bottom shows function keys: F5=Codes, F6=Cost, F9=Price, F10=Manufacturing, F15=Bulk Info, F24=Keys, and MW.

▶ **To assign item sources**

On Item Branch/Plant Information

Complete the following fields:

- Country of Origin
- Supplier

▶ **To assign item sources**

On Item Branch/Plant Information

Complete the following fields:

- Country of Origin
- Supplier

Entering Item Reorder Quantities

You can specify the minimum, maximum, and normal reorder quantities for an item when you enter branch/plant information. You can also specify the level of stock at which reordering takes place.

The screenshot shows a software window titled "[41026] - Item Branch/Plant Information". The window contains several input fields and checkboxes for configuring an item. The "Branch/Plant" field is set to "30". The "Item Number" is "TS001" and the item name is "Issel Pump Court Shoes". The "Stocking Type" is "S" and "Line Type" is unchecked. "G/L Class" is "IN30". "Item Price Group", "Basket Reprice Group", and "Order Reprice Group" are empty. "Sales Taxable" and "Purchasing Taxable" are checked. "Backorders Allowed" and "Check Availability Y/N" are checked. "Serial No. Required" is unchecked. "Shelf Life Days", "Lot Status Code", and "Lot Process Type" are empty. "ABC Codes" are "B - A - C" and "Commitment Method" is "I". "Margin Maintenance (%)" is empty. "Country of Origin" is "USA". "Planner Number", "Buyer Number", and "Supplier" (4343) are empty. The supplier name is "Vector Manufacturing Co". There are several icons at the bottom of the window, including a checkmark, an X, an information icon, a printer, a plus sign, a minus sign, and a refresh icon. The status bar at the bottom shows "F5=Codes F6=Cost F9=Price F10=Manufacturing F15=Bulk Info F24=Keys MW".

► **To enter reorder quantities**

On Item Branch/Plant Information

1. Choose Item Branch Quantities.

The screenshot shows a SAP window titled "[41022] - Item Branch Quantities". The window contains the following fields and controls:

- Branch/Plant: 30
- Item Number: TS001 (Issel Pump Court Shoes)
- Reorder Quantity: []
- Maximum Reorder Qty: []
- Minimum Reorder Qty: []
- Reorder Point: []
- Multiple Order Qty: []
- Units Per Container: []
- Safety Stock: []

At the bottom of the window, there are navigation icons and keyboard shortcuts: F3=Exit, F12=Previous, F24=More Keys, and MW.

2. On Item Branch Quantities, complete the following fields:

- Reorder Quantity
- Maximum Reorder Quantity
- Minimum Reorder Quantity
- Reorder Point
- Multiple Order Quantity
- Units Per Container
- Safety Stock

► **To enter reorder quantities**

On Item Branch/Plant Information

1. Access Item Branch Quantities.
2. On Item Branch Quantities, complete the following fields:
 - Reorder Quantity

- Maximum Reorder Quantity
- Minimum Reorder Quantity
- Reorder Point
- Multiple Order Quantity
- Units Per Container
- Safety Stock

Entering Item Manufacturing Information

Entering Manufacturing Information for Planning

You can define manufacturing information for an item that is specific to each branch/plant, including:

Requirements planning information You enter information about inventory shrinkage for the item so that you can plan for the quantity you need to replace due to shrinkage.

Leadtime information You can enter information about the time you plan to spend setting up production for an item, and the time that the item remains in the work queue before being processed. This information allows you to plan for the production of an item.

Engineering information You can enter reference information about engineering change orders so that you can refer back to the information, when necessary.

Complete the following tasks:

- Enter DRP, MPS, and MRP information
- Enter leadtime information
- Enter engineering information

What You Should Know About

Default values

Most fields on Plant Manufacturing Data are identical to those on Manufacturing Values Entry, which you access from Item Master Information. The system uses default values from Manufacturing Values Entry.

► To enter DRP, MPS, and MRP information

On Item Branch/Plant Information

1. Choose Plant Manufacturing Data.
2. On Plant Manufacturing Data, complete the following fields:
 - Shrink Factor
 - Shrink Factor Method

▶ **To enter DRP, MPS, and MRP information**

On Item Branch/Plant Information

1. Access Plant Manufacturing Data.
2. On Plant Manufacturing Data, complete the following fields:
 - Shrink Factor
 - Shrink Factor Method

▶ **To enter leadtime information**

On Item Branch/Plant Information

1. Choose Plant Manufacturing Data.
2. On Plant Manufacturing Data, complete the following fields:
 - Time Basis
 - Queue Hours
 - Standard Setup Hours

▶ **To enter leadtime information**

On Item Branch/Plant Information

1. Access Plant Manufacturing Data.
2. On Plant Manufacturing Data, complete the following fields:
 - Time Basis
 - Queue Hours
 - Standard Setup Hours

▶ **To enter engineering information**

On Item Branch/Plant Information

1. Choose Plant Manufacturing Data.
2. On Plant Manufacturing Data, complete the following fields:
 - ECO Reason
 - ECO Number

- ECO Date
- Item Revision Level

▶ **To enter engineering information**

On Item Branch/Plant Information

1. Access Plant Manufacturing Data.
2. On Plant Manufacturing Data, complete the following fields:
 - ECO Reason
 - ECO Number
 - ECO Date
 - Item Revision Level

Processing Options for Item Branch Information – Revisions

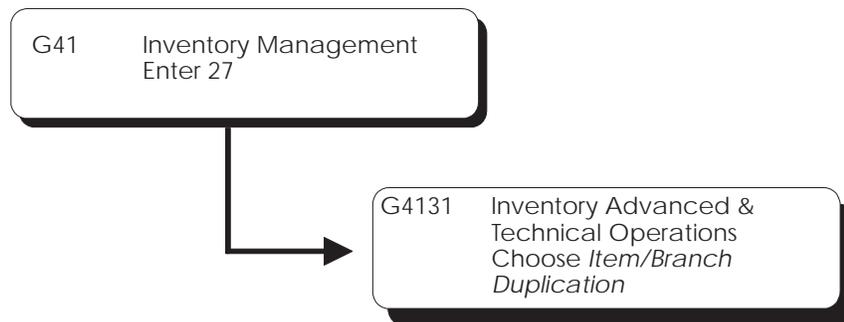
PROCESS CONTROL:

1. Enter a '1' to select the Item
Balance information screens to automatically call when performing an add or a change. If left blank, screen will not display.
 - Classification Codes. _____
 - Cost Revisions (conditional). _____
 - Price Revisions (conditional) _____
 - Unit of Measure _____
 - Quantities. _____
 - Manufacturing Values. _____
 - Item Profile. _____
 - Bulk Product Information. _____
2. Enter a '1' to use the window version of the screens selected above. If left blank, the full screen versions will be displayed. _____

DREAM WRITER VERSIONS:

3. Summary Availability (P41202) _____
4. Item / Location Information (P41024) _____
5. Test / Specification Revisions (P3710) _____

Duplicating Item Information across Multiple Branch/Plants



You might have items for which the same information applies across multiple branch/plants. You can enter item information for one branch/plant and then duplicate that information to up to ten other branch/plants using one of the following methods:

- Use Item Branch Duplication to select individual items for duplication
- Use the Item Branch Duplication DREAM Writer program to define criteria for items you want to duplicate

For both batch procedures, you use processing options to specify the branches for which you are duplicating information. You can also specify additional information to duplicate, such as costs, prices, units of measure, and so on.

If you use Item Branch Duplication to select individual items for duplication, you can set processing options to display up to four search fields that allow you to locate items for a particular branch/plant.

▶ **To duplicate item information across multiple branch/plants**

On Item/Branch Duplication

Item	Description
TS001	Issel Pump Court Shoes
TS002	Rir-Shaq Children's X-Trainer
TV001	Serial Number Required
V001	Natureway High Energy Vitamins
V002	Natureway High Energy Vitamins
WHEELPS	Professional Sport Wheels
WHEELS	Superwides Wheel Set
WHEELS01	Superwides Wheel Set
WHEELS02	Superwides Wheel Set
WHEELS03	Superwides Wheel Set
WHEELS04	Superwides Wheel Set
WHEELS05	Superwides Wheel Set
WHEELS06	Superwides Wheel Set
WHEELS07	Superwides Wheel Set
WHEELS08	Superwides Wheel Set

1. To specify the branch/plant from which you are duplicating information, complete the following field:
 - Branch Plant
2. Enter search criteria to locate the appropriate items.
3. Select the appropriate items.
4. Exit the form to activate the batch job.

► **To duplicate item information across multiple branch/plants**

On Item/Branch Duplication

1. To specify the branch/plant from which you are duplicating information, complete the following field:
 - Branch Plant
2. Enter search criteria to locate the appropriate items.
3. Select the appropriate items.
4. Exit the screen to activate the batch job.

What You Should Know About

Primary locations The system does not duplicate the primary location for an item. The system uses the blank location set up for the duplicated branch/plant.

For information about blank locations for branch/plants see *Setting Up Warehouse Locations*.

Deleting item branch/plant information You cannot delete a branch/plant record until all associated balances are equal to zero. The system will not accept the deletion until you resolve all on-hand balances, backordered quantities, and commitments.

Processing Options for Item/Branch Duplication

DEFAULT VALUES:

1. Enter the branch/plants to which you want to duplicate the items:

1)	_____
2)	_____
3)	_____
4)	_____
5)	_____
6)	_____
7)	_____
8)	_____
9)	_____
10)	_____

SCREEN DEFAULTS:

2. Enter the data selection fields you want displayed on the video (Enter the data dictionary field name.):

Data Item One	_____
Data Item Two	_____
Data Item Three	_____
Data Item Four	_____
3. Enter a '1' to pre-load all selection options with a '1' to duplicate those lines. _____

FILE UPDATES:

4. Enter a '1' next to each file to duplicate. If left blank, the file will not be duplicated:

Cost Ledger File	(F4105)	_____
Base Price File	(F4106)	_____
UOM Conversion Factors	(F41002)	_____
Bulk Depot/Product Info.	(F41022)	_____
Warehouse Item Profile	(F46010)	_____
Warehouse Item UOM/Profile	(F46011)	_____

Processing Options for Item/Branch Duplication-Batch Selection

UPDATE OPTIONS:

1. Enter the branch/plants to which you want to duplicate the items:

1)	_____
2)	_____
3)	_____
4)	_____
5)	_____
6)	_____
7)	_____
8)	_____
9)	_____
10)	_____

2. Enter a '1' next to each file to duplicate. If left blank, the file will not be duplicated.

Cost Ledger File	(F4105)	_____
Base Price File	(F4106)	_____
UOM Conversion Factors	(F41002)	_____
Bulk Depot/Product Info.	(F41022)	_____
Warehouse Item Profile	(F46010)	_____
Warehouse Item/UOM Profile	(F46011)	_____

Forecasting Review



Forecasting Review

Objectives

- To understand the forecasting process
- To understand how forecasting is integrated into the Manufacturing and Distribution Planning system
- To understand the forecasting methods
- To generate, review, and revise detail forecasts

About Forecasting

Effective management of your distribution and manufacturing activities begins with understanding and anticipating the needs of the market. The J.D. Edwards Forecasting system allows you to balance supply and demand by quickly assessing current market trends and sales so that you can make informed decisions about your company.

Demand forecasts project trends and patterns that exist in sales history data. Accurate forecasts help you make planning decisions. For this reason, forecasting should be a central activity in your operations. Detail forecasts project demand at the end-item level, so that they are appropriate to use as input into planning and scheduling systems.

You can use forecasts to support decisions about:

- Customer orders
- Inventory
- Delivery of goods
- Work load
- Capacity requirements
 - Warehouse space
 - Labor
 - Equipment
- Budgets
- Development of new products

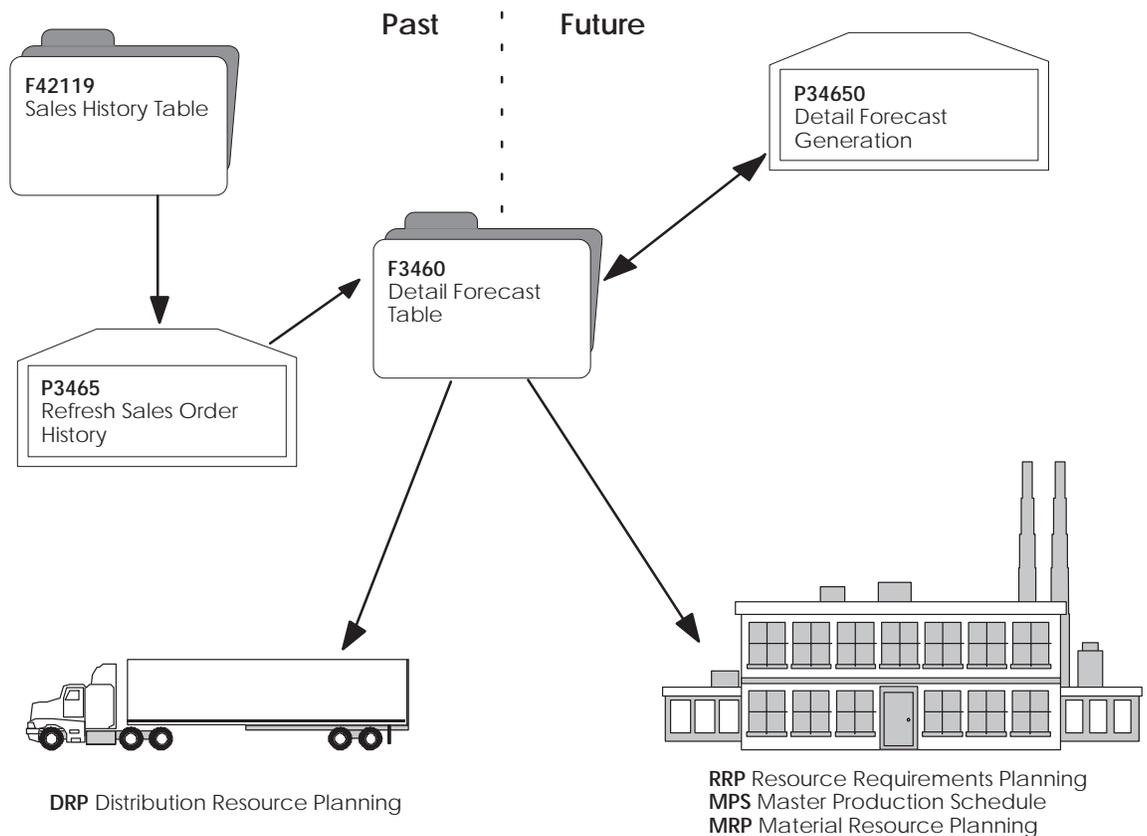


- Workforce requirements
- Fiscal date patterns

What Is the Forecasting Process?

You use the Extract Sales Order History program to copy data from the Sales History table (F42119) into the Detail Forecast table (F3460). You can generate detail forecasts that are based on data in the Detail Forecast table. You can use data from your forecasts to revise the forecast tables, and you can generate new forecasts based on the revised data. When you have made all the appropriate adjustments to the forecast data, you can use it as input into the Manufacturing and Distribution Planning system.

The process is illustrated in the following graphic.



How Do Forecasts Work with the Master Schedule?

The Forecasting system generates sales projections that can be used as input for J.D. Edwards' Manufacturing and Distribution Planning system. This system calculates material requirements for all component levels, from raw materials to complex subassemblies.

You can perform extensive "what if" changes to the initial forecast, which allows you to easily compare different situations. After you accept a forecast, the system updates your distribution and manufacturing plan with any changes you have made.

Resource Requirements Planning (RRP)

This system uses a forecast of future sales to estimate the time and resources that are needed to make product families in the strategic plan.

Master Production Schedule Scheduling (MPS)

This system plans and schedules the items and quantities a company expects to manufacture. Data from the Forecasting system is one MPS input that helps determine demand before production plans are executed.

Material Requirements Planning (MRP)

This is an ordering and scheduling system that explodes the requirements of all MPS parent items to the components. You can also use forecast data as demand input for lower-level MRP components that are service parts with independent demand (demand that is not directly or exclusively tied to sales of a particular product at a particular branch/plant).

Distribution Requirements Planning (DRP)

This is a management system that plans and controls the distribution of finished goods. Forecasting data can be used as input for DRP so that you can more accurately plan the demand that you supply through distribution.

What Are the Forecasting Methods?

The Forecasting system allows you to select from 10 methods for quantitative forecasting. The system also indicates which of the methods provides the best fit for your forecasting situation. can also determine which of the methods provides the best fit for your forecasting situation.

**Method 1 –
Percent Over Last Year**

This method uses the Percent Over Last Year formula to multiply each forecast month by a percentage increase or decrease that you specify in a processing option. This method requires at least 15 months of sales order history and is recommended for seasonal items with growth or decline.

**Method 2 –
Calculated Percent Over
Last Year**

This method uses the Calculated Percent Over Last Year formula to compare the most recent three months of past sales to the same three months of past sales of the previous year and determines a percentage increase or decrease. Then, the system multiplies each month by the percentage to determine the forecast.

This method requires 18 months of sales history and is recommended for short-term demand forecasts of seasonal items with growth or decline.

**Method 3 –
Last Year to This Year**

This method uses last year's sales for the following year's forecast. This method requires 15 months of sales history and is recommended for mature products with level demand or seasonal demand without a trend.

**Method 4 –
Moving Average**

This method uses the Moving Average Formula to average the previous three months to project the next month. This method requires six months of sales order history. You should have the system recalculate it monthly or at least quarterly to reflect changing demand level. This method is recommended for mature products without a trend.

**Method 5 –
Linear Approximation**

This method uses the Linear Approximation formula to compute a trend from the last three months of sales order history and projects this trend to the forecast. You should have the system recalculate the trend monthly to detect changes in trends.

This method requires six months of sales order history and is recommended for new products or products with consistent positive or negative trends that are not due to seasonal fluctuations.

**Method 6 –
Second Degree
Approximation**

This method uses the Second Degree Approximation formula to plot a curve based on the previous nine periods of sales to project 3-month blocks of forecast. This method requires 12 months of sales order history and is recommended for short-term forecasts.

**Method 7 –
Flexible Method
(Percent Over n Months
Prior**

The Flexible Method allows you to select a three-month block of sales order history starting n months prior and a percentage increase or decrease with which to modify it. This method is similar to Method 1, Percent Over Last Year, except that you can specify the three-month block used as the base.

Depending on what you select as n , this method requires 6 to 18 months of sales data and is recommended for a planned trend.

**Method 8 –
Weighted Moving
Average**

The Weighted Moving Average is similar to Method 4, Moving Average formula, because it averages the previous three months to project the next month's block. However, with this formula, you can assign weights for each of the three prior blocks in a processing option.

This method requires six months of sales data. Similar to Moving Average, this method lags demand trends, so it is not recommended for products with strong trends or seasonality. This method is recommended for mature products with demand that is relatively level.

**Method 9 –
Exponential Smoothing
with Moving Weight**

This method calculates a weighted average of past sales data. You can specify the number of months of sales history to use in the calculation (from 1 to 12) in a processing option. The system uses a mathematical progression to weight each month in the range from the first (least weight) to the final (most weight). Then, the system projects this information to each month in the forecast.

Depending on the number of months of sales history that are used in the calculation, this method requires 6 to 15 months of sales data.

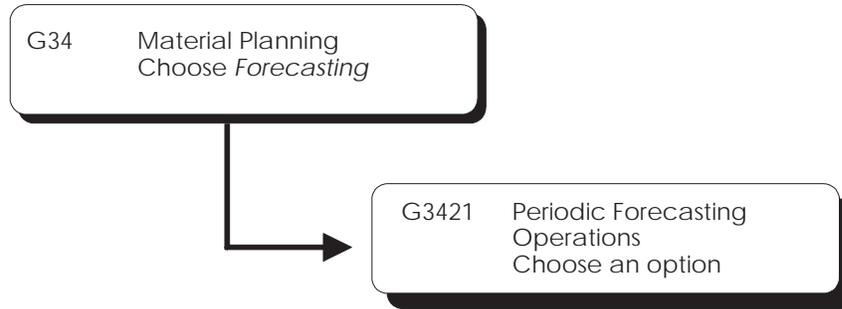
**Method 10 –
Exponential Smoothing
2 with Seasonality**

The Exponential Smoothing 2 with Seasonality method calculates a trend, a seasonal index, and an exponentially smoothed average from the sales order history. The system then applies a projection of the trend to the forecast and adjusts for the seasonal index. This method requires 24 months of sales data and is recommended for items that have both trend and seasonality in the forecast.

See Also

- *Forecasting Overview* in the *Forecasting Guide*

Work with Detail Forecasts



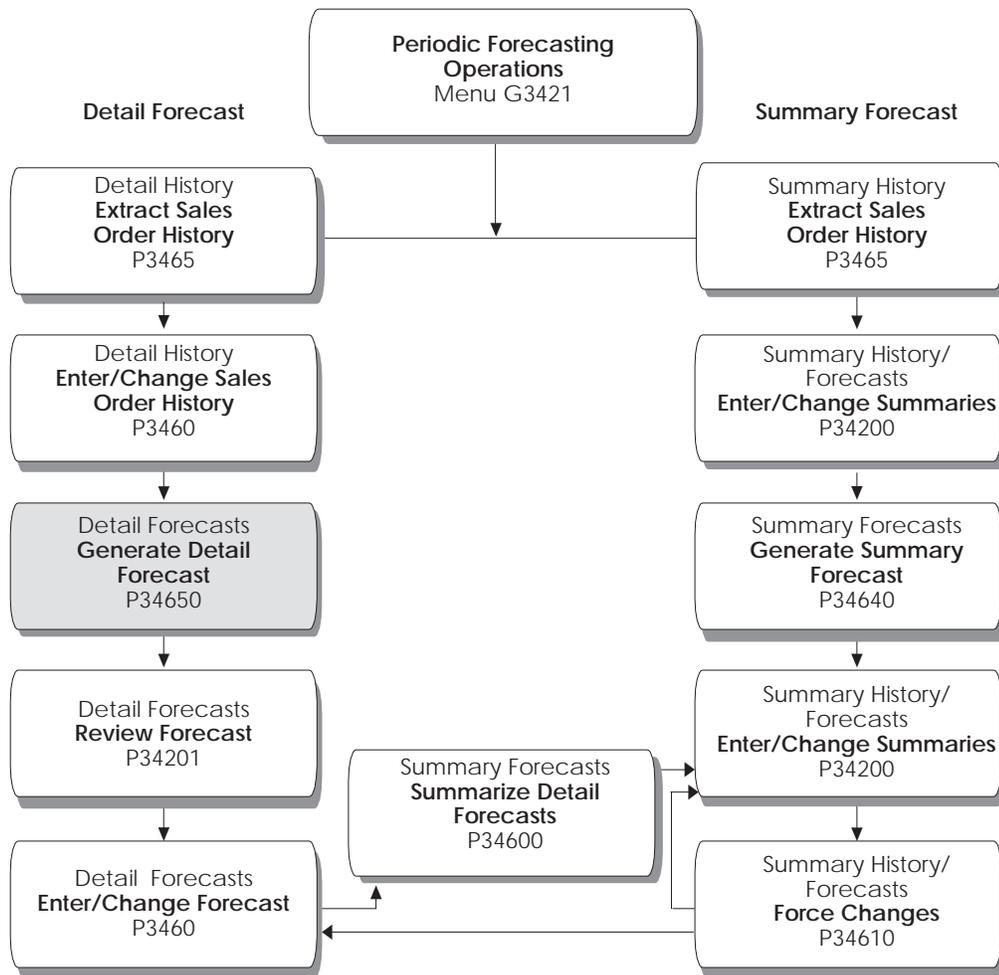
Working with Detail Forecasts

Because you use detail forecasts to project demand at the single-item level according to each item's individual history, detail forecasts are used as input to the Manufacturing and Distribution Planning system.

After you have set up the actual sales history on which you plan to base your forecast, you generate the detail forecast. You can then revise the forecast to account for any market trends or strategies that might make future sales deviate significantly from the actual sales history.

Working with detail forecasts includes the following tasks:

- Generating detail forecasts
- Reviewing detail forecasts
- Revising detail forecasts



Generating Detail Forecasts

Generate Detail Forecast is a DREAM Writer program that applies up to 10 forecasting methods to generate a forecast based on the method that provides the most accurate prediction of recent demand. The program can also calculate a forecast based on any selected method.

When you run Generate Detail Forecast, the system:

- Extracts sales order history information from the Detail Forecast table
- Calculates the forecasts using methods you selected
- Determines the percent of accuracy for each selected forecast method
 - Generates a simulated forecast for the past three months
 - Divides this simulated forecast for the past three months by the sales order history for the same time period
- Recommends the best fit forecast method

- Generates the detail forecast from the best fit forecast

The system designates the extracted actual records as type AA and the best fit model as BF. (The codes for these forecast types are not hard-coded, so you can specify your own codes.) The system stores both types of records in the Detail Forecast table. The system doesn't automatically save the other forecast types 01 through 10 unless you set the processing options to do so.

Processing Options for Forecast Generation

FORECASTING METHODS:

Enter a '1' by the Methods desired.

- | | |
|--------------------------------------|-------|
| 1. Percent Over Last Year | _____ |
| Enter the percentage increase | _____ |
| over last year (eg. 1.10 for | |
| a 10% increase, 0.97 for a 3% | |
| decrease). | |
| 2. Calculated Percent Over Last Year | _____ |
| 3. Last Year to This Year | _____ |
| 4. Moving Average | _____ |
| 5. Linear Approximation | _____ |
| 6. Second Degree Approximation | _____ |
| 7. Flexible Method (Percent over | _____ |
| N months prior.) | |
| Enter the no. of months prior. | _____ |
| Enter the percent over the | _____ |
| prior months. | |
| 8. Weighted Moving Average | _____ |
| Enter the weight for one | _____ |
| period prior. | |
| Enter the weight for two | _____ |
| periods prior. | |
| Enter the weight for three | _____ |
| periods prior. | |
| (The weights must add up to 1 | |
| eg. .6, .3 and .1) | |
| 9. Exponential Smoothing with | _____ |
| Moving Weight. | |
| Enter the number of months N | _____ |
| 10. Exponential Smoothing with | _____ |
| Trend and Seasonality factors. | |

RECORD TYPES TO USE:

- | | |
|--------------------------------------|-------|
| 11. Enter the 'Actual Type' in which | _____ |
| the actual information is stored. | |
| 12. Enter the Forecast Type to use | _____ |
| when creating forecasts. | |

SUMMARY RECORDS:

- | | |
|-----------------------------------|-------|
| 13. Enter a '1' to create summary | _____ |
| records for large customers. | |
| (ABC type = 'A'.) | |

FORECAST TYPE AND RANGE:

- | | |
|---------------------------------------|-------|
| 14. Enter a '1' to specify weekly | _____ |
| forecasts. (Default is monthly.) | |
| 15. Enter the date to start forecasts | _____ |
| (Default will be Today's Date.) | |

16. Enter the number of periods to forecast. (Blanks will default to 3 Periods. Maximum of one year eg. 12 Months or 52 Weeks.) _____

FISCAL DATE PATTERN:

17. Enter the Fiscal Date Pattern Type to use for forecast dating. If left blank, the type specified for company '00000' will be used. (See Company Names-Fiscal Patterns 'P00105' for more information). _____

FORECAST AMOUNTS/QUANTITIES

18. Enter a '1' to forecast using amounts. A default of blanks will forecast using quantities. _____

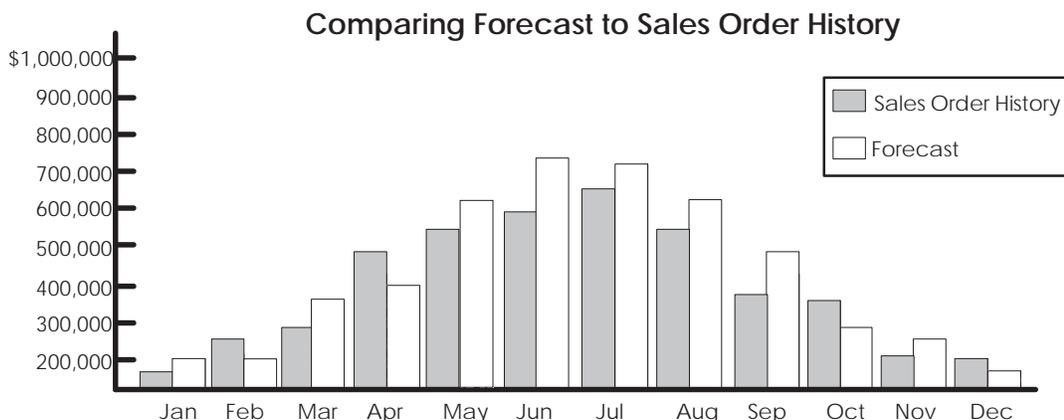
What You Should Know About Processing Options

Saving records for forecast types 01 to 10 to the Detail Forecast table (F3460)

To save records for any of the forecast types to the Detail Forecast table, enter the corresponding number in the processing options (01 for type 01, 04 for type 04, and so forth). To include any forecast types in a best fit calculation *without* saving the records, enter 1 (without the 0 preceding it) in the processing options for each type that you want to include.

Reviewing Detail Forecasts

Use Review Forecast to compare the actual sales to the detail forecast. The system displays the forecast values and actual quantities or sales order extended price for an item for the year that you specify.

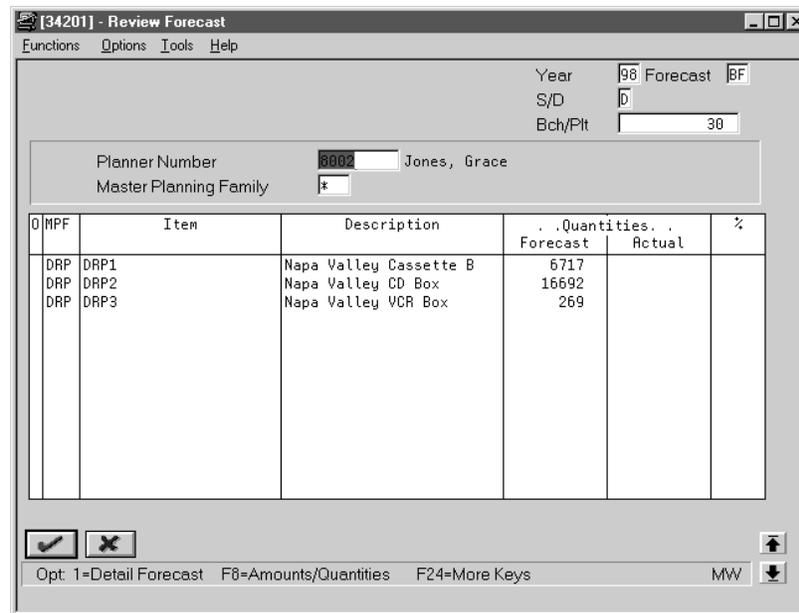


You can display information by planner, master planning family, or both. You can then change the forecast type to compare different forecasts to the actual demand. You can also:

- Display the data in summary or detail mode. Detail mode lists all item numbers. Summary mode consolidates data by master planning family.
- Display all information that is stored in the Detail Forecast table.
- Choose between quantities and amounts to review.

▶ **To review a detail forecast**

On Review Forecast



1. Complete the following fields:
 - Year
 - Forecast Type
 - Branch/Plant
2. Complete one of the following fields:
 - Master Planning Family
 - Planner Number
3. Review the following fields:
 - Quantities Forecast
 - Quantities Sales Order History

- Percent
4. Access the amounts fields.
 5. Review the following fields:
 - Amounts Forecast
 - Amounts Sales Order History
 6. To display data in detail mode, enter 2 on an item line.

Field	Explanation
Year – Calendar Year	The calendar year.
Forecast Type	<p>A code from the user defined code table 34/DF indicating either:</p> <ul style="list-style-type: none"> • The forecasting method used to calculate the numbers displayed about the item • The actual historical information about the item
Master Planning Family	<p>A code (table 41/P4) that represents an item property type or classification, such as commodity type, planning family, or so forth. The system uses this code to sort and process like items.</p> <p>This field is one of six classification categories available primarily for purchasing purposes.</p>
Planner Number	<p>The address number of the material planner for this item.</p> <p>..... <i>Form-specific information</i></p> <p>You can use this field, along with the Master Planning Family and Year fields, to display specific forecast items. For example, you can show items within a planning family that were forecasted by a specific planner for a specific year.</p>
Quantity – Forecast	The quantity of units forecasted for production during a planning period.
Quantity – Sales Order History	<p>The quantity of units affected by this transaction.</p> <p>..... <i>Form-specific information</i></p> <p>The quantity of units in the sales order history on which a forecast is based.</p>
Percent	<p>In costing, the percent difference between the frozen cost and the simulated cost.</p> <p>In forecasting, the percent of the forecast that has been consumed by actual sales.</p>
Amount – Forecast	The current amount of the forecasted units for a planning period.

Field	Explanation
Amount – Sales Order History	The number of units multiplied by the unit price. <i>..... Form-specific information</i> The original dollar amount of the sales order history on which a forecast is based.

Processing Options for Forecast Review

1. Forecasts are driven by quantities.
 Enter a 1 if you would prefer to see amounts as the primary forecast. _____
2. You may have multiple concurrent forecasts. Enter the default forecast type _____
3. Enter the forecast type for displaying the actual quantities and amounts. _____

Revising Detail Forecasts

After you generate and review a forecast, you need to revise the forecast to account for changes in consumer trends, market conditions, competitors' activities, your own marketing strategies, and so on. When you revise a forecast, you can:

- Manually change information in an existing forecast
- Add a forecast
- Delete a forecast
- Enter descriptive text for the forecast

For example, you are having a sales promotion for a specific month. You can manually increase the forecast for that month and add a qualitative forecast for new items with no sales history.

In the following example, the forecast for the CD boxes has been increased for the week of 2/13/98 from 330 to 500 to accommodate the sales promotion.

[3460] - Enter/Change Forecast

Functions Tools Help

See Memo Bch/Plt 20

Forecast Type BF

U/M EA

Best Simulated Forecast

Item Number DRP2 Napa Valley CD Box

Skip to date

Fc Ty	Request Date	Quantity		Pass	Cust. No	Description
		Adjusted	Original			
BF	01/02/98	261	261	N		
BF	01/09/98	261	261	N		
BF	01/16/98	261	261	N		
BF	01/23/98	261	261	N		
BF	01/30/98	261	261	N		
BF	02/06/98	330	330	N		
BF	02/13/98	330	330	N		
BF	02/20/98	330	330	N		
BF	02/27/98	330	330	N		
BF	03/06/98	334	334	N		
BF	03/13/98	334	334	N		
BF	03/20/98	334	334	N		
BF	03/27/98	334	334	N		
BF	04/03/98	338	338	N		

F15=Amounts/Quantities F24=More Keys MW

You can access forecasts that you want to revise by item number, branch plant, forecast type, or any combination of these elements. If your forecast is extensive, you can specify a beginning request date to limit the display.

As you revise the forecast, verify that the following combination must be unique for each item number and branch record:

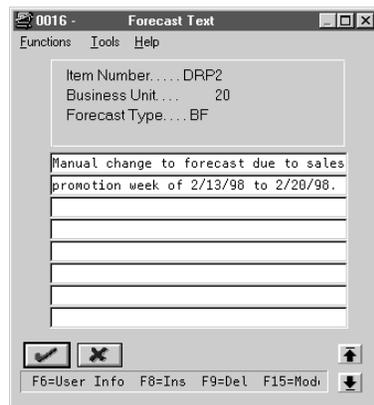
- Forecast type
- Request date
- Customer number

For example, if two records have the same request date and customer number, they must have different forecast types.

▶ **To revise a detail forecast**

On Enter/Change Forecast

1. To locate the forecast you want to revise, complete the following fields:
 - Branch/Plant
 - Forecast Type
 - U/M (Unit of Measure)
 - Item Number
2. Complete the following field:
 - Quantity Adjusted
3. Access amounts.
4. Revise the following field:
 - Amount Adjusted (F15)
5. To enter descriptive text, access Forecast Text.



Field	Explanation
Quantity – Adjusted	The quantity of units forecasted for production during a planning period.
Amount – Adjusted	The current amount of the forecasted units for a planning period.

Processing Options for Detail Forecast Maintenance

DEFAULT VALUES:

1. You may have multiple concurrent forecasts. Enter the default forecast type. _____
2. Enter a '1' to default the forecast type from the heading into the detail records on an add. _____

DISPLAY MODE:

3. The forecast is driven by quantities. Enter a '1' if you would prefer to see amounts as the primary forecast. _____



Exercises

See the exercises for this chapter.

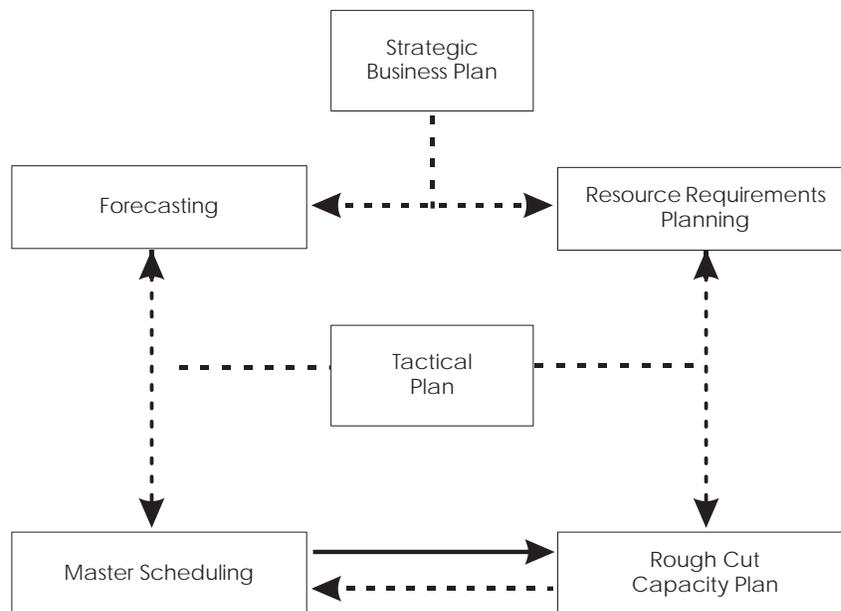
Resource Requirements Planning

Resource Requirements Planning

Objectives

- To create a profile of a work center's load that the system uses to validate a forecast
- To determine available capacity
- To determine long-range requirements for a work center
- To review the actual and planned load on work centers, either together (as a dispatch group) or individually
- To understand the different ways you can view actual and planned load information
- To set up Resource Requirements Planning (RRP)

About Resource Requirements Planning



You generate a resource requirements plan after you generate your long-term forecast, but before you run the Master Scheduling program. Resource Requirements Planning uses data from a forecast of future sales to estimate the time and resources that are required to make a product.



RRP can help you resolve long-range planning issues, such as:

- Expanding existing facilities
- Acquiring new facilities
- Staffing loads
- Determining capital expenditures for equipment

RRP enables you to support your company's strategic business plan with a realistic tactical plan that:

- Is shorter in range than the strategic plan and has a planning horizon of 12 months to 3 years
- Allows planning at the product family level and is in greater detail than the strategic plan
- Validates the monetary amounts allotted to the business plan as closely as possible

How Do You Use Demand Forecasting?

Demand forecasting is the logical starting point for developing a resource requirements plan. However, it is important to remember that the demand forecast is not the actual plan, but that you use it only as an input to the plan. Because you use the forecast in place of work orders, RRP provides an estimate of the time and resources that you will need to produce a product.

Manufacturing must determine whether the production plan is supportable as is or if additional future resource requirements are needed, such as:

- Additional skilled labor
- New machinery
- New facilities or additional real estate

What Factors Should You Consider?

You must consider the following factors when you generate the resource requirement plan:

- Include allowances for forecast error
- Use inventory to absorb fluctuations in demand and to level the work center load
- Weigh the cost of carrying inventory versus the cost of lost revenues if you are out of stock

Determining a Long-Range Capacity Plan

The Resource Requirements Planning program generates a capacity plan by critical work center. In order to answer long-range planning questions, you need to know your current capacity and the requirements to support the planned work load.

Complete the following tasks:

- Enter work centers
- Determine available capacity
- Determine long-range load
- Generate a resource requirements plan
- Review a resource requirements plan
- Set up a resource requirements plan

Entering work centers defines the work center as machine or labor-paced and whether it is a critical work center. You also specify other values, such as the percent efficiency and utilization of the work center and the crew.

After you estimate how much capacity you will need to produce a product, you must determine how much capacity you actually have. You determine a work center's available capacity on a given day by entering resource units.

Long-range load is an estimate of how many load hours are required to meet sales projections. To determine long-range load, the system uses resource profiles. The resource profile is a list of all work centers and their load requirements for a master scheduled item.

After you have entered resource units and resource profiles, you generate the resource requirements plan to obtain long-range estimates of the capacity needs at your work centers.

After you generate the resource requirements plan, the system creates a load profile that shows the load during each planning period for critical work centers. You can view this as a spreadsheet or as a graphical display. You can also review summaries of each period.

The system records resource requirements planning information in the following tables:

Resource Units (F3007) The Resource units table contains the available capacity for each work center by day, month, and year.

**Work Center Master
(F3006)**

The Work Center Master table contains detail data about all defined work centers.

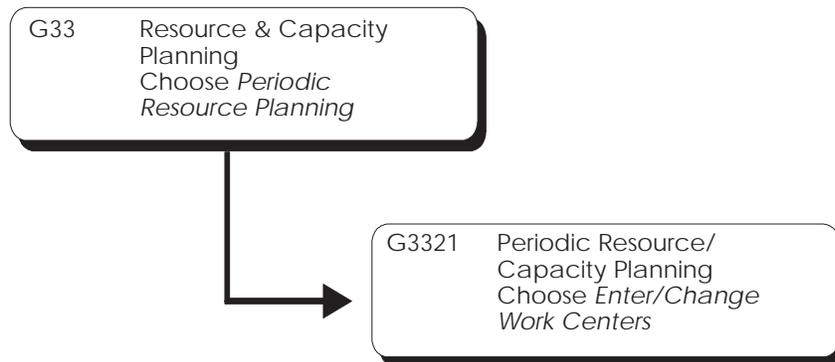
**Resource Profile
(F3303)**

The Resource Profile contains all resource profiles that are used in RRP.

Forecast (F3460)

The forecast table contains the forecast data that the resource requirements plan validates. It is also used as input for distribution requirements planning, material requirements planning, or the master production schedule.

Enter Work Centers



Entering Work Centers

Entering Work Centers for Resource Requirements Planning

Enter work center information that corresponds to the facilities on your shop floor. Entering work centers for RRP defines the work center as machine or labor-paced and whether it is a critical work center. You also specify other values, such as the percent efficiency and utilization of the work center and the crew.

You can also maintain general information about a work center, including:

- Pay points
- Prime load codes
- Number of machines and workers
- Crew size
- Backflush locations

Before You Begin

- Set up your work centers and dispatch groups as valid business units on the Single Business Unit Revisions form. See *Setting Up Business Units* in the *General Accounting I Guide*.

▶ To enter work centers

On Enter/Change Work Centers

1. Complete the following field:
 - Work Center
2. Complete the following optional fields:
 - Dispatch Group
 - Prime Load Code
 - Critical Work Center
 - Branch
 - Resource Offset
 - Efficiency
 - Utilization

Field	Explanation
Work Center	A number that identifies a branch, plant, work center, or business unit.

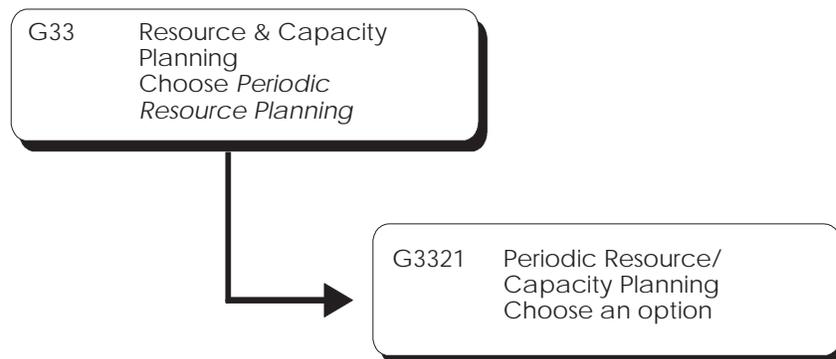
Field	Explanation
Dispatch Group – Work Centers	This is used as a super category code to group work centers within an overall business unit. For example, you can group like machines operating out of several work centers that report to one business unit under a dispatch group.
Prime Load Code	<p>This value determines if a work center is machine or labor intensive. These codes are also used in Resource Requirements Planning and Capacity Requirements Planning calculations to develop load profiles.</p> <p>Valid codes are:</p> <ul style="list-style-type: none"> L Run labor hours only M Machine hours only B Run labor plus setup labor hours C Machine plus setup hours O Other (will NOT generate resource units)
Critical Work Center	<p>This code identifies the work center as critical or not critical when the system calculates capacity. Valid values are:</p> <ul style="list-style-type: none"> N Not a critical work center 1 A critical work center in calculating resource requirement planning only 2 A critical work center in calculating capacity requirements planning only 3 A critical work center in calculating resource requirements planning and capacity requirements planning 4 Not a capacity work center (will not be generated in capacity planning) <p>Note: Type 3 work centers will be included in the form display whenever type 1 or type 2 is selected in this field.</p>
Branch	Represents a branch/plant or work center, usually defined as a business unit. The default value comes from the Default Location and Printers table.
Resource Offset	A value used in the Resource Profile table (F3303) to determine the number of days that the actual use of a work center resource should be offset from the forecasted need date.

Field	Explanation
Work Center Efficiency	<p>A user defined value that indicates how efficiently a work center operates. This value usually refers to people efficiency. When you enter a value in this field, and the Modify Cost by Work Center Efficiency field in the Job Shop Manufacturing Constants table (F3009) is set to Y, the system creates a new cost component (B4) from the cost calculated from the direct labor cost (B1). The system also uses this value to calculate rated capacity.</p> <p>Example: If the constant is set to Y, the value of this field is 80%, and the direct labor cost is 10, the system creates a B4 cost component for 2 in the Item Cost Component Add-Ons table (F30026).</p> <p>Enter percents as whole numbers, for example, enter 80% as 80.00.</p>
Work Center Utilization	<p>A percentage that indicates how intensively a work center is being used. This value usually refers to machine use. It is the ratio of the direct time charged for production activities to the planned hours. This value is also used to calculate rated capacity.</p> <p>Enter percents as whole numbers, for example, enter 80% as 80.00.</p>

On Enter/Change Work Centers

1. Complete the following field:
 - Work Center
2. Complete the following optional fields:
 - Dispatch Group
 - Prime Load Code
 - Critical Work Center
 - Branch
 - Resource Offset
 - Efficiency
 - Utilization

Determine Available Capacity



Determining Available Capacity

After estimating how much capacity you need to produce a product, you must determine how much capacity you actually have. You determine a work center's available capacity on a given day by entering resource units. The system uses this information to backschedule work orders in the Shop Floor Control system and to determine available hours for capacity planning.

You can either enter resource units manually or have the system generate the resource units. Enter units manually if you need to make adjustments. Use the Generate Resource Units program to automatically recalculate the work center hours. The system generates resource units based on hours (HR) unit of measure.

Complete the following tasks:

- Enter Resource Units Manually (optional)
- Generate resource units

Before You Begin

- Verify that work centers exist for all resource units that you enter. See *Entering Work Centers*.
- Set a default unit of measure in the processing options.

What You Should Know About

Using different units of measure You can assign resource units for different units of measure in different work centers. For example, you might want to estimate the square footage you need for storage of items as well as the hours needed to produce an item.

Entering Resource Units Manually

Enter resource units manually if you need to make adjustments. For example, you can make adjustments to account for machine downtime or employee vacations.

► **To enter resource units manually**

On Enter/Change Resource Units

The screenshot shows the 'Enter/Change Resource Units' window with the following data:

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

Below the calendar, there are four rows of 'Weekend' labels and '16.00' values. At the bottom, the 'Total Resource Units' field is set to 336.00, 'Efficiency' is 120.00, and 'Utilization' is 100.00.

1. Complete the following required field:
 - Work Center
2. Complete the following optional fields:
 - Unit of Measure
 - Efficiency

- Utilization
 - Daily Resource Units
3. Review the following field:
- Total Resource Units

Field	Explanation
Unit – Resource 01	<p>A value expressed in units, dollars, hours, floor space, and so on, that is used to calculate capacity.</p> <p>..... <i>Form-specific information</i></p> <p>On this form, the value appears as the quantity of units of measure, such as hours, allocated for the work center for this day on the Work Day Calendar. If the day has been set up as a weekend day or holiday, the field carries no value, but only the designation Weekend or Holiday instead.</p>
Total Resource Units	The total resource units for the month.

On Enter/Change Resource Units

1. Complete the following required field:
 - Work Center
2. Complete the following optional fields:
 - Unit of Measure
 - Efficiency
 - Utilization
 - Daily Resource Units
3. Review the following field:
 - Total Resource Units

What You Should Know About

Changing resource unit information You can change the values on the Enter/Change Resource Units form to account for scheduled or unscheduled downtime, additional shifts, or vacation time. However, each time you run Refresh Resource Units, the program recalculates the form values and overwrites your manual changes based on information in the Work Center Master table (F30006), the Shop Floor Calendar program, and the Manufacturing Constants table (F3009).

Processing Options for Work Center Resource Units Revisions

Enter the value to be defaulted into the following fields:

1. Unit of Measure: _____

Generating Resource Units

Run the Refresh Resource Units program to automatically recalculate the work center hours. You can view the results on Enter/Change Resource Units.

You should run this program whenever you revise the hours per day on the Manufacturing Constants, the number of machines, or the number of employees assigned to work centers. You can also run the program to define resource units for specific time periods.

The system recalculates the resource units for a work center based on the following information:

- Hours per day in the Work Center Master table (F30006)
- Shop Floor Calendar
- Manufacturing Constants table (F3009)



Any manual changes that you have made to the units on Enter/Change Resource Units will be overwritten when you run Refresh Resource Units.

WARNING: Any manual changes that you have made to the units on Enter/Change Resource Units will be overwritten when you run Refresh Resource Units.

Before You Begin

- Set up manufacturing constants. See *Setting up DRP/MPS*.
- Determine the branch/plants for which you want to generate resource units.
- Verify that a current shop calendar for the time period you specify is set up.

What You Should Know About

Resource unit calculations

The program uses the following resource unit calculation for machine-related hours:

- Prime load code = C or M
Number of machines x work hours per day

The program uses the following resource unit calculation for labor-related hours:

- Prime load code = L or B
Number of employees x work hours per day

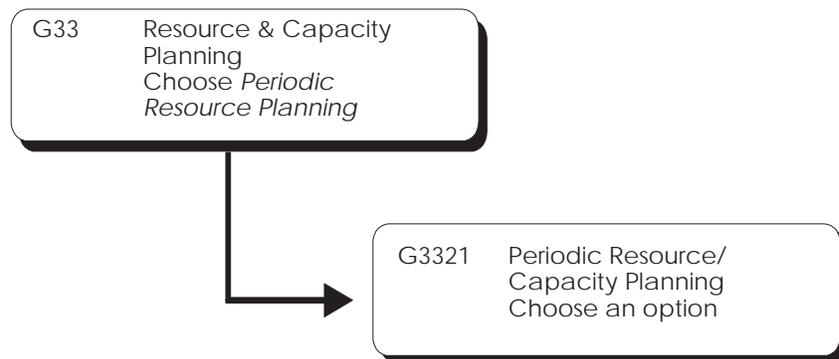
Processing Options for Work Center Resource Units Generation

Enter the "Start" date for the Resource Units generation process. _____

Enter the "End" date for the Resource Units generation process. _____

Enter the Branch/Plant to be processed. _____

Determine Long-Range Load



Determining Long-Range Load

Long-range load is an estimate of how many load hours are required to meet sales projections. To determine long-range load, the system uses resource profiles. The resource profile is a list of all work centers and their load requirements for a master scheduled item. It is the sum of all labor, machine, and setup hours required for all work centers and is for all parts in the master schedule items' multi-level bill of material.

You can either manually enter a resource profile or have the system generate the profile. You manually enter the profile if you have not defined bills of material (BOMs) and routings for an end item. You can also use the manual method for prototype items and new products. If BOMs and routings are available, the system can generate the profile.

Complete the following tasks:

- Define the resource profile manually
- Generate the resource profile

Defining the Resource Profile Manually

You manually enter the profile if you have not defined bills of material (BOMs) and routings for an end item. You can also use the manual method for prototype items and new products. If BOMs and routings are available, the system can generate the profile.

Before You Begin

- Enter item branch/plant information. See *Setting Up Branch/Plant Information* in the *Inventory Management Guide*.

▶ To define a resource profile manually

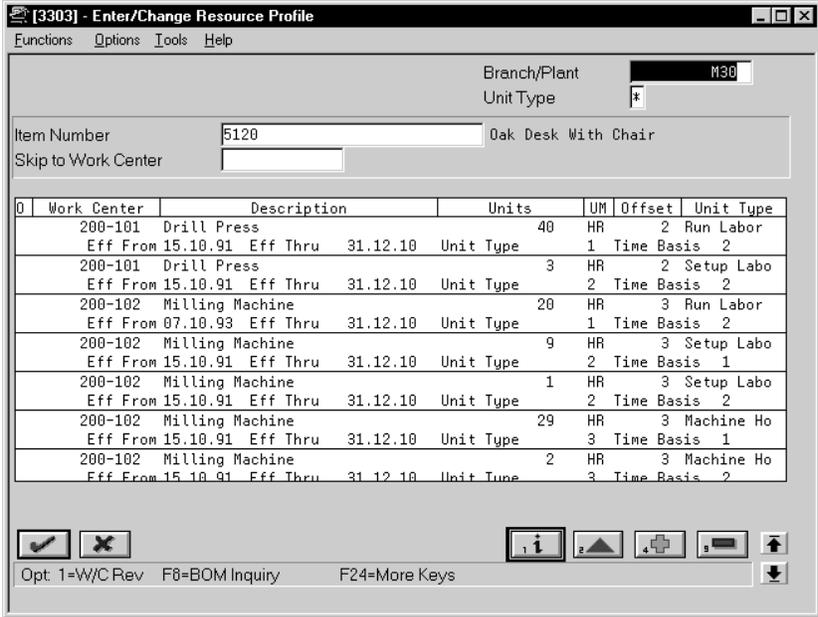
On Enter/Change Resource Profile

The screenshot shows a software window titled "[3303] - Enter/Change Resource Profile". It contains several input fields and a data table. The "Item Number" field is filled with "5120" and the item name is "Oak Desk With Chair". The "Branch/Plant" is "M30" and "Unit Type" is "*". Below these is a table with columns: Work Center, Description, Units, UM, Offset, and Unit Type. The table lists various work centers and their associated resources.

0	Work Center	Description	Units	UM	Offset	Unit Type
	200-101	Drill Press	40	HR	2	Run Labor
	200-101	Drill Press	3	HR	2	Setup Labo
	200-102	Milling Machine	20	HR	3	Run Labor
	200-102	Milling Machine	9	HR	3	Setup Labo
	200-102	Milling Machine	1	HR	3	Setup Labo
	200-102	Milling Machine	29	HR	3	Machine Ho
	200-102	Milling Machine	2	HR	3	Machine Ho
	200-103	Screw Machine	16	HR	3	Run Labor
	200-103	Screw Machine	10	HR	3	Machine Ho
	200-202	Molding	1	HR	1	Run Labor
	200-202	Molding	1	HR	1	Setup Labo
	200-202	Molding	5	HR	1	Machine Ho
	200-203	Blister Pack	84	HR	1	Run Labor
	200-203	Blister Pack	3	HR	1	Setup Labo

At the bottom of the window, there are navigation buttons and a status bar with options: "Opt. 1=W/C Rev", "F8=BOM Inquiry", "F24=More Keys", "Inquire", and "MW".

1. Complete the following field:
 - Item Number
2. Complete the following optional fields:
 - Work Center
 - Units
 - Unit of Measure
 - Offset
3. Access the fold area.



4. Complete the following optional fields or allow the system to enter a default:
- Effective From
 - Effective Thru
 - Unit Type
 - Time Basis

Field	Explanation
Units – Order/Transaction Quantity	The quantity of units affected by this transaction.
Resource Offset	A value used in the Resource Profile table (F3303) to determine the number of days that the actual use of a work center resource should be offset from the forecasted need date.

Field	Explanation
Effective – From Date	<p>A date that indicates one of the following:</p> <ul style="list-style-type: none"> • When a component part goes into effect on a bill of material • When a routing step goes into effect as a sequence on the routing for an item • When a rate schedule is in effect <p>The default is the current system date. You can enter future effective dates so that the system plans for upcoming changes. Items that are no longer effective in the future can still be recorded and recognized in Product Costing, Shop Floor Control, and Capacity Requirements Planning. The Material Requirements Planning system determines valid components by effectivity dates, not by the bill of material revision level. Some forms display data based on the effectivity dates you enter.</p>
Effective – Thru Date	<p>A date that indicates one of the following:</p> <ul style="list-style-type: none"> • When a component part is no longer in effect on a bill of material • When a routing step is no longer in effect as a sequence on the routing for an item • When a rate schedule is no longer active <p>The default is December 31 of the default year defined in the Data Dictionary for Century Change Year. You can enter future effective dates so that the system plans for upcoming changes. Items that are no longer effective in the future can still be recorded and recognized in Product Costing, Shop Floor Control, and Capacity Requirements Planning. The Material Requirements Planning system determines valid components by effectivity dates, not by the bill of material revision level. Some forms display data based on the effectivity dates you enter.</p>
Unit Type	<p>A code indicating the type of resource unit associated with this work center. Possible types are:</p> <ul style="list-style-type: none"> 1 Run Labor Hours 2 Setup Labor Hours 3 Machine Hours 9 Miscellaneous (Storage Space, and so on)
Time Basis Code	<p>A user defined code (system 30, type TB) that identifies the time basis or rate to be used for machine or labor hours entered for any routing step. You can set rates per unit, per 10, per 1000, and so on.</p> <p>The system uses the values in the Description-2 field on the User Defined Codes form for costing and scheduling calculations. The Description field is a description of what the code represents, but is not used in calculations.</p>

► **To define a resource profile manually**

On Enter/Change Resource Profile

1. Complete the following field:
 - Item Number
2. Complete the following optional fields:
 - Work Center
 - Units
 - Unit of Measure
 - Offset
3. Access the fold area.
4. Complete the following optional fields or allow the system to enter a default:
 - Effective From
 - Effective Thru
 - Unit Type
 - Time Basis

Field	Explanation
Units – Order/Transaction Quantity	The quantity of units affected by this transaction.
Resource Offset	A value used in the Resource Profile table (F3303) to determine the number of days that the actual use of a work center resource should be offset from the forecasted need date.
Unit Type	A code indicating the type of resource unit associated with this work center. Possible types are: <ul style="list-style-type: none"> 1 Run Labor Hours 2 Setup Labor Hours 3 Machine Hours 9 Miscellaneous (Storage Space, and so on)
Time Basis Code	A user defined code (system 30, type TB) that identifies the time basis or rate to be used for machine or labor hours entered for any routing step. You can set rates per unit, per 10, per 1000, and so on. The system uses the values in the Description-2 field on the User Defined Codes form for costing and scheduling calculations. The Description field is a description of what the code represents, but is not used in calculations.

Effective – Thru Date	<p>A date that indicates one of the following:</p> <ul style="list-style-type: none">• When a component part is no longer in effect on a bill of material• When a routing step is no longer in effect as a sequence on the routing for an item• When a rate schedule is no longer active <p>The default is December 31 of the default year defined in the Data Dictionary for Century Change Year. You can enter future effective dates so that the system plans for upcoming changes. Items that are no longer effective in the future can still be recorded and recognized in Product Costing, Shop Floor Control, and Capacity Requirements Planning. The Material Requirements Planning system determines valid components by effectivity dates, not by the bill of material revision level. Some forms display data based on the effectivity dates you enter.</p>
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Effective – From Date	<p>A date that indicates one of the following:</p> <ul style="list-style-type: none">• When a component part goes into effect on a bill of material• When a routing step goes into effect as a sequence on the routing for an item• When a rate schedule is in effect <p>The default is the current system date. You can enter future effective dates so that the system plans for upcoming changes. Items that are no longer effective in the future can still be recorded and recognized in Product Costing, Shop Floor Control, and Capacity Requirements Planning. The Material Requirements Planning system determines valid components by effectivity dates, not by the bill of material revision level. Some forms display data based on the effectivity dates you enter.</p>
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Generating the Resource Profile

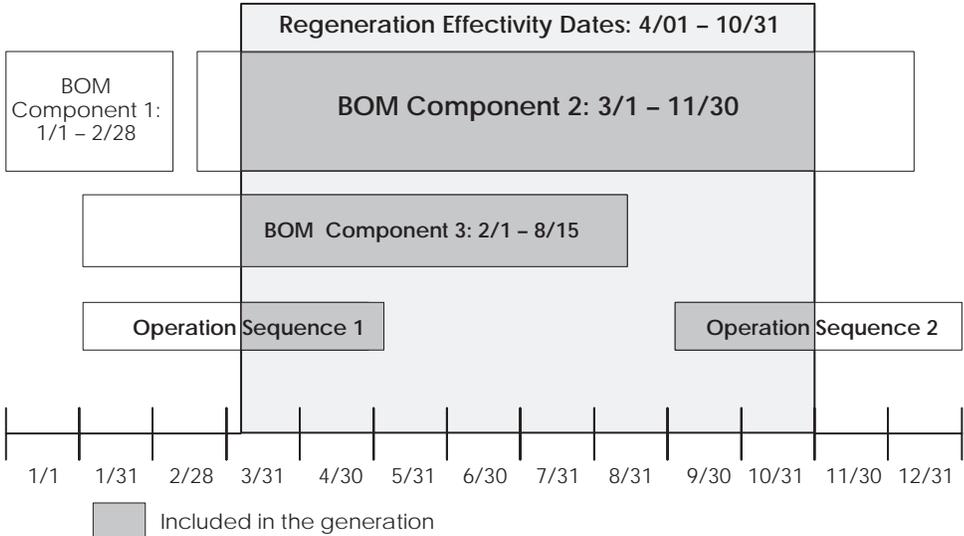
If you have defined bills of material (BOMs) and routings for an end item and all its subassemblies, you can run Generate Resource Profile to automatically generate the resource profile. The program calculates the load on a work center by extending the hours in the routing by the forecasted quantities for the master scheduled items.

Resource Profile Generation creates units of measure only in hours (HR). Enter the resource profile manually if you want to use additional units of measure.

Generate Resource Profile changes or updates the resource profile using components with effectivity dates within the period that you specify. The specific items affected by the program are determined by the following factors:

- The system retrieves routings only for BOM components that are effective within the range of effectivity dates in the processing options for the regeneration.
- The system creates resource profiles only from BOM components with effectivity dates that are within the effectivity dates assigned to the item and the processing options.
- The Effective From date in the resource profile is the latest of the dates in the processing option, the BOM, or the routing Effective From dates.
- The resource profile Effective Through date is the earliest of the dates in the processing option, the BOM, or the routing Effective From dates.

The following graphic illustrates all the BOMs and routings with effectivity dates that are within the Effective From and Effective Through dates.



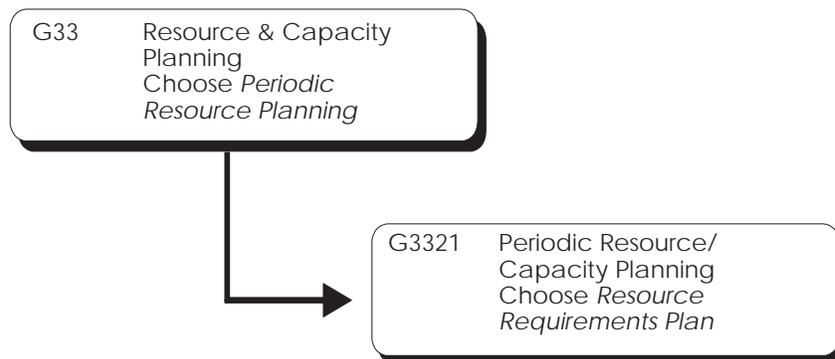
Before You Begin

- Enter all applicable bills of materials, work centers, and routings. See *Entering Work Centers* in the *Product Data Management Discrete Manufacturing Guide*.

Processing Options for Resource Profile Regeneration

1. Enter the effectivity dates for the regeneration:
Effective From: _____
Effective Thru: _____

Generate a Resource Requirements Plan



Generating a Resource Requirements Plan

After you have entered resource units and resource profiles, you run the program that generates the resource requirements plan to obtain long-range estimates of the capacity needs at your work centers, such as:

- The number of production staff that you need to hire now to meet future production needs
- The number of additional machines you will need for a new product line
- What real estate you will need to buy for additional facilities

Because you use the forecast in place of work orders for long-range planning, the data that this program creates is an estimate of capacity needs based on the forecast. The resource profile offsets required dates for capacity.

The types of data you can create include:

- Over- or under-capacity messages.
- New load profile information based on the type of work center load:
 - Rated profile is the available units from the Resource Units table (F3007).
 - Loaded profile is the forecasted load derived from the master planned items' forecasts and their resource profiles.

- Percent resource used is the loaded profile divided by the rated profile.
- Resource available is the rated profile minus the loaded profile
- Accumulated resources available is a running total of the resources available
- Period summaries about work centers

Before You Begin

- Verify that resource units exist for all work centers in your facility. See *Determining Available Capacity*.
- Verify that resource profiles exist for all master schedule items. See *Determining Long-Range Load*.
- Verify that the resource profile is set up for the appropriate units of measure. You can use a maximum of five units of measure. See *Determining Long-Range Load*.
- Create a detail forecast for the master scheduled items using Enter/Change Forecasts. See *Entering Detail Forecasts* in the *Forecasting Guide*.
- Determine which forecast types you want to use in the generation. You can use a maximum of five. See *Setting Up Summary Forecasts* in the *Forecasting Guide*.
- Set up the shop calendar for all summary time periods for which you want to generate RRP. See *Setting Up Shop Floor Calendar* in the *Shop Floor Control Discrete Manufacturing Guide*.

See Also

- *Reviewing a Resource Requirements Plan (P3313)*
- *Reviewing a Resource Requirements Plan*

Processing Options for Resource Requirements Planning Regeneration

1. Enter the Start Date for Resource Requirements Planning Regeneration. _____
2. Enter the Planning Periods:
(Maximum of 52 Periods.)
Weeks (e.g. 12 weeks) _____
and Months (e.g. 24 months) _____
3. Past Due Information:
Enter the number of periods:
(0, 1, or 2 periods are allowed
and 0 is the default) _____
4. Enter the percent under rated capacity
to generate a Under Capacity Message. _____
5. Enter the percent over rated capacity
to generate a Over Capacity Message. _____
6. Enter the Forecast Type to be Read. _____
7. Enter the Branch to be processed. _____
8. Enter the Unit of Measure to Process. _____
9. Enter a '1' to Roll the Work Centers
into their Dispatch Group. _____

Data Selection

Critical Work Centers

The options you have for data selection determine whether to process only critical work centers or to process all work centers. The choices in the Critical Work Center data selection option are:

- N Process only non-critical work centers
- 1 Process critical work centers in calculating Resource Requirement Planning only
- 2 Process critical work centers in calculating Capacity Requirements Planning only
- 3 Process critical work centers in calculating Resource Requirements Planning and Capacity Requirements Planning
- 4 Not a Capacity Work Center (will not be generated in the Capacity Planning System)

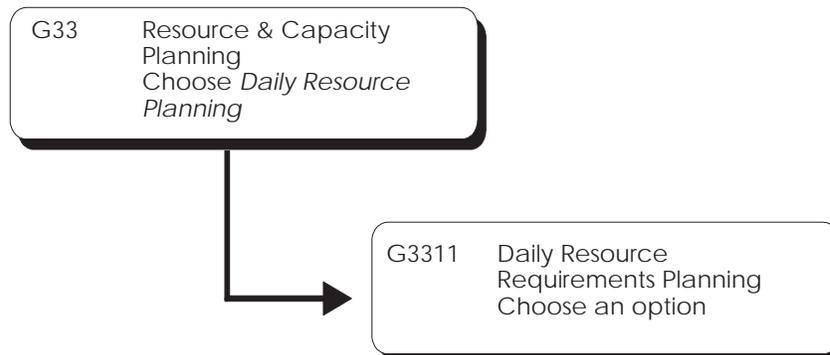
The system also displays Type 3 work centers whenever you select Type 1 or Type 2.

Branch/Plant and Dispatch Group

You can select the following data for planning facilities and dispatch groups:

- A specific planning facility and/or the dispatch groups
- A group of planning facilities and/or the dispatch groups using the *RANGE or *VALUE

Review a Resource Requirements Plan



Reviewing a Resource Requirements Plan

When you generate a resource requirements plan, the system creates a time series that shows the load during each planning period for a work center. You can view the time series as a spreadsheet or as a graphical display. If you have organized several work centers as a dispatch group according to common functions, similar operations, or steps in routing, you can view the group to see how the production plan affects capacity of the work centers as a group.

You can review summaries of each period to determine the load that is placed on a work center by each item or order. You can also review messages for each work center and delete, clear, or hold messages.

If the system encounters over- or under-capacity conditions, you can review the plan and identify the periods or work centers in which the conditions occur. It might be necessary to adjust the forecast or capacity and generate the RRP again.

Complete the following tasks:

- Review dispatch group
- Review work center load
- Review period summaries
- Review message detail

2. Complete the following optional fields:
 - Critical Work Center
 - Message Type
 - Unit of Measure
3. Review the following field:
 - Outstanding Messages

Field	Explanation
Message Type	A code that distinguishes different messages generated in the Capacity Planning system. Valid codes are: A Warning messages M Manual messages O Over capacity U Under capacity

Processing Options for Review Dispatch Group

1. Enter the Critical Work Center Code to displayed be or a "*" for all Work Centers. _____
2. Enter the Capacity Mode _____
 "1" = Resource Requirements Planning
 "2" = Rough Cut Capacity Planning
 "3" = Capacity Requirements Planning
3. Enter the Default Unit of Measure _____

Reviewing Work Center Load

Reviewing Work Center Load for Resource Requirements Plan

You can review the capacity load at each work center. Use this information to determine whether to adjust capacity or the forecast.

You can view the time series as a spreadsheet or as a graphical display. The spreadsheet provides a numerical breakdown, by planning period, of the load placed on a work center. The bar graph provides the same information as the Review Work Center Load form. The graph uses time series information from Resource Requirements Load to generate the comparison. The capacity load at the work center displays for each planning period based on several calculations.

Complete the following tasks:

- Review the work center load as a spreadsheet

- Review the work center load as a graph

Before You Begin

- Verify that your resource units and resource requirements plan are current

▶ To review the work center load as a spreadsheet

On Review Work Center Load

Description	31.01.98	28.02.98	31.03.98	30.04.98	31.05.98	30.06.98
Rated Profile	336	320	352	352	336	352
Loaded Profile	62	78	78	94	62	77
% Resource Used	19	24	22	27	19	22
Resource Available	274	242	274	258	274	275
Accum. Resource Avail	274	516	789	1048	1322	1596

1. Complete the following field:
 - Work Center
2. Review the following fields:
 - Unit of Measure
 - Description

What You Should Know About

Prime load code

The entry in the Prime Load Code field on Enter/Change Work Center determines the type of load. For example, if you have entered machine and setup hours as the prime load code, the numbers that appear will be different than if you entered machine hours only.

Resource offset

The demand is offset by the number of days set on the Resource Profile form.

Type of load

The type of load is determined by the prime load code. Calculations for the types of load are:

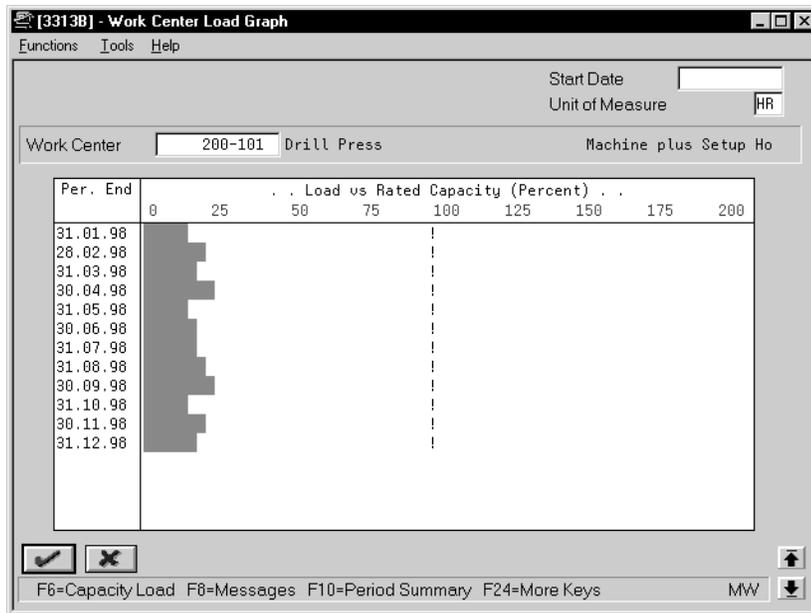
- Rated profile – The amount of capacity available for a work center.
- Loaded profile – The capacity that is required to meet the forecast. Loaded profile uses the resource profile units (based on prime load code) divided by the time basis code, multiplied by the forecast for each period.
- Percent resource used – The loaded profile divided by rated profile.
- Resource available – The rated profile minus the loaded profile.
- Accumulated resource available – A running total of resource available.

Processing Options for Work Center Load

1. Enter the Capacity Mode: _____
 "1" = Resource Requirements Planning
 "2" = Rough Cut Capacity Planning
 "3" = Capacity Requirements Planning
2. Enter the User Defined Code for the
 list of row descriptions to appear: _____
3. Enter the default Unit of Measure: _____
4. Enter the version of the Dispatch
 List program to call. _____
 Default is ZJDE0001.

► **To review the work center load as a graph**

On Work Center Load Graph



1. Complete the following field:
 - Work Center
2. Review the following field:
 - Unit of Measure
3. On Capacity Load Percent, review the amount of load.

Field	Explanation
Branch/Plant	<p>Identifies a branch or plant.</p> <p>NOTE: You can enter numbers and characters in this field. The system right-justifies them (for example, C0123 appears as ___ C0123). You cannot locate business units for which you have no authority.</p> <p>..... <i>Form-specific information</i></p> <p>You enter the work center for which you want to display the load.</p>
Unit of Measure	<p>A user defined code (system 00/type UM) that identifies the unit of measurement for an amount or quantity. For example, it can represent a barrel, box, cubic yard, gallon, an hour, and so on.</p>

Field	Explanation
Date – Requested	The date that an item is to arrive or that an action is to be complete.

What You Should Know About

Over-capacity work centers	The system displays the portion of the bar graph that is over 100% in a color different from the portions less than 100%.
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Processing Options for Work Center Load Bar Graph

1. Enter the Capacity Mode: _____
 "1" = Resource Requirements Planning
 "2" = Rough Cut Capacity Planning
 "3" = Capacity Requirements Planning
2. Enter the default Unit of Measure: _____
3. Enter the version of the Dispatch List to call. Default is ZJDE0001. _____

Reviewing Period Summaries

In addition to reviewing the capacity load of a work center, you can also evaluate the load that is placed on a work center by period and by item. You can review period summaries either online or on a printed report. You can review:

- The items that are scheduled for a work center.
- The number of units of an item that make up the load.
- The percent of the total load on the work center that is for a specific item's forecast. This is the percent of the total load planned for the work center that the item consumes. The system summarizes the load by the period using the unit of measure that you specify.

You use this information to determine whether to adjust the forecast or the capacity at the work center.

To review period summaries

On Review Period Summary

[3312] - Review Period Summary

Functions Options Tools Help

Unit of Measure
Machine plus Setup

Work Center Drill Press
Period From To

0	Per. End	Item	Description	Units	Percen
	31.05.98	333	OAK SHELF UNIT	31	50,00
			Total	62	
	30.06.98	333	OAK SHELF UNIT	39	50,65
	30.06.98	5120	Oak Desk With Chair	38	49,35
			Total	77	
	31.07.98	333	OAK SHELF UNIT	39	50,65
	31.07.98	5120	Oak Desk With Chair	38	49,35
			Total	77	
	31.08.98	333	OAK SHELF UNIT	39	50,65
	31.08.98	5120	Oak Desk With Chair	38	49,35
			Total	77	
	30.09.98	333	OAK SHELF UNIT	47	50,54
	30.09.98	5120	Oak Desk With Chair	46	49,46
			Total	93	
	31.10.98	333	OAK SHELF UNIT	32	50,79
	31.10.98	5120	Oak Desk With Chair	31	49,21

Opt. 1=Forecast F8=Msg F10=Load F14=Dispatch List F24=More Keys MW

1. Complete the following field:
 - Work Center
2. Complete the following optional fields:
 - Unit of Measure
 - Period From – To
3. Review the following fields:
 - Period End
 - Item
 - Units
 - Percent Completed
 - Total
4. Access the fold area.

[3312] - Review Period Summary

Functions Options Tools Help

Unit of Measure
Machine plus Setup

Work Center Drill Press

Period From To

0	Per. End	Item	Description	Units	Percen
	31.05.98	333	ORK SHELF UNIT	31	50,00
		Order Number	Order Type FC Forecast		
			Total	62	
	30.06.98	333	ORK SHELF UNIT	39	50,65
		Order Number	Order Type FC Forecast		
	30.06.98	5120	Oak Desk With Chair	38	49,35
		Order Number	Order Type FC Forecast		
			Total	77	
	31.07.98	333	ORK SHELF UNIT	39	50,65
		Order Number	Order Type FC Forecast		
	31.07.98	5120	Oak Desk With Chair	38	49,35
		Order Number	Order Type FC Forecast		
			Total	77	

Opt: 1=Forecast F8=Msg F10=Load F14=Dispatch List F24=More Keys MW

5. Review the following field:

- Order Number

Field	Explanation
Date/Period From	A number that identifies either a fiscal period (numbers from 1 to 14) or a beginning date. The information displayed begins with this date or period. If you leave this field blank, the system displays all transactions up to the Thru Date. Totals are for the transactions displayed.
Date/Period To	A number that identifies either the period number or date upon which you want to inquire. If you leave this field blank, the system uses the ending date of the current period for the company that contains the business unit. Valid period numbers are from 1 through 14. <i>Form-specific information</i> If you leave this field blank, the system displays all orders since the From date.
Units	The available quantity can be on-hand balance minus commitments, reservations, and backorders. This is user defined in branch/plant constants. <i>Form-specific information</i> In RRP, this is the quantity forecast. In MRP, this is the open work order quantity.
Percent – Percent Yield	The percentage of the planned amount that has been completed.

Processing Options for Period Summary

1. Enter the Capacity Mode: _____
 "1" = Resource Requirements Planning
 "2" = Rough Cut Capacity Planning
 "3" = Capacity Requirements Planning
2. Enter the default Unit of Measure: _____
3. Enter the version of the Dispatch List to call. Default is ZJDE0001. _____

Reviewing Message Detail for Resource Requirements Planning

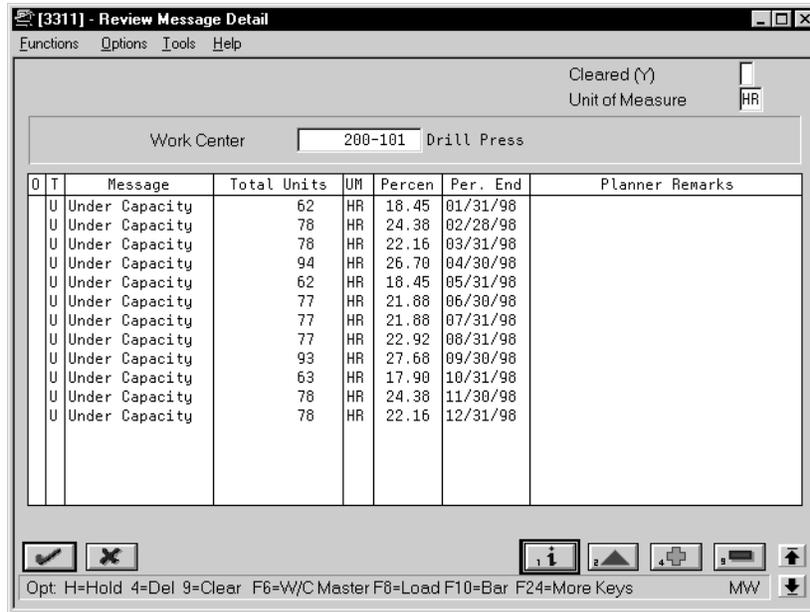
Reviewing Message Detail

Each time you generate a resource requirements plan, the system creates messages to identify work centers whose loads are in conflict with planned capacity. Review Message Detail indicates whether you have over-load or under-load conditions. It displays messages for each work center alphabetically by message type.

Use Review Message Detail to delete, clear, or hold messages. You can add remarks for each message as a record for the actions you take. In addition, you can access related forms to confirm or change dates, amounts, and key plant manufacturing data for the work center.

► **To review message detail**

On Review Message Detail



1. Complete the following field:
 - Work Center
2. Review the following fields:
 - Message Type
 - Message
 - Total Units
 - Unit of Measure
 - Percentage
 - Period End
 - Planner Remarks

Field	Explanation
Quantity – DRP/MPS/MRP/CRP Display 01	This field displays the unit quantities making up the load and resources used for each period shown in the time series for DRP/MPS/MRP and CRP.

Field	Explanation
Planner Remarks	A brief description of an item, a remark, or an explanation. <i>Form-specific information</i> You can use this field to enter a brief note or comment about each message.

What You Should Know About

- Retrieving cleared messages** When you clear or delete messages, the system no longer displays them on the Review Message Detail form. Enter a Y in the Cleared (Y) field to retrieve cleared messages.
- Held messages** The system retains held messages until you manually clear or delete them. When you generate the Rough Cut Capacity Plan or Capacity Requirements Plan programs, the system deletes all current non-held messages.
- Deleted messages** You can generate a plan more than once. When you regenerate a resource requirements plan, the system will not delete the following messages:
 - Manually entered messages
 - Messages that you have placed on hold

Processing Options for Message Revisions

1. Enter the Capacity Mode _____
"1" = Resource Requirements Planning
"2" = Rough Cut Capacity Planning
"3" = Capacity Requirements Planning
2. Enter the Default Unit of Measure _____

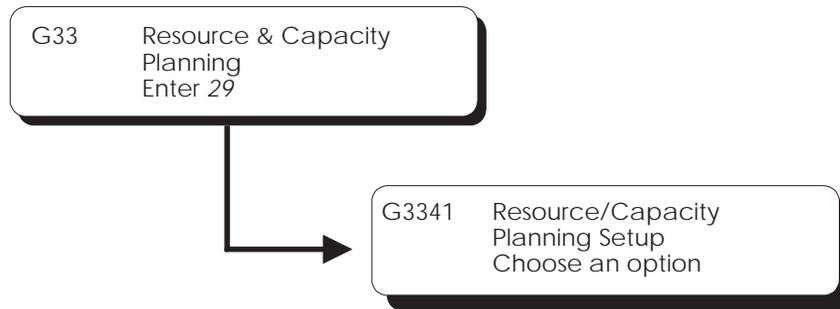
Validating the Resource Requirements Plan

Validating the resource requirements plan consists of identifying the overloaded work centers, making adjustments in forecast or resources, and generating the plan again to see if your adjustments distributed the loads among the work centers.

▶ **To validate the resource requirements plan**

1. Complete the steps for reviewing the requirements plan.
*See *Reviewing Resource Requirements Plan*.*
2. Revise the forecast.
*See *Revising Summaries of Forecasts* in the *Forecasting Guide*.*
3. Complete the steps for generating the requirements plan.
*See *Generating Resource Requirements Plan*.*
4. Complete the steps for reviewing the revised requirements plan.
*See *Reviewing Resource Requirements Plan*.*
5. Repeat the steps until all loads at each work center are appropriate.

Set Up a Resource Requirements Plan



Setting Up a Resource Requirements Plan

Before you generate a resource requirements plan, you must define information for processing. The system uses setup information to determine how to select and display data.

Complete the following tasks:

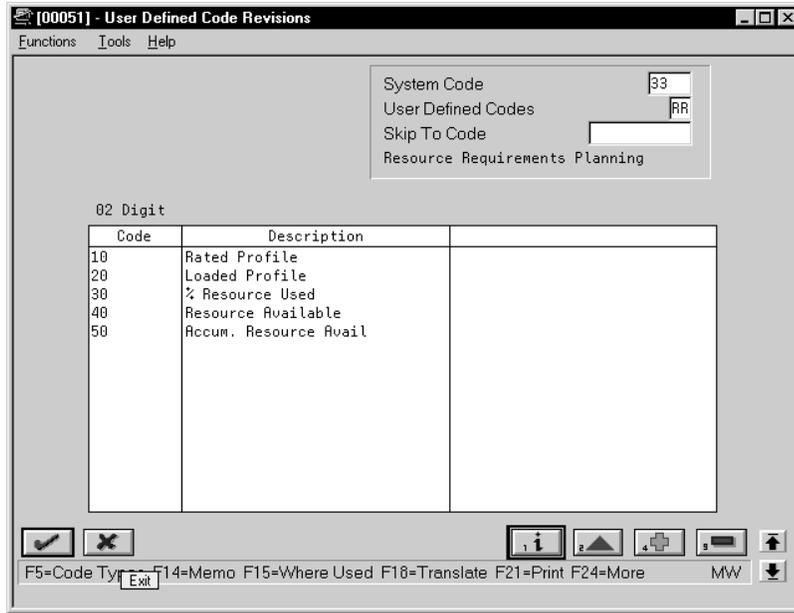
- Set up resource requirements display
- Set up unit types

Setting Up Resource Requirements Display

The Resource Requirements Display identifies the types of loads on a work center. You can review these on the Review Work Center Load form. See *Reviewing Work Center Load* for more information on the calculations for the types of load.

▶ To set up resource requirements display

On User Defined Code Revisions/Resource Requirements Planning



Complete the following fields:

- Code
- Description

Field	Explanation
User Defined Code	This column contains a list of valid codes for a specific user defined code table. The number of characters permitted for a code appears in the column title.
Description	A user defined name or remark that describes a field.
Description-2	Additional text that further describes or clarifies a field in J.D. Edwards systems.

Setting Up Unit Types

You need to identify all the different types of resource units that can be associated with any work center. Unit types are system 33, type UT UDCs.

► To set up unit types

On User Defined Code Revisions/Unit Types

[00051] - User Defined Code Revisions

Functions Tools Help

System Code 33
User Defined Codes UT
Skip To Code
Unit Types

01 Character

Code	Description
1	Run Labor Hours
2	Setup Labor Hours
3	Machine Hours
9	Misc. Units

F5=Code Types F14=Memo F15=Where Used F18=Translate F21=Print F24=More MW

Complete the following fields:

- Code
- Description

Single Level Master Scheduling



Single Level Master Scheduling

Objectives

- To create Distribution Requirements Plans (DRP) or Master Production Schedules (MPS)
- To understand the Net Change program
- To read and use time series displays
- To understand time fence rules
- To interpret Ending Available (EA), Available to Promise (ATP), Cumulative Available to Promise (CATP), and Forecast Consumption (FCP) calculations
- To review and process action messages
- To process purchase orders with or without blanket order check
- To consolidate messages and purchase orders
- To add a freeze code on purchase orders and work orders
- To use Rough Cut Capacity Planning (RCCP) to validate the master schedule
- To set up master planning and rough cut capacity displays
- To process work orders

About Single Level Master Scheduling

A single level master schedule is a statement of what the company expects to produce based on the tactical plan and budget constraints.

A master scheduled item is critical in its impact on lower-level components or resources, such as skilled labor, key machines, or revenues. Single level implies master scheduling at the end deliverable item level.

The master scheduling process consists of:

- Determining what you need (forecast, customer orders, and interplant demands)
- Subtracting what you have (inventory, purchase orders, and work orders)
- Calculating net requirements and when you need them



You can generate master planning for all items or for a net change generation, which includes only items that have been affected by transactions since the last generation. After you generate DRP/MPS output, you can review and respond to messages.

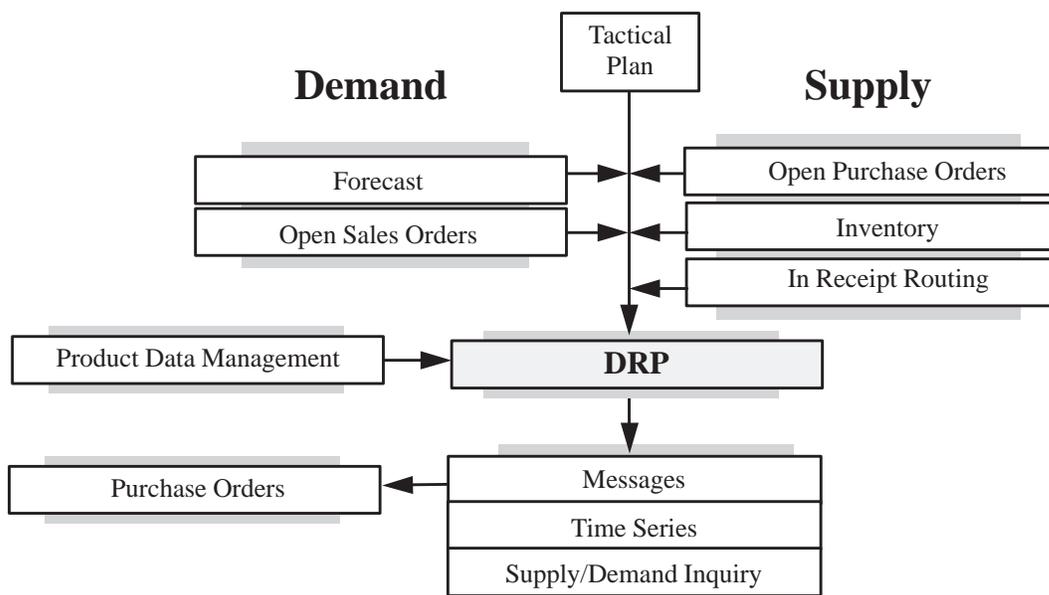
Master scheduling consists of the following:

- Understanding time fences and system messages
- Generating a single level master schedule
- Working with the master schedule
- Validating the master schedule
- Setting up DRP, MPS, and RCCP
- Processing orders

Master Scheduling Applications

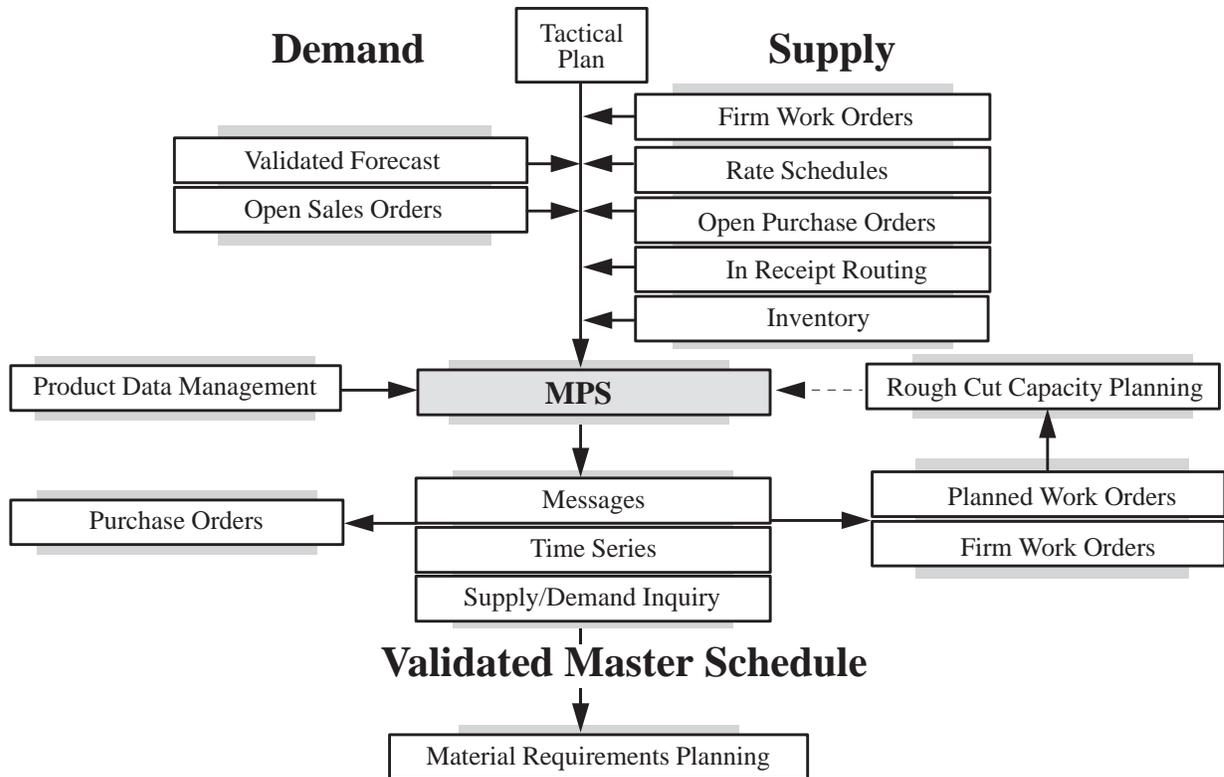
DRP and Purchased Items

For distribution businesses, DRP provides centralized control of distribution inventories and creates a coordinated replenishment plan.



MPS and Manufactured Items

You use MPS to generate the master schedule for manufactured items. J.D. Edwards systems plan replenishment for both purchased items and manufactured items in the same generation program. Processing options control how the system runs the generation.

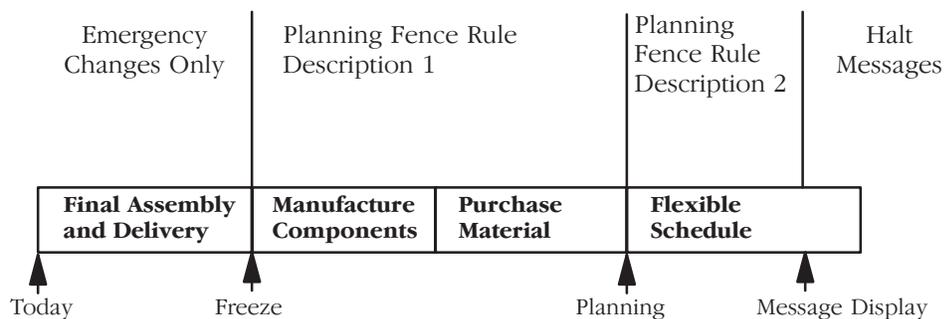


Understand Time Fences and System Messages

About Time Fences

Time fences are points in time in which you can make changes to either policy or operating procedures. J.D. Edwards software includes three fences:

- Freeze
- Planning
- Message Display



Freeze Fence (F)

A freeze fence holds, or freezes, the master schedule. In doing so, the system does not generate any planned orders from the current date to the number of days set in the field. This enables the master scheduler to review the schedule and make adjustments manually if required. The system allows the schedule to be “frozen.”

In addition, the system does not generate any messages that require action on existing work orders (such as an expedite message) within the frozen period of time. It displays warning action messages.

J.D. Edwards recommends that you set this fence at a point in time in which you need to freeze the MPS, depending on the nature of your product and the nature of the business environment.

Planning Fence (P)

A planning fence controls how the system uses the demand from forecast and customer orders in the ending available (EA) calculation. This fence also indicates where the method used to calculate ending available inventory changes from the demand rule in “Description 1” to “Description 2.”

For planning purposes, J.D. Edwards recommends that you set the planning fence at a point from the current date that equals at least 1-1/2 times the cumulative leadtime. This will depend upon the business environment and the nature of the product. Once inside the planning fence, you have committed resources to the product line.

Message Display Fence (D)

A message display fence suppresses action messages beyond the number of days that you selected from the current date. When you set this fence, calculations are not affected.

J.D. Edwards recommends that you set the message display fence at the point in which you do not need to act on action messages, depending on the cumulative leadtime of the product and the business environment.

What Are Time Fence Rules?

When you use a planning time fence rule that calculates an ending available that is based on the greater of forecast or customer demand, the forecast is “consumed.” For rules C and G, this means that the forecast is reduced by the amount of the customer demand on that same time bucket. The system displays all adjusted and unadjusted values. In the table above, this applies to rules C, G, and H.

J.D. Edwards software uses the following planning time fence rules:

Rule C

Description 1

Customer demand

Description 2

Whichever is greater, forecast or customer demand

Rule F	Description 1 Forecast Description 2 Forecast plus customer demand
Rule G	Description 1 Whichever is greater, forecast or customer demand Description 2 Forecast
Rule H	Forecast consumption periods When you use planning fence rule H, J.D. Edwards recommends that you set the Planning Fence field on the Plant Manufacturing Data form to 999 (the end of the planning horizon).
Rule S	Description 1 Customer Demand Description 2 Forecast
Rule 1	Description 1 Zero Description 2 Forecast
Rule 3	Description 1 Zero Description 2 Forecast plus customer demand

What Are the Time Series Calculations?

The Manufacturing and Distribution Planning systems provide four different time series calculations. These are:

- Ending Available
- Available to Promise
- Cumulative Available to Promise
- Forecast Consumption

Example: Ending Available Calculation

Ending Available (EA) is the amount of product available at the end of a time bucket after the system calculates the effect of all supplies and all demands for the time bucket.

The system uses the planning time fence rule and the following formula to calculate the ending available amount:

- Add within the time bucket:
 - Beginning Available (+BA)
For the first weekly time period, +BA = quantity on hand – safety stock
For remaining time periods, +BA = Ending Available from the previous time period (=EA)
- Subtract according to the planning time fence rule:
 - Forecast (–FCST)
 - Customer Demand (sales orders and interplant demand)
- The remainder is the ending available (EA)

The following table shows how the system calculates the amount of product available at the end of a time period. Assume that the Lot Size = Lot for Lot, Safety Stock = 20, Planning Time Fence Rule = C, and L/T = 1.

Periods								
On Hand = 80	1	2	3	4	5	6	7	8
+BA	60	40	25	25	0	0	0	0
-FCST	20	20	20	20	20	20	20	20
-SO	20	15		40			45	
-PO								
=EA	40	25	25	200	200	200	200	200
+DRP				15	20	20	45	20
(Order Start)			15	20	20	45	20	

Example: Available to Promise Calculation

Available to Promise (ATP) is the uncommitted portion of a company’s inventory or planned acquisitions. You use this amount to accurately promise customer orders.

As long as manufacturing produces according to the MPS and sales makes commitments according to the ATP in formation, this method increases customer service and reduces inventory carrying cost.

Available to Promise uses actual customer orders to identify inventory that might be promised to a customer. The planning time fence rule has no effect on ATP. Forecast is never included in ATP calculations.

The system uses the following formula to calculate the ATP quantity:

- First period ATP = on-hand balance – safety stock + work orders + purchase orders + planned orders – sales orders – work order parts list demand – interplant demand – unconsumed expired lot quantities.
- After the first period, ATP = work orders + purchase orders + planned orders – sales orders – work order parts list demand – interplant demand – unconsumed expired lot quantities.

The system does not display negative ATP for following periods. However, the system reduces the Cumulative Available to Promise (CATP) by the negative amount.

Example: Cumulative Available To Promise Calculation

Cumulative Available to Promise (CATP) is a running total of the ATP.

For new products or seasonal products, building inventory might be part of the management strategy. In these cases, sales and marketing might not be expected to sell within the replenishment buckets. The bulk of sales might not be in the near future.

The system calculates CATP as follows:

- First period CATP = beginning available + replenishment – sum of customer orders and parent demand before the next replenishment.
- After the first period, CATP = CATP from last period + replenishment – sum of customer orders and parent demand before the next replenishment.

CATP does not assume complete depletion. Rather, the system continues to add inventory.

The following table shows how the system calculates CATP. Assume that the Lot Size = Lot for Lot, Safety Stock = 0, Planning Time Fence Rule = C, and L/T = 1.

	Periods							
On Hand = 80	1	2	3	4	5	6	7	8
+BA	80	50	25	55	45	25	50	30
-FCST	20	20	20	20	20	20	20	20
-SO	30	25	30	10		35		
+PO								
=EA	50	25	-5	45	25	-10	30	10
+DRP			60			60		
ATP	25		20			25		

Example: Forecast Consumption Calculation

Forecast consumption is based on the assumption that actual sales orders reduce, or “consume,” the forecasted quantities. The plan begins with an estimate (forecast), and actual orders are placed that consume the estimate. Forecast consumption compares and uses the greater of forecast or sales orders in the calculation.

You define forecast consumption periods to represent a period in which selected forecasts are partially, fully, or over-consumed by sales orders. This allows you to include more than one time series bucket in calculating the forecast consumption. That is, you can designate a longer period of time (the forecast consumption period) for the system to compare the gross forecasts to the combined gross sales and shipments.

Forecast consumption uses the Planning Fence Rule H. With forecast consumption processing, the system uses the following quantity types:

- FCSU** Forecast for a specific item from the detail forecast table

- SOU** Actual sales orders from the sales order detail table

- SO** Sales orders that exceed the forecast displays only when -SO is greater than -FCST

- SHIP** Shipments that occur within the forecast consumption period

- FCST** Unconsumed forecast

- +WO, +PLO** Replenishment orders that cover the greater of forecast or actual orders

As shown below, the forecast is made at the beginning of the forecast consumption period.

- -FCST = +BA plus +WO
- -FCSU = -FCST plus -SHIP

The screenshot shows a window titled "[3413] - MRP Time Series Inquiry". It contains a form with the following fields: Branch/Plant (M30), Start From Date, Unit of Measure (EA), Item Number (5120), and Leadtime Level (5 Fixed). Below the form is a data table with the following columns: Data, Past Due, 01/02/98, 01/09/98 L, 01/16/98, 01/23/98 M, and 01/30/98. The table contains the following rows of data:

Data	Past Due	01/02/98	01/09/98 L	01/16/98	01/23/98 M	01/30/98
+BRU	445	445	657-	657-	607-	457-
+BR	445	445				
+WOU				50	150	
+WO		657				
-FCSU		1242				
-FCST		1102				
-SHIP		140				
-SOU					150	
=ERU	445	657-	657-	607-	457-	457-
=EA	445					
+PLO						
ATPU		445		50		
ATP		952				
CATPU		445	445	495	290	290
CATP		952	952	952	952	952

Building planned orders to the forecast at the beginning of the forecast consumption period minimizes expediting of the end item when actual orders are placed later in the period.

What are the Message Types for DRP and MPS?

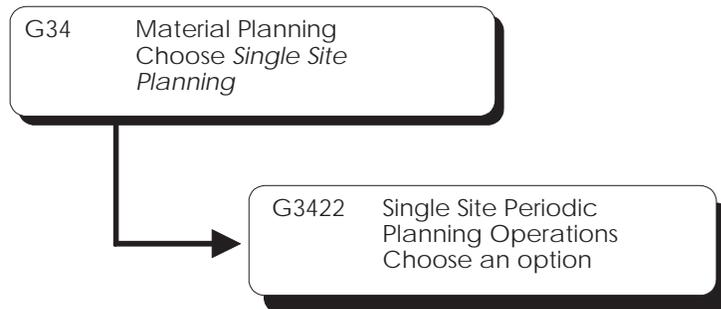
After you generate DRP/MPS output, the system creates action messages that:

- Alert the master scheduler of possible adverse conditions
- Display action recommendations that the master scheduler can process

The system displays messages by type. You can identify which items require attention based on the following message types:

A	Warning Message
B	Order and Expedite
C	Cancel
D	Defer
E	Expedite
F	Frozen
G	Increase Order Quantity To
H	Decrease Rate Quantity To
I	Increase Rate Quantity To
L	Decrease Order Quantity To
M	Manual Reminder
N	Create Rate
O	Order
P	Firm Order
S	FPO Adjustment Suggestion
T	Past Due Order

Generate a Single Level Master Schedule



Generating a Single Level Master Schedule

You can regenerate a master schedule for a single item or all items. When you generate a master schedule, the system evaluates selected information, performs calculations, and recommends a time-phased planning schedule for all selected items. You should run MPS weekly, at a minimum, to keep the plan current.

You can use net change processing to include only items that have changed since the last generation. Use Net Change Review to determine which items to include in the net change generation.

Complete the following tasks:

- Generate a master schedule for all items
- Review items for master schedule selection
- Generate a master schedule for selected items

Before You Begin

- Generate a forecast for independent demand items. See *Generating Detail Forecast* in the *Forecasting Guide*.

About Net Change Flag

Net Change Flag Update

The net change flag in the Item Branch table (F4102) is activated by any transaction that causes a change in supply or demand during the next MRP run. Examples include:

- You have taken action on an order message, and the quantity, start date, or requested date changes.
- You have taken action on an Expedite or Defer message, and the recommended start date or recommended requested date is processed.
- You cancel an order.

Net Change Flag Control

The following is a list of programs that automatically activate the net change flag:

Parts List Revisions	Any addition, change, or deletion activates the flag for that item. If a branch is changed for an item, the system updates both old and new locations.
Parts List Substitutes	Any selection activates the flag for both the selected item and the item being substituted.
Work Order Entry	Any addition or deletion activates the flag for the item. If you change an item request date or quantity, the system activates the flag for the item. If an item status changes to 99, and the quantity ordered is not equal to the quantity completed, the system activates the flag for that item. If a branch is changed for an item, both the old and new locations are updated.
Work Order Inventory Issues	The flag is activated only on overissues.
Work Order Inventory Completions	If an item status changes to 99, and the quantity ordered is not equal to the quantity completed, the system activates the flag for that item.
Inventory Adjustments	The system activates the flag for any item whose inventory has been adjusted.

Inventory Transfers	When inventory is transferred from one branch to another, the system activates the flag for the affected items in both locations.
Bill of Materials Master	Any addition or deletion of a component item activates the flag for the parent of the changed component. If the item, quantity per, scrap, or effectivity dates change for any component item, the system activates the flag for the parent of that component.
Message Where Used Update	Any change to a component item activates the flag for the parent of the changed component.
Detail Message Review	If you take action on an order message and the quantity, start date, or request date changes, the system activates the flag for the item. If you take action on an expedite or defer message and the recommended start date or recommended request date changes, the system activates the flag for the item.
Forecast Revisions	Any addition, change, or deletion activates the flag for the affected item.
Manufacturing Data Revisions	Any addition, change, or deletion activates the flag for the affected item.
Repost Open Quantities	A repost cancels the commit component inventory on work orders that have a status equal to the status indicated in the processing option (usually status 99).
Leadtime Rollup	This program can change critical manufacturing data in the Item Branch table (F4102).
Sales Order Entry	Any addition, change, or deletion activates the flag for the affected item.
Purchase Order Entry	Any addition, change, or deletion activates the flag for the affected item.
Net Change Review	Any manual update to the Net Change field activates the flag for the affected item.

About Forecast Consumption

Forecast consumption periods are user defined and stored in the Forecast Consumption Periods table (F3405). The system only applies the forecast

consumption calculations if you set the appropriate processing option. To generate a master schedule using forecast consumption, you must understand the following features:

Past Due Time Buckets

You can set the number of past due buckets to 2.

- The first past due bucket includes all activity that is scheduled to occur before the current generation date but within the current forecast consumption period.
- The second past due bucket includes all activity that is scheduled to occur before the beginning of the current forecast consumption period.

If you use at least one past due period, the system calculates unconsumed quantity for the first time bucket as follows:

- Past due forecasts (-FCST prior to the generation date, but after the forecast consumption beginning date) are consumed by:
 - Past due sales orders (sales orders that have not shipped), but are within the forecast consumption period
 - Sales orders that have been shipped within the forecast consumption period, but prior to the generation date
- Any remaining -FCST is added to the -FCST in the first bucket that is not past due.

Planning Horizon Time Periods

Forecast consumption allows you to specify both forecast consumption and time series periods. You define the forecast periods on the Forecast Consumption Periods form. You specify the time series in the Master Planning Processing options. The system does not allow more than 52 total time series and forecast consumption period buckets.

If you specify a day or week planning horizon in the processing options and the time series end does not coincide with a forecast consumption period end, the system creates another time series bucket to reflect the forecast consumption period.

If you define the forecast consumption periods by month and the forecast consumption period does not coincide with the month and date in the Shop Floor Calendar, the system displays the forecast consumption date (not the month end date) as a time series bucket.

You can set a Master Planning processing option so that the system highlights all the forecast consumption periods on Time Series Inquiry. This helps you differentiate between the time series and the forecast consumption periods.

The following example illustrates the forecast at the end of the forecast consumption period. Note that early sales orders consume the forecast that is placed at the end of the forecast consumption period. The system subtracts quantity type -SO from quantity type -FSCU to calculate the quantity type -FCST (1242 - 290 = 952).

[3413] - MRP Time Series Inquiry

Functions Tools Help

Branch/Plant: M20
 Start From Date:
 Unit of Measure: ER
 Item Number: 5120 Oak Desk With Chair
 Leadtime Level: 5 Fixed

Data

	Past Due	01/02/98	01/09/98 L	01/16/98	01/23/98	01/30/98
+BRU	445	445	445	445	445	155
+BR	445	445	445	445	445	155
-FSCU						1242
-FCST						952
-SOU					290	
-SO					290	
=ERU	445	445	445	445	155	797-
=ER	445	445	445	445	155	45
+PLO						842
ATPU		155				
ATP		155				797
CATPU		155	155	155	155	110
CATP		155	155	155	155	952

F8=Code F13=Peg F14=Msg F16=Sup/Dem F19=Left F20=Right F24=More Keys MW

The following example illustrates a weekly forecast spread over a monthly consumption period.

[3413] - MRP Time Series Inquiry

Functions Tools Help

Branch/Plant: M10
 Start From Date:
 Unit of Measure: ER
 Item Number: 5120 Oak Desk With Chair
 Leadtime Level: 5 Fixed

Data

	Past Due	01/02/98	01/09/98 L	01/16/98	01/23/98	01/30/98
+BRU	445	445	197	51-	299-	548-
+BR	445	445	197			
-FSCU		248	248	248	249	249
-FCST		248	248	248	249	249
-SOU					290	
-SO						
=ERU	445	197	51-	299-	548-	797-
=ER	445	197				45
+PLO			51	248	249	294
ATPU		445				
ATP		445	51	248		294
CATPU		445	445	445	155	155
CATP		445	496	744	703	997

F8=Code F13=Peg F14=Msg F16=Sup/Dem F19=Left F20=Right F24=More Keys MW

Generating a Master Schedule for All Items

Generating MPS for All Items

DRP and MPS regenerations use the same DREAM Writer program to produce a single level DRP or MPS schedule for all items that meet the data selection criteria. The program:

- Reads the selected forecast or sales orders
- Uses data from the DRP/MPS/MRP inclusion rules to calculate requirements for master planned items
- Does not explode planned orders to the bill of material components

Before the program generates a schedule, it deletes the message and time series tables for the selected items.

Processing Options for Master Planning Schedule

BUCKET INFORMATION:

1. Enter the Generation Start Date. _____
(Default is current date)
2. Enter the number of past due periods, (0, 1 or 2). _____
(Default is 0)
3. Enter the planning horizon periods. _____
(maximum of 52 periods):
 - a. Days (e.g. 5) _____
 - b. Weeks (e.g. 25) _____
 - c. Months (e.g. 6) _____

GENERATION DEFINITION:

4. Enter the Generation Mode: _____
 - 1 - Net Change
 - 2 - Gross Regeneration
5. Enter the Generation Type: _____
 - 1 - Single Level MPS/DRP
 - 2 - Planning Bill-Creates Forecast
 - 3 - Multi Level MPS Items
 - 4 - MRP with/without MPS
 - 5 - MRP with Frozen MPS

PHANTOM ITEMS:

6. Enter a '1' to generate messages and time series records for phantoms. _____

ON HAND ADJUSTMENTS:

7. Enter a '1' to decrease beginning available by safety stock quantity. _____
8. Enter the lot hold codes (up to 5) to be considered on hand, or enter a '*' to consider all held lots as _____

on hand. If left blank, held lots will not be considered on hand.

9. Enter a '1' by the following Receipt Routing quantities to be considered on hand.

- a. Quantity in Transit _____
- b. Quantity in Inspection _____
- c. User Defined Quantity 1 _____
- d. User Defined Quantity 2 _____

NOTE: Any quantity not included will be placed in the On Receipt bucket.

DAMPER DAYS:

10. Enter the Defer Damper days, (no defer message if less than 'X' number of days). _____

11. Enter the Expedite Damper days, (no expedite message if less than 'X' number of days). _____

SAFETY LEADTIME:

12. Enter the purchased item leadtime days. _____

13. Enter the manufactured item leadtime days. _____

FORECASTING INFORMATION:

14. Enter the Forecast Type to include. Up to 5 types can be included, (e.g. '0102BF'). If left blank, no forecast will be included. _____

15. Enter the Forecast Type for MPS to create when using Planning Bills. _____

RATE BASED SCHEDULING INFORMATION:

16. Enter the Schedule Type for rate based items. (Default is 'AC') _____

17. Enter a '1' to extend rate based adjustments to lower level items. _____

PURCHASE ORDER INFORMATION:

18. Enter the Document Type for purchase orders. (Default is 'OP') _____

WORK ORDER INFORMATION:

19. Enter the Document Type for work orders. (Default is 'WO') _____

20. Enter the Work Order Status at which messages will no longer be exploded to lower level items. If left blank, all messages will be exploded to lower level items. _____

INCLUSION RULES:

21. Enter the Version of Demand/Supply Inclusion Rules to be used. _____

PERFORMANCE ISSUES:

22. Enter a '1' to initialize the MPS/MRP Print Code. This Code is used for selecting records during the MPS/MRP print.
(See glossary for MRPD.)
NOTE: If left blank, the run time of the generation will be reduced. _____
23. Enter the User Defined Code Type that contains the list of quantity types to be calculated & written to the Time Series File (F3413). User Defined Code 34/QT contains a master list of quantity types that can be written and will be used as the default. _____
24. Enter a '1' clear the DRP/MPS/MRP Files before a Regeneration. This option should be used with EXTREME CAUTION. It will totally clear the following files:
F3411 - Message Detail File
F3412 - Pegging File
F3413 - Time Series File
NOTE: If a '1' is entered, it will improve performance and clean up any bad data in the files. _____
- PROCESS PLANNING:
25. Enter a '1' to generate planning in Process Mode. _____
NOTE: If left blank, the run time of the generation will be reduced.
- LOT EXPIRATION:
26. Enter a '1' to consider lot expiration dates in calculations. _____
- FORECAST CONSUMPTION PROCESSING:
27. Enter a '1' to use Forecast Consumption logic. _____

Data Selection

Base your selection on branch/plant, category codes (usually Master Planning Family), and planning code. Any selection from based-on table fields can be processed.

Data Sequence



Copy data sequence from the DREAM Writer example. Do not change this sequence or unpredictable results might occur.

WARNING: Copy data sequence from the DREAM Writer example. Do not change this sequence or unpredictable results might occur.

Reviewing Items for Master Schedule Selection

Use the Net Change Review program to review items that have changed, either through certain planned or unplanned activities, throughout the Manufacturing and Distribution Planning systems. You can locate a selected group of items by planner number, planning family, branch/plant, and specific planning codes. You can access related time series, inventory, and scheduling information forms for any of the items.



This program allows you to set the net change flag. Secure the program so that only a few people, such as master scheduling supervisors, have access.

WARNING: This program also allows you to set the net change flag. Secure the program so that only a few people, such as master scheduling supervisors, have access.

► To review items for master schedule selection

On Net Change Review

Opt	Chg	Item	Description
Y	DRP1		Napa Valley Cassette Box
Y	DRP2		Napa Valley CD Box
Y	DRP3		Napa Valley VCR Box
Y	MPDRP		Napa Valley Soft Side CD Case
Y	MPDRPST01		Napa Valley Soft Side CD Case
Y	MPDRPST02		Napa Valley Soft Side CD Case
Y	MPDRPST03		Napa Valley Soft Side CD Case
Y	MPDRPST04		Napa Valley Soft Side CD Case
Y	MPDRPST05		Napa Valley Soft Side CD Case
Y	MPDRPST06		Napa Valley Soft Side CD Case
Y	MPDRPST07		Napa Valley Soft Side CD Case
Y	MPDRPST08		Napa Valley Soft Side CD Case
Y	MPDRPST09		Napa Valley Soft Side CD Case
Y	MPDRPST10		Napa Valley Soft Side CD Case
Y	MPDRPST11		Napa Valley Soft Side CD Case

To locate the items for net change generation, complete the following fields:

- Branch/Plant
- Master Planning Family

On Net Change Review

To locate the items for net change generation, complete the following fields:

- Branch/Plant
- Master Planning Family

Processing Options for Net Change Summary

Enter the default Planning Code to display or "*" equals all.

Generating MPS for Selected Items

Generating a Master Schedule for Selected Items

DRP and MPS net change use the same DREAM Writer batch program as the DRP and MPS regenerations. You can further define the data selection to include only specific items on the Net Change Review form. When you run DRP Net Change or MPS Net Change, the system:

- Evaluates selected information
- Performs calculations
- Generates a time series and messages for the selected items

The system bases item selection from Net Change Review on the following types of activities:

- Bill of material changes
- Inventory transactions
- Forecast adjustments
- Work order changes
- Purchase order changes
- Leadtime rollup that results in new leadtime values
- Sales order changes
- Changes in parent order requirements

You should run Net Change on a regular basis to continually update your schedule. The program writes to the Action Message, Pegging, and Time Series tables. You can view the information that is generated by this program online by using the time series and message review programs.

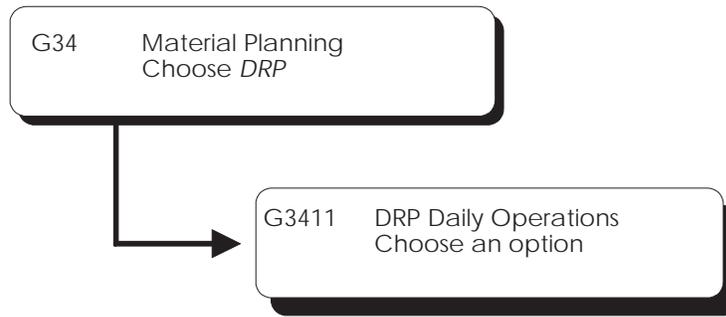
See Also

- *Generating a Master Schedule for All Items (P3482)* for the processing options for this program
- *Generating a Master Schedule for All Items* for the processing options for this program

Data Selection Values

The data selections are similar to the DRP/MPS generation, except for the net change flag. Set this flag to '1' to select items that have changed since the last generation of the program.

Work with the Master Schedule



Alternatively, to review information for Master Production Schedule, choose Daily MPS on the Material Planning Operations menu. Then, choose an MPS option on the MPS Daily Operations menu.

Working with the Master Schedule

DRP/MPS output consists of information in the time series and action messages. Use the time series information to decide whether to accept the planning that is suggested by the system or to override it. You should review the action messages for individual item numbers to determine which action, if any, to take.

Working with the master schedule consists of the following tasks:

- Reviewing DRP/MPS time series
- Reviewing planning families
- Working with messages
- Processing purchase order messages
- Adding a freeze code to a purchase order
- Adding a freeze code to a work order

Reviewing DRP/MPS Time Series

Use the DRP or MPS time series inquiry programs to review the master schedule. This is a record of time-phased supply and demand netting for selected items. This data is derived from the most recent generation or net change run. Use processing options in the DRP/MPS generation program to set up daily, weekly, or monthly time periods (buckets).

When you review a time series, you can:

- Review the following information for an item:
 - MPS adjusted and unadjusted quantities
 - Time-phased inventory activity in any unit of measure
 - Available to promise quantities in any valid unit of measure
- Identify the following information:
 - Time fences and item level leadtime
 - Cumulative leadtime occurrences
 - Manufacturing leadtime occurrences
- Choose rows of information to select, suppress, or both
- Toggle between two different quantity type displays that you specify in user defined code quantity lists
- Run an online single item DRP or MPS generation
- Summarize the following:
 - All demand lines into one DEM line
 - All supply lines into one SUP line
- Access the following:
 - Supply/Demand Inquiry, to view all actions that affect the item's quantities
 - Pegging Inquiry, to determine from where higher level demands are being generated
 - Message File Revisions, to review message detail and take any appropriate actions
 - Manufacturing Data Revisions, to verify item setup details
 - Detail Forecast Revisions, to review item forecasts and sales history
 - Rate Schedule Revisions, to review item rate schedules

To review the time series, complete one of the following tasks:

- Review DRP time series

- Review MPS time series

Quantity Types for DRP and MPS

Use the DRP or MPS Time Series Inquiry form to review the quantity types that the system has generated for the master schedule.

When you access DRP or MPS Time Series/ATP Inquiry, you can display different quantity types for the master schedule by creating a new user defined code table and changing the processing option to display this new table. You can also display two different tables, such as adjusted and unadjusted quantities, by changing the processing options.

Each table displays only those items that are pertinent to its application. For example, table 34/DR displays only those data items applicable to DRP items. If the code is not defined in table 34/DR, it will not appear on the DRP Time Series/ATP Inquiry form or report. DRP and MPS calculations are not affected by the appearance of this code.

If you do not specify a particular user defined code list, all quantity types display. However, the time series calculation is not affected by the quantity types that are not pertinent to the application.

Valid Quantity Types for DRP

The following lists the valid quantity types and descriptions that are defined for DRP in user defined code table 34/DR:

+BA	+ Beginning Available
+IR	+ In Receipt Routing
+PO	+ Purchase Orders
-LEXP	- Lot Expired
-FCST	- MPS/Forecast
-SHIP	- Shipped Quantity
-SO	- Sales Orders
-ID	- Interplant Demand
=EA	= Ending Available
+DRP	+ Distribution Requirements Plan
ATP	Available to Promise
CATP	Cumulative Available to Promise

Valid Quantity Types for MPS

The following lists the valid quantity types and descriptions that are defined for MPS in user defined code table 34/MS:

+BAU	+ Beginning Available (Unadjusted)
+BA	+ Beginning Available
+IR	+ In Receipt Routing
+POU	+ Purchase Orders (Unadjusted)
+PO	+ Purchase Orders
+WOU	+ Work Orders (Unadjusted)
+WO	+ Work Orders
+RSU	+ Rate Schedule (Unadjusted)
+RS	+ Rate Schedule
-LEXP	- Lot Expired
-FCSU	- MPS/Forecast (Unadjusted)
-FCST	- MPS/Forecast
-SHIP	- Shipped Quantity
-SOU	- Sales Orders (Unadjusted)

What You Should Know About

Period quantities

Period quantities are either:

- Adjusted — assumes that the user will process the messages.
- Unadjusted — assumes that the action messages will not be processed. The U at the end of quantity types indicates that period quantities are unadjusted.

Time series calculation

When you use a planning time fence rule that calculates the ending available that is based on the greater of forecast or customer demand, such as G, C, or H, the forecast is consumed. This means that the forecast is reduced by the amount of the customer demand in that same period.

ATP unadjusted calculation (ATPU)

Unadjusted ATP assumes that no action messages have been processed.

Negative ATP/ATPU

After you run the MPS generation, ATP/ATPU that have a negative value appear blank on the Time Series/ATP Inquiry form, except for the first period.

Cumulative available to promise unadjusted (CATPU) calculation

The following calculation assumes the user has not acted on the messages:

- $CATPU = \text{running total of ATPU}$

If ATPU is negative inside the planning time fence, then the system displays the resulting CATPU, whether it is positive or negative, in all previous time periods.

Suppressing blank lines

You can use a function key to suppress the quantity types that have no data in them.

Graphic display

You can choose to display the time series in a graph format.

▶ **To review DRP time series**

On DRP Time Series/ATP Inquiry

	Past Due	02.01.98	09.01.98 L	16.01.98	23.01.98	30.01.98
+BR	9850	9850	9473	9473	9473	9473
+IR						
+PO						
-LEXP						
-FCST		377				
-Ship		150				
-SO						
-ID						
=ER	9850	9473	9473	9473	9473	9473
+DRP						
ATP		9720				
CATPU		9720	9720	9720	9720	9720

To locate the time series for your item, complete the following fields:

- Branch/Plant
- Item Number

On DRP Time Series/ATP Inquiry

To locate the time series for your item, complete the following fields:

- Branch/Plant
- Item Number

► To review MPS time series

On MPS Time Series Inquiry

The screenshot shows a window titled "[3413] - MPS Time Series Inquiry". It has a menu bar with "Functions", "Tools", and "Help". The window contains several input fields: "Branch/Plant" (M30), "Start From Date", "Unit of Measure" (EA), "Item Number" (5120), and "Leadtime Level" (5 Fixed). Below these is a "Data" section with a table. The table has columns for "Past Due", "02.01.98", "09.01.98 L", "16.01.98", "23.01.98PM", and "30.01.98". The rows contain various codes and their corresponding values across these dates.

	Past Due	02.01.98	09.01.98 L	16.01.98	23.01.98PM	30.01.98
+BAU	502617	500834	500834	500834	500884	500884
+BR	502617	500834	500834	500834	500834	500684
+WOU	231			50	150	
+WO	231					
-SOU	2014				150	
-SO	2014				150	
=EAU	500834	500834	500834	500884	500884	500884
=ER	500834	500834	500834	500834	500684	500684
ATPU		500834		50		
ATP		500479				
CATPU		500834	500834	500884	500679	500679
CATP		500479	500479	500479	500479	500479

At the bottom of the window, there are keyboard shortcuts: F8=Code, F13=Peg, F14=Msg, F16=Sup/Dem, F19=Left, F20=Right, F24=More Keys, and MW.

To locate the time series for your item, complete the following fields:

- Branch/Plant
- Item Number

On MPS Time Series Inquiry

To locate the time series for your item, complete the following fields:

- Branch/Plant
- Item Number

Processing Options for Time Series

ITEM RECALCULATION:

1. Enter the Dream Writer version to use when submitting single item MPS/MRP/DRP recalculation. If left blank, version ZJDE0001 will be used. _____

PAST DUE PERIODS:

2. Enter the number of past due periods. (0, 1, or 2 are allowed values. 0 is the default.) _____

VALUES TO DISPLAY:

3. Enter the User Defined Code for the list of row descriptions to appear. (Required) _____
4. Enter the User Defined Code for the list of alternate rows to appear when using the row toggle function key. (Optional) _____

SUPPLY/DEMAND SUMMARY:

5. Enter a '1' to summarize the supply lines into one line and the demand lines into one line. _____

VERSIONS TO EXECUTE:

Enter the Dream Writer version to use for each program listed. If left blank, version ZJDE0001 will be used.

6. MPS/MRP/DRP Message Inq. (P3411) _____
7. Supply/Demand Inquiry (P4021) _____
8. Detail Forecast Revisions (P3460) _____
9. MPS/MRP/DRP Pegging Inq. (P3412) _____
10. Rate Schedule Revisions (P3104) _____

FORECAST CONSUMPTION PROCESSING

11. Enter '1' to process using Forecast Consumption Period logic _____

Reviewing Planning Families

After you generate DRP/MPS, you can review all item numbers that have messages. You can display the list of items that have messages using the following filters:

- Branch/Plant
- Thru Date
- Planning Code
- Message Type
- Stocking Type

- Planner Number
- Buyer Number
- Master Planning Family

► **To review planning families**

On Planning Family Review

Item	Description	Outstanding Messages
DRP1	Napa Valley Cassette Box	
DRP2	Napa Valley CD Box	
DRP3	Napa Valley VCR Box	
MPDRP	Napa Valley Soft Side CD Case	
MPDRPST01	Napa Valley Soft Side CD Case	
MPDRPST02	Napa Valley Soft Side CD Case	
MPDRPST03	Napa Valley Soft Side CD Case	
MPDRPST04	Napa Valley Soft Side CD Case	
MPDRPST05	Napa Valley Soft Side CD Case	
MPDRPST06	Napa Valley Soft Side CD Case	

To locate your planning family, complete the following fields:

- Branch/Plant
- Master Planning Family

On Planning Family Review

To locate your planning family, complete the following fields:

- Branch/Plant
- Master Planning Family

Processing Options for Planning Family Review

MPS TYPE CODES:

1. Enter the MPS Type Code to be displayed or a '*' for all MPS Types. _____

MANUFACTURING SCHEDULING WORKBENCH:

2. Enter the version of Manufacturing Scheduling Workbench to be used. Default is ZJDE0001. _____

MESSAGE FILE REVISIONS:

3. Enter the version of Message File Revisions to be used. Default is ZJDE0001. _____

ITEM AVAILABILITY:

4. Enter the version of Item Availability to be used. Default is ZJDE0001. _____

TIME SERIES:

5. Enter the version of Time Series to be used. Default is ZJDE0001. _____

DETAIL FORECAST MAINTENANCE:

6. Enter the version of Detail Forecast Maintenance to be used. Default is ZJDE0001. _____

SUPPLIER SCHEDULING REVISIONS:

7. Enter the version of Supplier Schedule Revisions to be used. Default is ZJDE0001. _____

SUPPLIER MASTER:

8. Enter the version of Supplier Master to be used. Default is ZJDE0001. _____

PURCHASE ORDER GENERATION:

9. Enter a '1' to default the tax area from the "Ship-To" address book number. If left blank, the tax area will be defaulted from the "Supplier" address number. _____

Working with Messages

As an alternative to processing messages using Planning Family Review, you can access the messages directly using Detail Message Review program.

Complete the following tasks:

- Review detail messages
- Process messages for work orders

Work order messages on Detail Message Review have an order type of WO.
Purchase order messages on Detail Message Review have an order type of OP.

The action messages for DRP/MPS/MRP are defined in user defined code table 34/MT. The character codes are hard-coded. Do not change the character codes in this table.



Depending on the organization of your company, the person working with the DRP/MPS/MRP action messages should coordinate with Shop Floor or Purchasing personnel before taking action on messages affecting these departments.

WARNING: Depending on the organization of your company, the person working with the DRP/MPS/MRP action messages should coordinate with Shop Floor or Purchasing personnel before taking action on messages affecting these departments.

What You Should Know About

Placing messages on hold

You can place a message on hold so that the system does not change the message during the next generation (for example, to preserve a manual reminder). Because the system does not indicate that a message is on hold, J.D. Edwards recommends that you add a planner remark that indicates the message is on hold.

Clearing messages

You can remove a message from Detail Message Review if you do not choose to process it. To view the message again after it has been removed, enter a Y in the Cleared field.

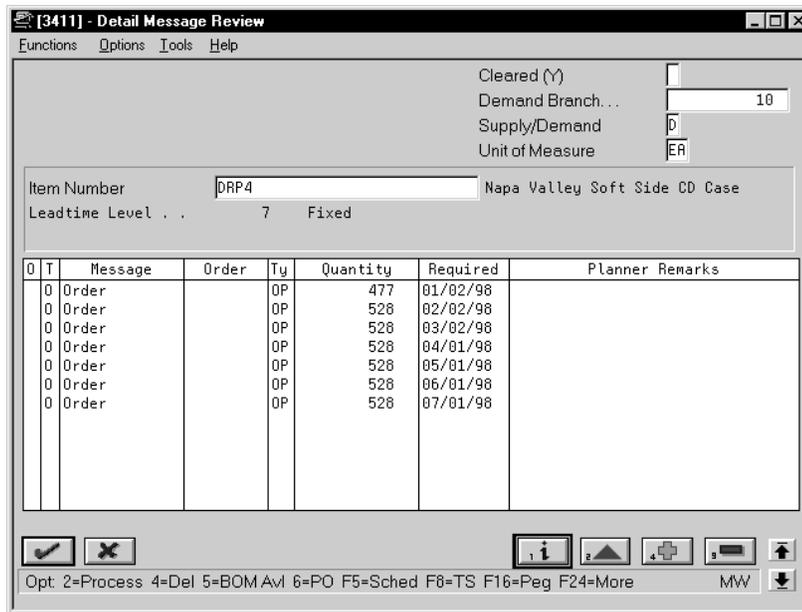
Deleting messages

You can delete any message that you have reviewed but did not process.

► To review detail messages

After you generate DRP/MPS, you review the action messages for the individual item numbers. After you review the message, you can place the message on hold, or clear, delete, or process the message.

On DRP Detail Message Review



Complete the following fields to locate the messages for the item:

- Branch/Plant
- Item Number

On DRP Detail Message Review

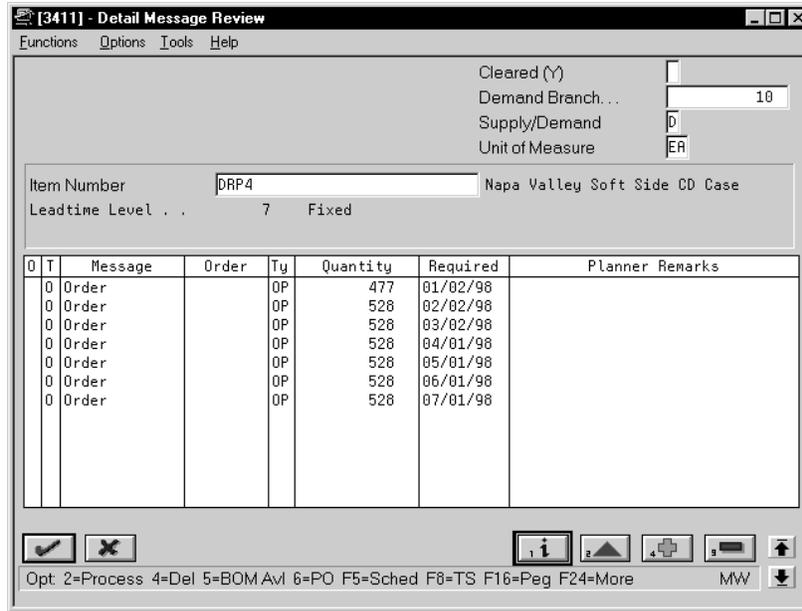
Complete the following fields to locate the messages for the item:

- Branch/Plant
- Item Number
- Decreased

► To process messages for work orders

After you review the messages, you can process them. When you process a message, the system creates work order headers in the Work Order Master table (F4801) and assigns work order numbers. No parts list or routing is attached at this time.

On DRP Detail Message Review



1. To locate the message for the item, complete the following fields:
 - Branch/Plant
 - Item Number
2. Choose the appropriate selection option to process the message.



Based on the message type, the system processes the work order as follows:

- Released
- Canceled
- Deferred
- Expedited
- Increased

WARNING: Based on the message type, the system processes the work order as follows:

- Released
- Canceled
- Deferred
- Expedited
- Increased

On DRP Detail Message Review

1. To locate the message for the item, complete the following fields:
 - Branch/Plant
 - Item Number
2. Choose the appropriate selection option to process the message.

What You Should Know About

Processing messages	When you process a message, the system removes it from the Detail Message Review form. To view the message again, enter a Y in the Cleared field and scroll to the end of the message list.
Fixed order quantity (FOQ)	When you use FOQ, MPS/DRP does not generate an Increase message for an existing order to cover demand. Instead, the system generates Order messages in multiples of FOQ as needed to cover the demand.
Order status	When you create or update an order, you can modify the status to indicate the stage of production. To do so, enter a new status in the Status field in the fold area. The system displays this field only for those messages that are related to order processing.

Processing Purchase Order Messages

You can process a purchase order message using one of following options:

- Process a single action message without blanket order checking or consolidation
- Process one or more action messages with blanket order checking
- Process messages using purchase order consolidation to place more than one item on a purchase order
- Process purchase order messages using a planning family
- Process messages using the Supplier Scheduling system

J.D. Edwards recommends that you set up different versions of the previous options to expedite processing messages. That is, set up one version to process a single action message without blanket order checking or consolidation, another version to process one or more action messages with blanket order checking, and so on.

Complete the following tasks:

- Process a single action message
- Process messages using consolidation

Depending on how you set the processing option for the DRP/MPS generation program, the program creates either a purchase requisition (OR) or a purchase order (OP). The program places a user ID on the purchase order and uses the system date as the date that the purchase order was created.

In addition, the program creates the purchase order in the purchasing unit of measure, even though the action message displays the primary unit of measure. The program makes the proper unit of measure conversions.

What You Should Know About

Processing messages using blanket order checking

A processing option controls whether the system verifies the existence of a blanket order for the item you are processing. If the part has any open blanket orders, the system displays the Blanket Order Release form in the Purchasing system. The system releases the amount that you are processing against the blanket order.

Process messages using a planning family

You can process messages by family using DRP Planning Family Review. After you select all the items that you want to process, DRP Detail Message Review appears for each item that you selected. Process the messages for each item in the same way you process messages using consolidation.

Freezing purchase orders

When you sign a purchasing contract with a supplier, you can freeze purchase orders in time and quantity so that DRP/MPS does not generate any action messages to change orders.

Consolidating multiple item numbers

You can consolidate several order lines for the same supplier into one purchase order. Do this by setting a processing option for DRP Detail Message Review.

See Also

- *Processing Orders (P31410)*
- *Generating a Supplier Schedule (P3482)* for information on processing messages using this system
- *Reviewing Planning Families (P3401)*
- *Processing Orders*

- *Generating a Supplier Schedule* for information on processing messages using this system
- *Reviewing Planning Families*

▶ **To process a single action message**

On Detail Message Review

O	T	Message	Order	Ty	Quantity	Required	Planner Remarks
0		Order		OP	505	01/02/98	
0		Order		OP	528	02/02/98	
0		Order		OP	528	03/02/98	
0		Order		OP	528	04/01/98	
0		Order		OP	528	05/01/98	
0		Order		OP	528	06/01/98	
0		Order		OP	528	07/01/98	
0		Order		OP	528	08/03/98	

1. Complete the following required fields:
 - Demand Branch
 - Item Number
2. Choose the selection option next to the message that you want to process.
3. Accept the record to process the message.
4. Choose the selection option to exit the program.

The system displays Suppliers Selected For Order.

0	Supplier	Supplier Name	Cost	Branch	Order	Ty
	4343	Vector Manufacturing C	5.050,00	20		0P

Opt: 1=Items Selected 9=Cancel F6=Create Order F24=More Keys

- On Suppliers Selected For Order, choose the selection option next to the supplier for whom you want selected items to be canceled.

The system displays Item Selected For Order.

0	Quantity	UM	Unit/Extended	Request	Item/Account
	505	EA	10,0000	02.01.98	DRP4

Opt: 9=Cancel Selected Item F5=Refresh F24=More Keys

- On Items Selected For Order, choose the selection option to cancel the items that you do not want to process.
- Choose the exit selection to close Items Selected For Order.
- On Suppliers Selected For Order, choose the selection option next to the supplier for whom you want a purchase order created.
- Choose the selection option to create the purchase order.

The system assigns a purchase order number and displays it in the Order field.

- Choose the selection option to close the window.
- To display the message you processed, complete the following field:

- Cleared
12. Use the roll keys to view the message that you processed and the order number to which it was assigned.

On Detail Message Review

1. Complete the following required fields:
 - Demand Branch
 - Item Level
2. Choose the selection option next to the message that you want to process.
3. Accept the record to process the message.
4. Choose the selection option to exit the program.

The system displays Suppliers Selected For Order.

5. On Suppliers Selected For Order, choose the selection option next to the supplier for whom you want selected items to be canceled.

The system displays Item Selected For Order.

6. On Items Selected For Order, choose the selection option to cancel the items that you do not want to process.
7. Choose the exit selection to close Items Selected For Order.
8. On Suppliers Selected For Order, choose the selection option next to the supplier for whom you want a purchase order created.
9. Choose the selection option to create the purchase order.

The system assigns a purchase order number and displays it in the Order field.

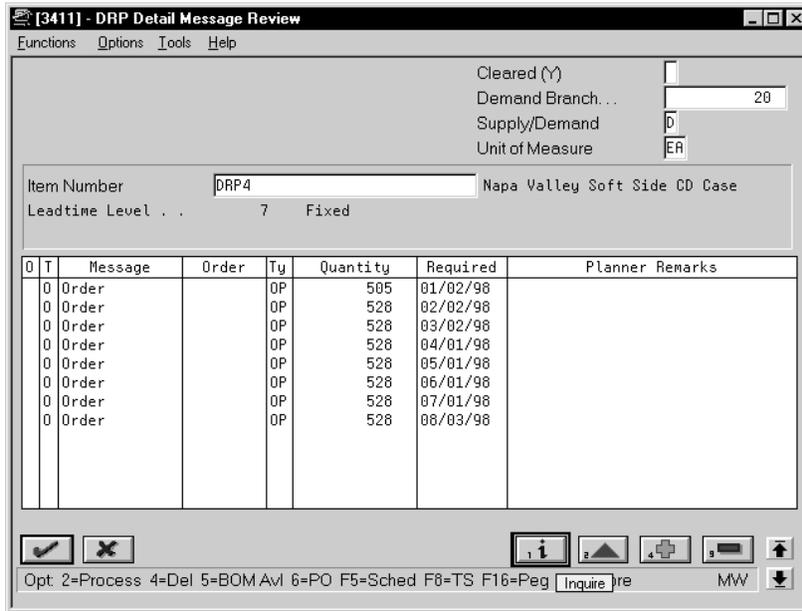
10. Choose the selection option to close the window.
11. To display the message you processed, complete the following field:
 - Cleared
12. Use the roll keys to view the message that you processed and the order number to which it was assigned.

To process messages using consolidation

The system creates one purchase order header with as many detail line items as necessary. Dates correspond to the messages. If a part has more than one supplier, you can change the supplier number in the message fold area. The system produces a purchase order for each supplier.

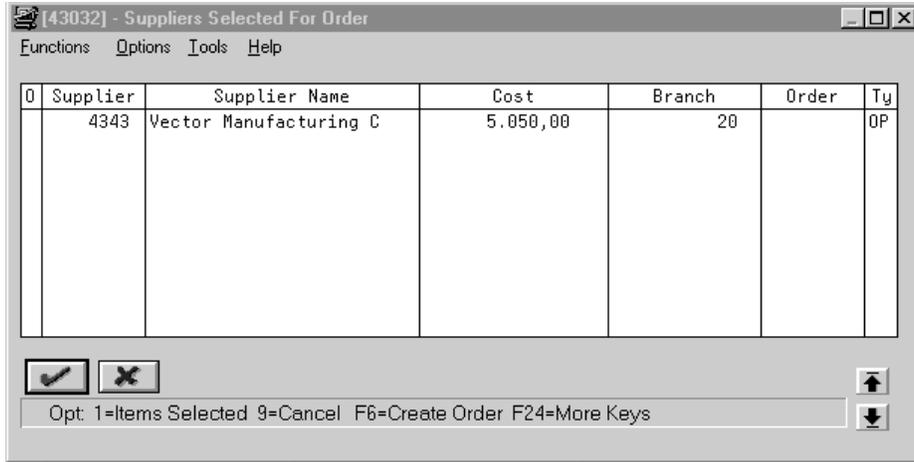
On DRP Daily Operations (G3411)

1. Access the processing options for DRP Detail Message Review.
2. Set the appropriate processing option to consolidate all messages for the same supplier into one purchase order.
3. Choose DRP Detail Message Review.



4. On DRP Detail Message Review, complete the following required fields to locate the messages for the item:
 - Demand Branch
 - Item Level
5. Choose the selection option next to the messages that you want to process.
6. Accept the record to process the messages.
7. Choose the selection option to exit the program.

The system displays Suppliers Selected For Order.



8. On Suppliers Selected For Order, choose the selection option next to the supplier for whom you want a purchase order created.
9. Choose the selection option to create the purchase order.

The system assigns a purchase order number and displays it in the Order field.

10. Choose the selection option to close the window.
11. To display the messages you processed, complete the following field:
 - Cleared
12. To view the messages you processed and the order number that was assigned to them, use the roll keys.

The system creates one purchase order header with as many detail line items as necessary. Dates correspond to the messages. If a part has more than one supplier, you can change the supplier number in the message fold area. The system produces a purchase order for each supplier.

1. Access the processing options for DRP Detail Message Review.
2. Set the appropriate processing option to consolidate all messages for the same supplier into one purchase order.
3. Choose DRP Detail Message Review.
4. On DRP Detail Message Review, complete the following required fields to locate the messages for the item:
 - Demand Branch
 - Item Level
5. Choose the selection option next to the messages that you want to process.
6. Accept the record to process the messages.

7. Choose the selection option to exit the program.

The system displays Suppliers Selected For Order.

8. On Suppliers Selected For Order, choose the selection option next to the supplier for whom you want a purchase order created.
9. Choose the selection option to create the purchase order.

The system assigns a purchase order number and displays it in the Order field.

10. Choose the selection option to close the window.
11. To display the messages you processed, complete the following field:
 - Cleared
12. To view the messages you processed and the order number that was assigned to them, use the roll keys.

Processing Options for Message File Revisions

PURCHASE ORDER INFORMATION:

1. Enter a '1' to consolidate all messages for a supplier on one purchase order. _____
2. Enter the version of Purchase Order Entry (P4311) to be called. (Default is ZJDE0001) _____
3. Enter the version of Open Purchase Orders (P430301) to be called. (Default is ZJDE0001) _____
4. Enter the version of the Supplier Master to be called. (Default is ZJDE0001) _____

WORK ORDER INFORMATION:

5. Enter the status for Cancelled Orders. _____
6. Enter the version of Work Order Entry (P48013) to be called. (Default is ZJDE0001) _____
7. Enter the version of Open Work Orders (P31225) to be called. (Default is ZJDE0001) _____

BLANKET ORDER INFORMATION:

8. Enter the Document Type associated with Blanket Orders. If left blank open blanket orders will not be used. _____
9. Enter the version of Blanket Order Release (P43060) to be called. _____

(Default is ZJDE0001)

PEGGING INQUIRY:

10. Enter the version of Pegging Inquiry (P3412) to be called. _____
(Default is ZJDE0001)

SUPPLY AND DEMAND INQUIRY:

11. Enter the version of Supply and Demand Inquiry (P4021) to be called. _____
(Default is ZJDE0001)

RATE SCHEDULE REVISIONS:

12. Enter the version of Rate Schedule Revisions (P3104) to be called. _____
(Default is ZJDE0001)

TIME SERIES:

13. Enter the version of Time Series (P3413) to be called. _____
(Default is ZJDE0001)

BILL AVAILABILITY:

14. Enter the version of Bill Availability (P30205) to be called. _____
(Default is ZJDE0001)

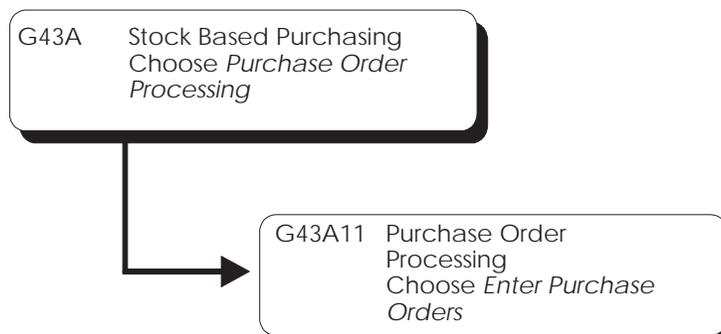
TRANSFER ORDERS:

15. Enter the version of Transfer Order Entry (P4242) to be called. _____
(Default is ZJDE0001)

SUPPLY/DEMAND DEFAULT:

16. Enter the default mode for viewing Supply/Demand Branch Messages: _____
D - Demand Branch in header
S - Supply Branch in header
If left blank, the data dictionary default is used.

Adding a Freeze Code to a Purchase Order



You can freeze the time and quantity values in the purchase order so that DRP/MPS does not generate any action messages to change the order. You freeze purchase orders before negotiations are final or when a purchasing contract has been signed with a supplier.

► To add a freeze code to a purchase order

On Enter Purchase Orders

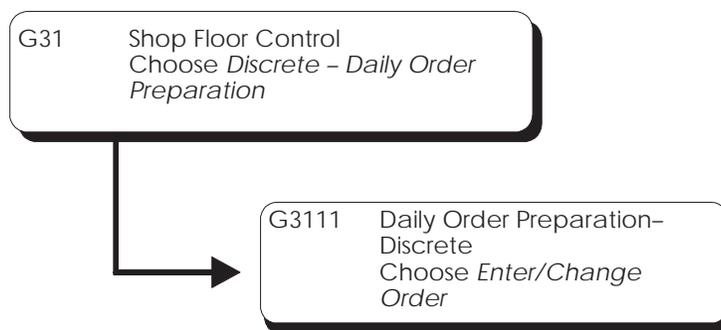
1. To locate your purchase order, complete the following fields:
 - Branch/Plant
 - Order Number
2. On the item line, access Purchasing Information.

3. On Purchasing Information, complete the following field to identify the purchase order as frozen:
 - Freeze Code

On Enter Purchase Orders

1. To locate your purchase order, complete the following fields:
 - Branch/Plant
 - Order Number
2. On the item line, access Purchasing Information.
3. On Purchasing Information, complete the following field to identify the purchase order as frozen:
 - Freeze Code

Adding a Freeze Code to a Work Order



You can freeze the time and quantity values in the work order so that DRP/MPS does not generate any action messages to change the order. You freeze work orders when the order is within the freeze time fence.

► **To add a freeze code to a work order**

On Enter/Change Order

1. To locate the work order, complete the following field:
 - Work Order Number
2. To identify the work order as frozen, complete the following field:
 - Freeze Code

On Enter/Change Order

1. To locate the work order, complete the following field:
 - Work Order Number
2. To identify the work order as frozen, complete the following field:
 - Freeze Code

Field	Explanation
Work Order Freeze Code	A code that indicates if the order is frozen. MPS/MRP will not plan for frozen orders. Valid codes are: Y Yes, freeze the order N No, do not freeze the order (Default)



Exercises

See the exercises for this chapter.

Validate the Master Schedule

Validating the Master Schedule

After you create the master schedule, validate it to ensure that you have sufficient work center capacity. Use the Rough Cut Capacity Planning (RCCP) batch program to generate capacity planning information.

In the J.D. Edwards software, the same batch program generates capacity planning information for both RCCP and Capacity Requirements Planning (CRP). The only difference is in the work centers that you identified in the data selection.

The system uses the following inputs to RCCP:

- Firm MPS work orders and routing instructions
- Planned MPS work orders and routing instructions

If critical work centers appear in the routings of component work orders that are generated by Material Requirements Planning (MRP), then the system can also include MRP orders in the RCCP, because both RCCP and CRP use the same batch program.

The system generates the following outputs from RCCP:

- Over-capacity and under-capacity messages
- Work center load
- Work center load graph
- Period summary

Rough Cut Capacity Planning consists of:

- Identifying critical work centers
- Identifying the pacing resource for critical work centers
- Calculating the rated capacity for critical work centers
- Calculating the MPS load for critical work centers

The pacing resource for critical work centers is either labor or machine, depending on which one would increase the work centers' capacity. A work

center is paced by labor if adding additional employees to the work center increases capacity. A work center is paced by machine if adding machines adds capacity.

Validating the master schedule consists of the following tasks:

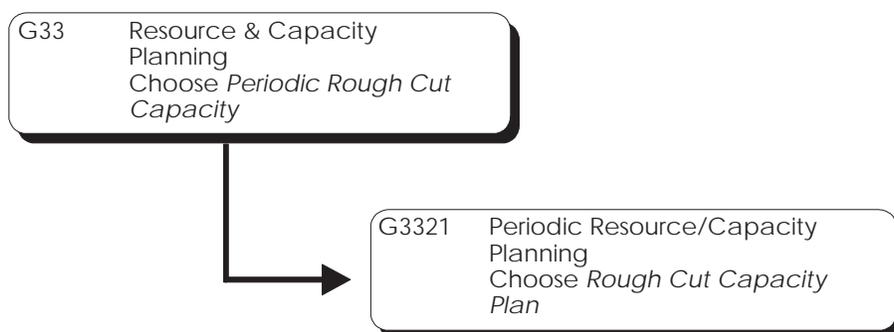
- Generating RCCP
- Reviewing work schedules on the dispatch list
- Reviewing rate schedule and work center loads

What You Should Know About

Revising resource units The resource units indicate the hours that are associated with a work center for each workday on the Work Day Calendar. The system uses this information to backschedule work orders in the Shop Floor Control system and to calculate available hours for capacity planning. You can manually enter or revise resource unit information for each work center and for each workday using the Enter/Change Resource Units program.

Recalculating work center hours Use the Refresh Resource Units DREAM Writer program to recalculate the work center hours. You can use this program only for processing data. It does not produce a printed report. However, you can view the results of the most recent refresh operation on Work Center Resource Units.

Generating RCCP



Use Rough Cut Capacity Plan to compare prospective MPS resource requirements to the capacity available in critical work centers. Rough Cut Capacity Plan (RCCP) indicates if you should revise the master schedule to create feasible work loads or improve use of limited resources.

Before You Begin

- Report hours and quantities for operations that are complete or partially complete to ensure that the figures for Released Load remaining for existing work orders are correct. See *Working with Hours and Quantities* in the *Shop Floor Control Discrete Manufacturing Guide*.
- Verify that resource units exist for all critical work centers in your generation. See *Setting Up Resource Units* in the *Shop Floor Control Discrete Manufacturing Guide*.
- Set up supply and demand inclusion rules for RCCP. See *Setting Up Supply and Demand Inclusion Rules*.
- Run Master Production Schedule. See *Generating a Supplier Schedule*.

What You Should Know About

Reviewing RCCP

After you generate RCCP, you can review the capacity load to determine if you need to change capacity or the scheduled load.

Reviewing work center load

Use Review Work Center Load to display the loads and capacity information for the work center that you select. The information is dependent on the Prime Load code that you entered for the work center on Work Center Revisions.

Use the Work Center Load Graph program to view the load versus rated capacity (percent) bar chart for a work center. The numbers across the top are the percent of the rated capacity consumed by load during that period. The information is dependent on the Prime Load code that you entered for the work center on Work Center Revisions.

Reviewing period summary

Use Review Period Summary to review specific items that make up the capacity load for a defined period for a work center. You can view the detail of all current and future orders that have been scheduled to enter a work center.

The system summarizes the load by period using the unit of measure that you select. The system also displays the percent of total load planned for that period for an item on an order.

Calculating rated capacity

To calculate rated capacity for critical work centers, the system uses the following standard formula for calculating rated capacity:

- Number of employees (or machines) x hours per day x efficiency factor x utilization factor

You can manually calculate efficiency by dividing standard hours by actual hours. For example, if it takes a crew 10 hours to complete a job that has standard hours established at 8 hours, the crew is working at 80% efficiency ($8 / 10 = .80$).

For reference, the inverse (actual hours / standard hours) is called realization. The goal is to approach 1.0 realization.

Utilization is calculated by finding the number of hours in a day that the work center is actually available for working load to standards. Therefore, 100% use is an unrealistic goal because preventative maintenance, employee breaks, and other typical needs affect utilization.

Calculating MPS load

You calculate the MPS load for critical work centers by using either the routing table for planned work orders (+PLO) or the routing instruction table for firm work orders (+WO) with a routing attached. If the work order is firm (header created) but does not have a routing instruction attached, the system uses the routing table. The formulas for calculating MPS load are:

- Planned orders x pacing hours from the routing table
- Firm orders x pacing hours from the routing instruction table

The entry in the Prime Load Code field in the Work Center Master table determines the type of pacing at the work center.

Operations are backscheduled using the same logic in the Shop Floor Control system. This operation schedule places load into the proper time frame. You must enter the time basis code and order quantity into the equation for load calculation.

The system uses the following formula to calculate the load for an operation:

- Work order quantity x number of packing hours on routing/time basis code

The system generates messages that indicate if your load is either over- or under-capacity.

See Also

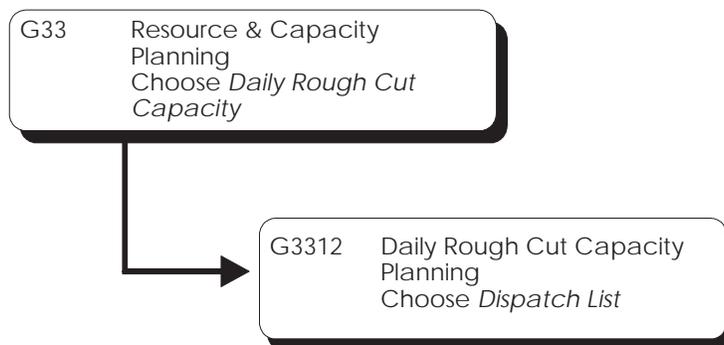
- *Entering Resource Units Manually (P3007)*
- *Reviewing Dispatch Groups (P3301)*
- *Reviewing Period Summaries (P3312)*
- *Reviewing Message Detail (P3311)*
- *Reviewing Work Schedules (P31220)*
- *Reviewing Work Center Loads (P3313)*
- *Reviewing Rate Schedules (P31224)*
- *Entering Resource Units Manually*
- *Reviewing Dispatch Groups*
- *Reviewing Period Summaries*
- *Reviewing Message Detail*
- *Reviewing Work Schedules*

- *Reviewing Work Center Loads*
- *Reviewing Rate Schedules*

Processing Options for CRP/RCCP Regeneration

1. Enter the percent under rated capacity to generate a Under Capacity Message. _____
2. Enter the percent over rated capacity to generate a Over Capacity Message. _____
3. Enter the Branch to be processed. _____
4. Enter the Version of Supply/Demand Inclusion Rules to use. _____
5. Enter the Capacity Mode
"2" = Rough Cut Capacity Planning
"3" = Capacity Requirements Planning _____
6. Back-Scheduling Information:
- Enter the Unit of Measure Code _____
7. Enter a '1' to Roll the Work Centers into their Dispatch Group. _____

Reviewing Work Schedules on the Dispatch List

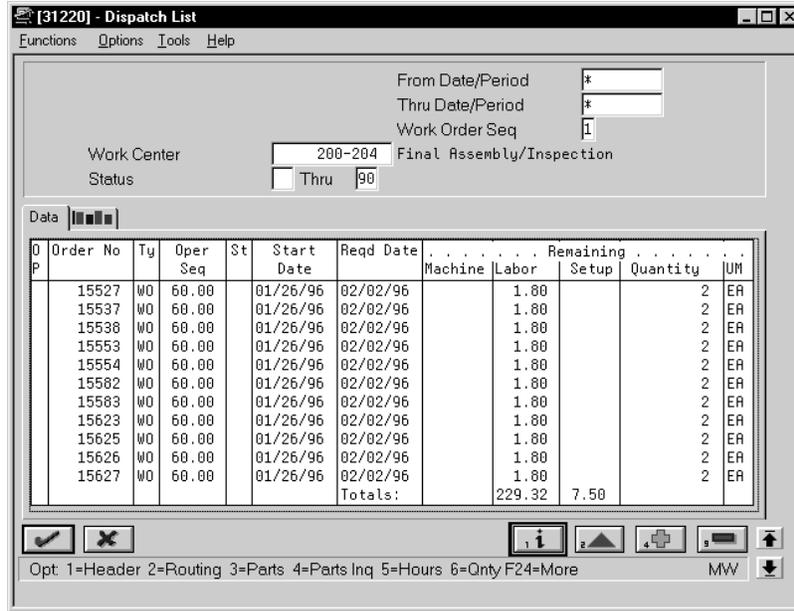


Use Dispatch List to locate and update work center scheduling information. This workbench environment serves as a starting point for work center scheduling and the release of work to the floor. Use this program to:

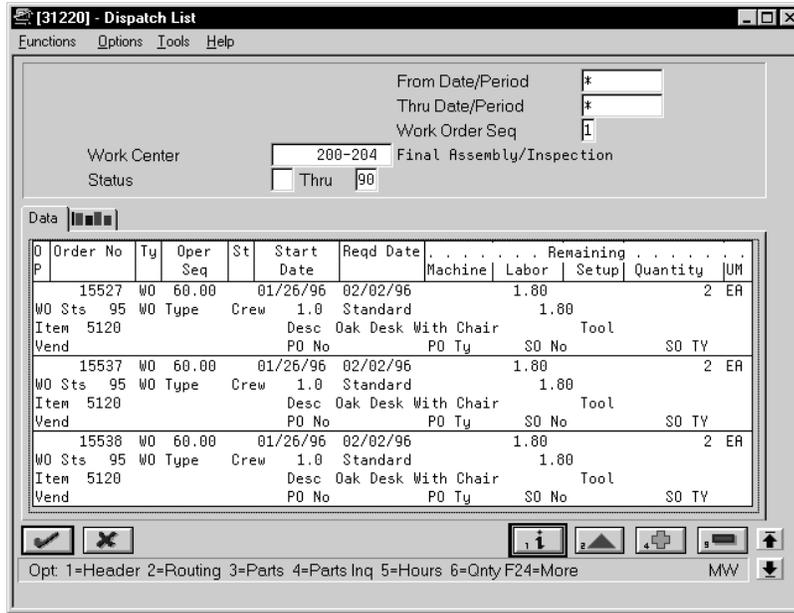
- Access work order information, including the header, the parts list, and the routing instructions
- Display work order information, such as work center, remaining labor, and machine and setup hours
- Sort work orders by start date, requested date, or operations status code
- Change the work order status code, start date, or requested date

► **To review work schedules on the dispatch list**

On Dispatch List



1. Complete the following fields:
 - Work Order Sequence
 - Work Center
 - Status Through
2. Access the fold area for additional information for a work order.



Field	Explanation
Work Order Sequence	A code that determines the sequence in which transactions are displayed. You use the From and Thru Date ranges to select transactions according to the sequence. Valid codes are: 1 Display work orders in start date order. 2 Display work orders in requested date order.
Run Machine – Remaining	The remaining machine hours for an operation. The remaining hours are calculated by taking the total hours minus the quantity completed divided by the standard quantity times the total hours.
Run Labor – Remaining	These are the remaining labor hours for an operation. The remaining hours are calculated by taking the total hours minus the quantity completed divided by the standard quantity times the total hours.
Hours – Setup Labor Hours – Remaining	These are the remaining setup labor hours for an operation. The remaining hours are calculated by subtracting the setup hours recorded from the standard setup hours.
Units – Quantity Remaining	This is the remaining quantity for an operation. The remaining quantity is calculated by subtracting the quantity completed from the standard quantity.

On Dispatch List

3. Complete the following fields:
 - Work Order Sequence

- Work Center
 - Status Through
4. Access the fold area for additional information for a work order.

Processing Options for Operation Dispatch Inquiry

DEFAULT STATUS INFORMATION:

1. Enter the From Status. _____
2. Enter the Thru Status. _____

DEFAULT DATE INFORMATION:

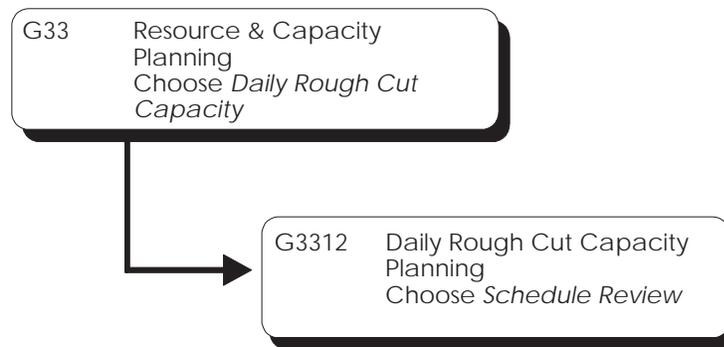
3. Enter the number of days prior to today's date for the From Date. _____
4. Enter the number of days after today's date for the Thru Date. _____

DREAM WRITER VERSIONS:

5. Enter the version of Work Order Parts Inquiry to execute. If left blank, 'ZJDE0001' will be used. _____

Reviewing Rate Schedule and Work Center Loads

Reviewing Loads

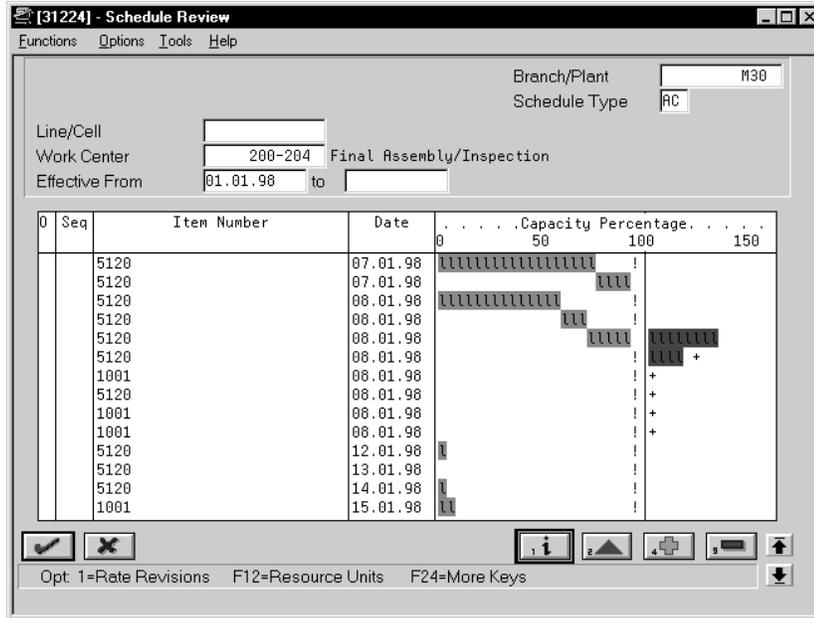


Use Schedule Review to review the rate schedule load and the work order load for a work center for a day, week, or month. You can also select a specific date range for which to view the load for the work center. If you need to adjust the scheduled load at the work center, you can access several different forms to make adjustments.

You can use Schedule Review for rate based items and as an alternative for viewing load on a work center. A processing option allows you to include work order-generated loads before or after rate loads.

► To review rate schedule and work center loads

On Schedule Review



To locate your work center schedule, complete the following fields:

- Branch/Plant
- Schedule Type
- Work Center

On Schedule Review

To locate your work center schedule, complete the following fields:

- Branch/Plant
- Schedule Type
- Work Center

Processing Options for Scheduling Review

SCREEN DEFAULTS:

Enter the values to preload to the screen at initial inquiry. If left blank, no value will be preloaded.

- 1. Schedule Type. _____
- 2. Resource Unit of Measure _____

VERSIONS TO EXECUTE:

- 3. Enter the version of Rate Revisions to call. Default is 'ZJDE0001'. _____

DATE DISPLAY

- 4. Enter one of the following for the subfile dates to display: _____
 - "1" = Monthly
 - "2" = Weekly
 - "3" = Daily
 The default is Daily ("3").

WORK ORDER PROCESSING:

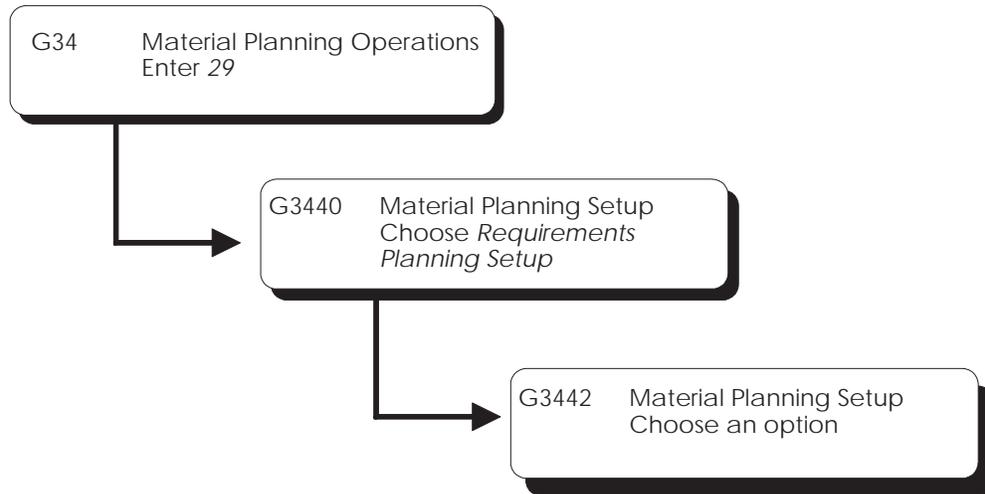
- 5. Enter a '1' to include Work Order generated loads BEFORE Rate loads. Enter a '2' to include Work Order generated loads AFTER Rate loads. If left blank, no Work Order loads will be recognized. _____
- 6. Enter the operation status 'from' and 'to' values to use to select active operations to include.
 - a. From Status _____
 - b. Through Status. _____



Exercises

See the exercises for this chapter.

Set Up DRP, MPS, and RCCP



Setting Up DRP, MPS, and RCCP

Before you can successfully generate DRP, MPS, and RCCP output, you must define the information to use during processing. The system uses setup information to determine how to select and display data.

You must set up some of this information in other systems, such as Shop Floor Control and Inventory Management.

Complete the following tasks:

- Set up supply and demand inclusion rules
- Set up message types for DRP, MPS, and RCCP
- Set up time fence rules for DRP, MPS, and RCCP
- Set up forecast consumption periods
- Set up the rough cut capacity display

Setting Up Supply/Demand Inclusion Rules

You set up supply and demand inclusion rules to display the supply, demand, and available quantities for an item. The source of these quantities in supply and demand equations are as follows:

On-hand inventory	Quantity on hand – Hard commits – Quantity on sales orders – Quantity on work orders
Purchase orders	+ Open quantity on purchase orders
Manufacturing work orders	+ Quantity entered on work order – Quantity shipped
Safety stock	+ Safety stock
Sales orders	+ Quantity entered on sales order – Quantity shipped – Quantity canceled
Work order requirements	+ Quantity required + Quantity issued
Co-/by-products supply from work orders	+ Quantity ordered – Quantity completed
Co-/by-products supply from rates	+ Quantity Ordered – Quantity completed

▶ **To set up supply and demand inclusion rules**

On Supply/Demand Inclusion Rules

[34004] - Supply/Demand Inclusion Rules

Functions Options Tools Help

Selected/All (S/A) [A]

Inclusion Code [CRP] RCCP/CRP Work Order Rules

Skip to Order Type [WO]

Opt	S	Or	Ln	Sts	Status Description
		Ty	Ty	Val	
	Y	WO		A	Approved ECO
		WO		AI	Additional data required (ECO)
		WO		D	Disapproved ECO
		WO		EM	Emergency Order
		WO		E1	ECO Entered
		WO		E2	Preliminary Workup
		WO		E3	Approval Pending
		WO		E4	ECO Approved
		WO		E5	ECO Implemented
		WO		IA	Inactive Work Order
		WO		M	Maintenance Work Request
		WO		M*	MWO Waiting Manager Approval
		WO		MA	MWO Approved

Opt: 4=Select Line 9=Delete Line F24=More Keys MW

- To locate the status values for your inclusion code, complete the following fields:
 - Inclusion Code
 - Skip to Order Type
- Choose the work order statuses to include in supply and demand calculations.

Field	Explanation
Inclusion Code	<p>A user defined code (system 40/type RV) that identifies an inclusion rule that you want the system to use for this branch/plant. The Manufacturing and Advanced Warehouse Management systems use inclusion rules as follows:</p> <ul style="list-style-type: none"> For Manufacturing <ul style="list-style-type: none"> Allows multiple versions of resource rules for running MPS, MRP, or DRP. For Advanced Warehouse Management <ul style="list-style-type: none"> Allows multiple versions of inclusion rules for running putaway and picking. The system processes only those order lines that match the inclusion rule for a specified branch/plant.

Field	Explanation
Order Type	<p>A user defined code (system 00/type DT) that identifies the type of document. This code also indicates the origin of the transaction. J.D. Edwards has reserved document type codes for vouchers, invoices, receipts, and time sheets, which create automatic offset entries during the post program. (These entries are not self-balancing when you originally enter them.)</p> <p>The following document types are defined by J.D. Edwards and should not be changed:</p> <ul style="list-style-type: none">P Accounts Payable DocumentsR Accounts Receivable DocumentsT Payroll DocumentsI Inventory DocumentsO Order Processing DocumentsJ General Accounting/Joint Interest Billing Documents <p>..... <i>Form-specific information</i></p> <p>If you are using the Skip to Order Type field, you can enter an order type code and press Enter to display only rules about that order type. To see the whole set of order types included in the resource rules, leave this field blank and use the Roll keys.</p>

Processing Options for Supply/Demand Inclusion Rules

- WORK ORDER DOCUMENT TYPES:
1. Enter the Work Order Document Types that you want to setup Inclusion Rules for. The document types can be stacked one after the other for multiple document types. If left blank, 'WO' will be used.

Setting Up Message Types for DRP, MPS, and RCCP

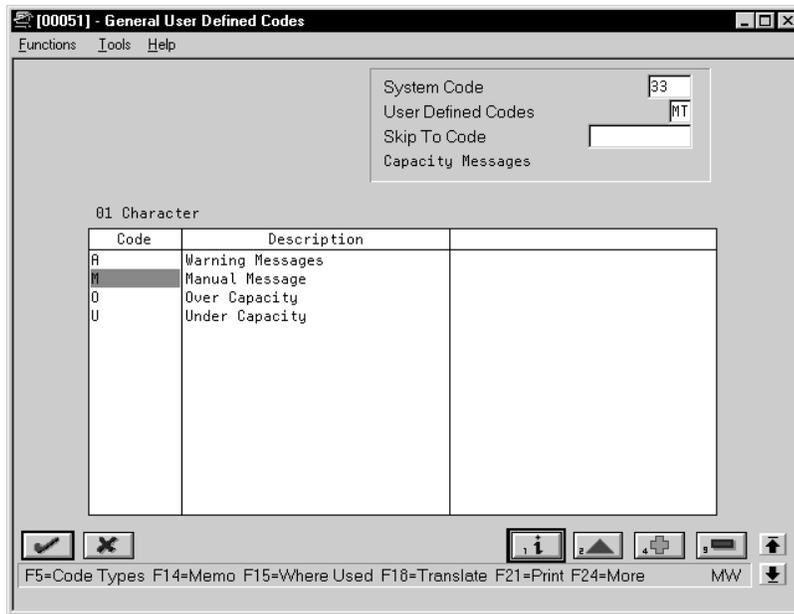
Message types are already defined for all the messages that the system can create when you generate DRP, MPS, and so on. Because the character code is hard coded, you can change the description, but not the function of the message type.

► To set up message types

On Action Messages

Code	Description	Description-2
A	Warning Messages	User Controlled
B	Order & Expedite	
C	Cancel	
D	Defer	
E	Expedite	
F	Frozen Order	User Controlled
G	Increase Order Quantity to	User Controlled
H	Decrease Rate Quantity to	
I	Increase Rate Quantity to	
L	Decrease Order Quantity to	User Controlled
M	Manual Reminder	
N	Create Rate	
O	Order	
P	Firm Order	

- To set up an action message, complete the following fields:
 - Code
 - Description
- To locate the action messages for RCCP, enter 33 in the following field:
 - System Code



On Action Messages

1. To set up an action message, complete the following fields:
 - Code
 - Description
2. To locate the action messages for RCCP, enter 33 in the following field:
 - System Code

Field	Explanation
System Code	A user defined code (98/SY) that identifies a J.D. Edwards system.
User Defined Codes	Identifies the table which contains user defined codes. The table is also referred to as a code type.

Setting Up Time Fence Rules for DRP, MPS, and RCCP

Time fences are points of time at which you can make changes to either policy or operating procedures. The system supports three time fences:

- Freeze Fence (F)** Within this time period, orders are neither created nor replanned.
- Planning Fence (P)** Within this time period, the system uses demand from the forecast and customer orders to calculate ending available product.
- Message Display Fence (D)** After this time period, messages are neither created nor displayed.

► To set up time fence rules

On User Defined Code Revisions/Time Fence Rules

The screenshot shows a window titled "[00051] - User Defined Code Revisions". It has a menu bar with "Functions", "Tools", and "Help".

At the top right, there is a form with the following fields:

- System Code: 34
- User Defined Codes: TF
- Skip To Code: [Empty]
- Time Fence Rule: [Empty]

Below the form, there is a section labeled "01 Character" containing a table with three columns: "Code", "Description", and "Description-2".

Code	Description	Description-2
C	Customer Demand	Greater of Fcst or Cust Demand
F	Forecast	Forecast Plus Customer Demand
G	Greater of Fcst or Cust Demand	Forecast
H	Forecast Consumption Periods	N/A
S	Customer Demand	Forecast
1	Zero	Forecast
3	Zero	Forecast Plus Customer Demand

At the bottom of the window, there is a toolbar with several icons and a status bar. The status bar contains the text: "F5=Code Types F14=Memo F15=Where Used F18=Translate F21=Print F24=More MW".

Complete the following fields:

- Code
- Description
- Description-2

Setting Up Forecast Consumption Periods

You define the end date for each forecast consumption period on Forecast Consumption Periods. The system stores this information in the Forecast Consumption Periods table (F3405). The periods apply system-wide. You cannot have different forecast consumption periods for different locations or branch/plants.

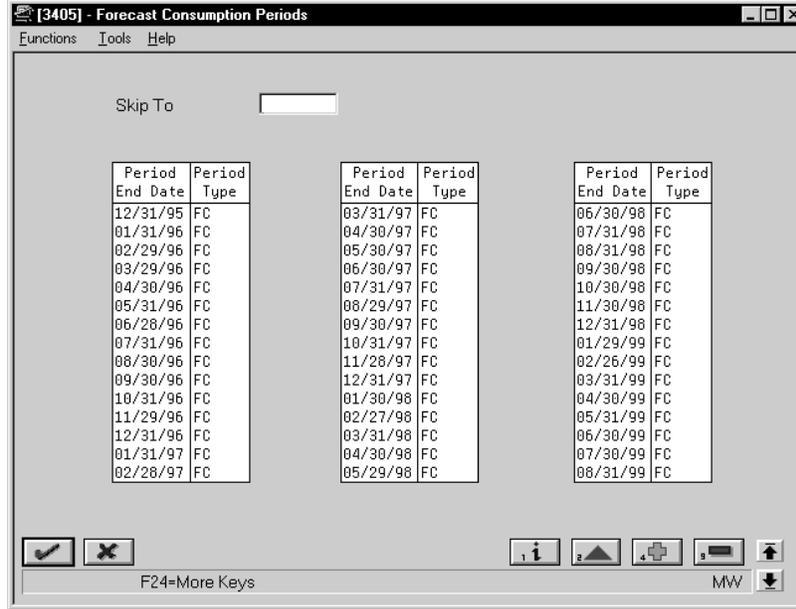
The system adds the forecast consumption time periods to the number of time series periods that you specified in the processing options for the DRP/MPS generation program. The total for all time periods cannot exceed 52.

Before You Begin

- Verify that the following information has been set up:
 - Planning fence rule H in user defined code table 34/TF
 - The order types in user defined code list 40/CF, to include in shipped order calculations
 - The -SHIP quantity type in user defined code list 34/QT, to calculate shipped orders quantity
 - The order types in user defined code list 40/IU, to update inventory includes order type SO
 - The Planning Fence Rule field on Plant Manufacturing Data, with a value of H
 - The Planning Fence field on Plant Manufacturing Data, with a value of 999 (the end of the planning horizon)
 - The appropriate processing options in the DRP/MPS generation program

► **To set up forecast consumption periods**

On Forecast Consumption Periods



Complete the following fields:

- Period End Date
- Period Type

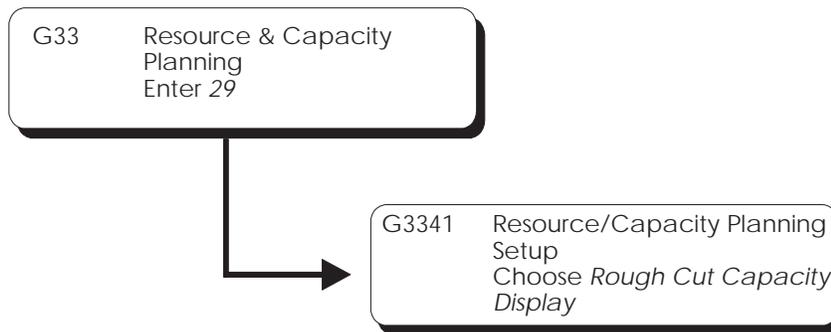
On Forecast Consumption Periods

Complete the following fields:

- Period End Date
- Period Type

Field	Explanation
Date – Requested	The date that an item is to arrive or that an action is to be complete.
Period Type	A type of record to be used in conjunction with Forecast Consumption. Valid values are: FC Forecast consumption period TS Time series bucket

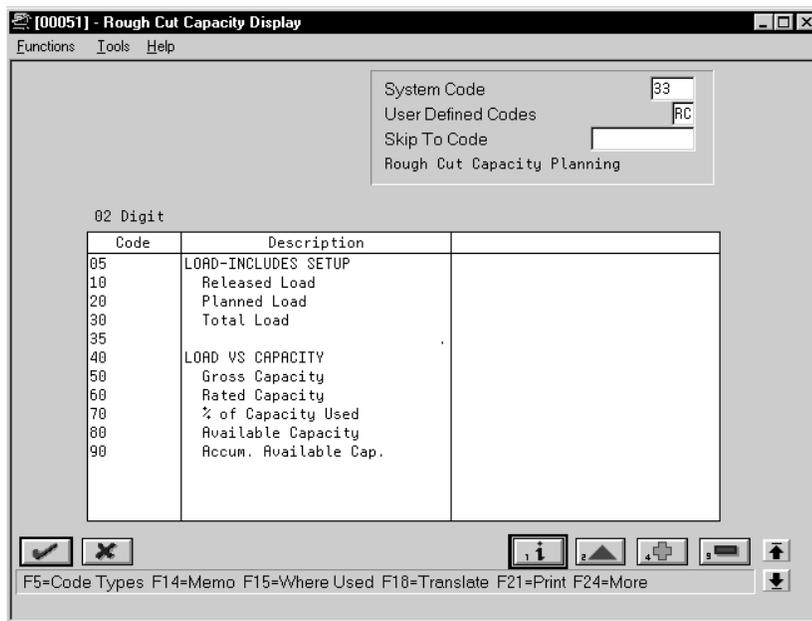
Setting Up the Rough Cut Capacity Display



Use Rough Cut Capacity Display to specify row descriptions for RCCP displays and reports. The digit code is hard-coded.

► **To set up the rough cut capacity display**

On Rough Cut Capacity Display



Complete the following fields:

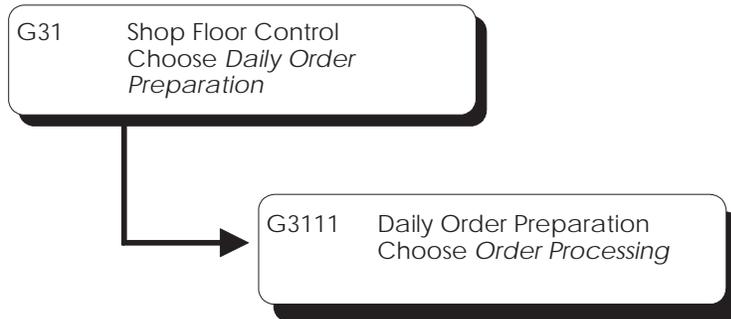
- Code
- Description

On Rough Cut Capacity Display

Complete the following fields:

- Code
- Description

Process Orders



Processing Orders

After you run MPS Regeneration or MPS Net Change, use Order Processing to process multiple work orders. The program:

- Attaches the parts list
- Attaches the routing instructions
- Sets an initial order status
- Generates the shop packet, including:
 - Parts list
 - Routing instructions
 - Shop packet summary
 - Component shortages

Before You Begin

- Verify that work orders have been entered manually or have been processed using the MPS Planning Messages program. See *Generating a Supplier Schedule*.

See Also

- *Processing Work Orders (P31410)* in the *Shop Floor Control Discrete Manufacturing Guide*

Processing Options for Work Order Generation – Print and Automatic Issue

GENERATION INFORMATION:

1. Enter one of the following: _____
 - 1 - Parts List only
 - 2 - Routing only
 - 3 - Both Parts List and RoutingIf left blank, neither Parts List nor Routing will be generated.
2. Enter a '1' to use the W.O. Date for Effectivity checking. (Default is the W.O. Start Date.) _____

UPDATE INFORMATION:

3. Enter the new Status Code for the Work Order Header. If left blank, status will not be changed. _____

WORK ORDER PRINT INFORMATION:

4. Enter a '1' to print Work Orders. If printing Work Orders: _____

PARTS LIST PRINT INFORMATION:

5. Enter a '1' to print Parts List _____
6. Enter a '1' to print the 2nd line of information, which is scrap and related work center. _____
7. Enter a '1' to print Parts List on a new page. _____
8. Enter the DREAM Writer Version of the Parts List to print. If left blank, XJDE0001 is used. (See Form ID P31415.) _____
9. Enter a '1' to print a consolidated Parts List. _____

ROUTING INSTRUCTIONS PRINT INFO:

10. Enter a '1' to print Routing _____
11. Enter a '1' to print Routing on a new page. _____
12. Enter the DREAM Writer Version to be executed for the desired sequencing of the Routing. If left blank, the operation sequence is used. (See Form ID P314151.) _____

BACKSCHEDULING INFORMATION:

13. Enter the Unit of Measure for backscheduling. _____

SHOP PACKET SUMMARY INFORMATION:

14. Enter a '1' to print the Shop Packet Summary. _____

SHORTAGE REPORT INFORMATION:

15. Enter the DREAM Writer Version of the Shortage Report to execute. If left blank, no shortage report will be printed. (See Form ID P31418.) _____

BAR CODE INFORMATION:

16. Enter the DREAM Writer Version to be executed for the desired print _____

overrides for Bar Coding.
(See Form ID P31413.)

INVENTORY ISSUE INFORMATION:

17. Enter the DREAM Writer Version of
Batch Inventory Issues to execute. _____
If left blank, the Inventory Issues
program will not be called.
(See Form ID P31420)

PURCHASE ORDER INFORMATION:

(Used for Sub-Contract Routings)

18. Enter the Document Type _____
19. Enter the Line Type _____
20. Enter the Beginning Status _____
21. Enter a '1' to default the tax area
from the 'Ship-To' address book
number. If left blank, the tax area
will default from the Supplier
address book number. _____

SALES ORDER INFORMATION:

22. Enter the new Line Type for kit
and configured components. This
is used to avoid issuing inventory
from Sales Order processing. The
Line Type used should be inventory
interface 'N'. If left blank, Line
Type will not be changed. _____
23. Enter the Next Status for Sales
Order kit and configured component
lines. (This is used to bypass
the normal flow of the order, i.e.,
Pick Slip.) If left blank, status
will not be changed. _____
24. Enter a '1' to print Sales Order
Text lines. _____

CONFIGURED ITEM COSTS:

25. Enter one of the following options
for calculating the standard cost
for configured items in the WO
Variance file (F3102). _____
1 - Always calculate the standard
cost.
2 - Only calculate the standard
cost if it has not already
been done (no variance records
exist.)
If left blank, standard cost will
not be calculated.

BOM SUBSTITUTES:

26. Enter '1' to allow the use of
Bill of Material substitutes in
case of a shortage. _____

PURCHASING JOURNAL ENTRIES:

27. Enter a '1' to load the Work Order
Number into the Subledger field of
the purchasing J/E's. _____

BLANKET/QUOTE PROCESSING:

28. Enter a '1' for automatic blanket _____

order release processing.

BUILD AGAINST PRIOR REVISIONS:

29. Enter a '1' to permit building work orders against prior revision levels. The revision level in the work order header (F4801) will be used to select the parts list to attach to the work order. If left blank, prior revision level bills will not be selected.

WAREHOUSE PROCESSING:

30. Enter the request processing mode:
1 - Generate requests only
2 - Generate requests and process using the subsystem.
If left blank, requests will not be generated.

31. If processing pick requests using the subsystem, enter the DREAM Writer version to use. If left blank, XJDE0002 will be used. (see Form ID P46171)

32. Enter the default staging location for moving goods out of the warehouse. The parts picked from the warehouse are staged at this location prior to use within manufacturing. (F1=Location Window)

33. Enter a '1' if the default staging location should be checked for availability. If the part is available at the staging location a request will NOT be generated. This option only applies to parts without work center locations.

QUALITY MANAGEMENT OPTIONS:

34. Enter a '1' to attach the Work Order/Routing tests.

GENERIC TEXT PRINT OPTIONS:

35. Enter a '1' to print component generic text on the Parts List.

36. Enter a '1' to print operation generic text on the Routing.



Exercises

See the exercises for this chapter.

Multi-Level Master Scheduling



Multi-Level Master Scheduling

Objectives

- To understand planning bills
- To set up order policy rules for reordering inventory
- To classify the types of items that you stock
- To define the percentage of demand for a specified feature based on projected sales
- To generate a multi-level master schedule

About Multi-Level Master Scheduling

You set up and generate multi-level master schedules to:

- Define demand information on a family basis and make changes as needed
- Define planning bills to acquire the options and features you expect to sell
- Update a product plan with a change in customer demand or design specifications
- Customize your schedule generation to include only the information you require
- Explode planned orders down to component items

Multi-level master schedules support assemble-to-order production and delivery.

When several different material purchasing options are available, your planners can make informed decisions within the available time frame. The system uses planning bills to notify planners when special attention is needed.



Multi-level master scheduling consists of the following tasks:

- Setting up a multi-level master schedule
- Generating a multi-level master schedule

The system records multi-level master schedule information in the following tables:

Bill of Materials Master (F3002)	Contains warehouse or plant level information about bills of materials, such as costs and quantities of components, features and options, and levels of detail for each bill.
Item Master (F4101)	Contains basic information about each item defined to inventory, such as item numbers, description, alpha description, category codes, and units of measure.
Item Branch (F4102)	Contains warehouse or plant level information, such as costs, quantities, physical location, and branch level category codes.

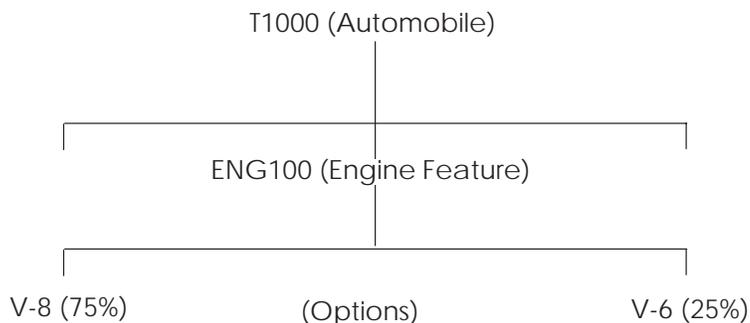
What Are Planning Bills?

Planning bills are groups of items in a bill of material format that reflect how an item is sold. Planning bills help you manage the acquisition of a variety of options and features that might be included in a saleable end item.

Planning bills allow you to configure a “pseudo” end item. With a pseudo item you don’t have to assign a unique part number or maintain a bill of materials for every combination of options and features that might be included in the end product.

You define planning bills to acquire the options and features in the proportion that you expect to sell. A final assembly schedule coordinates the material selection and assembly after you order the product options.

An example of this is an automobile with engine options:



A part number can be assigned to the engine feature for planning purposes. Obviously, the two engine options cannot be assembled together, so the engine feature never actually exists in inventory. It is a pseudo item.

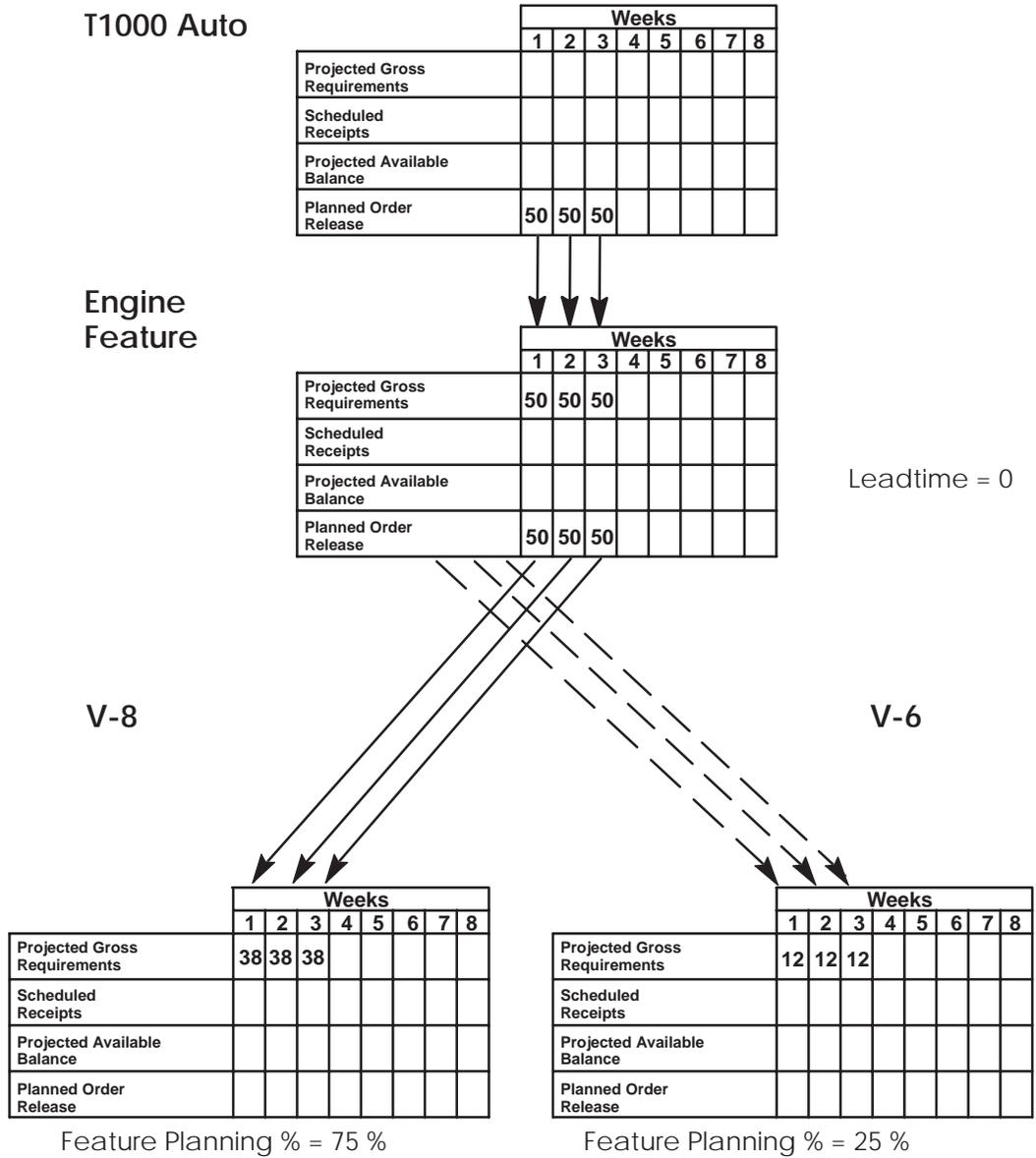
The planner does not know which automobile will ship with which engine next month, but the ratio of engines consumed is fairly constant. The above planning bill of material identifies the percentages of each type of engine that you expect to ship.

By exploding this bill against the master schedule for the T1000 family of automobiles, the system can calculate the total requirements for each type of engine.

Example: Exploding Planned Orders

You use a planning bill to configure a pseudo parent item that represents the engine feature. The engine feature includes both V-8 and V-6 engines, and can never actually exist in inventory. It is a pseudo item. The stocking type, however, identifies the engine feature in the planning bill of material as a phantom. Phantoms call for a special type of processing where the leadtime is zero and the order policy is lot-for-lot.

In this example, the system uses phantom processing to pass planned order releases from the parent (T1000 automobile) directly through to the planned order releases of the engine feature. The system uses the feature planning percentages to explode the planned order releases for the engine feature down to the gross requirements for V-8 and V-6 engines.



MRP acquires the required engine components, such as pistons, blocks, and so on, in order to build these engines. When you receive an order for a T1000 automobile with a specific combination of options, the desired engine is committed to the saleable end item after you attach the parts list to the final assembly work order.

See Also

- *Single Level Master Scheduling* for an overview of master scheduling concepts and terms
- *Setting Up Planning Bills (P3002)* in the *Forecasting Guide*
- *Setting Up Planning Bills* in the *Forecasting Guide*

Set Up a Multi-Level Master Schedule

Setting Up a Multi-Level Master Schedule

You must set up planning data for a multi-level master schedule to:

- Develop rules and procedures for ordering
- Classify the types of items that you stock
- Identify the features that you expect to sell

The system uses the planning data to generate and maintain a multi-level master schedule for the hypothetical parent item. It explodes the parent item to the component level.

Setting up multi-level master scheduling consists of the following tasks:

- Setting up order policy rules
- Setting up a stocking type
- Setting up a feature planned percent

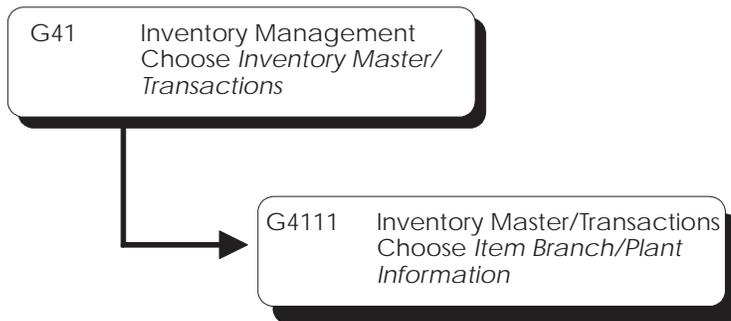
Before You Begin

- Verify that DRP, MPS, or RCCP has been set up
- Understand the concepts and terms described in *Single Level Master Scheduling*

See Also

- *Setting Up DRP/MPS/RCCP (P34004)* for information on how to define distribution or production and rough cut capacity data that you want the system to use during processing
- *Setting Up DRP/MPS/RCCP* for information on how to define distribution or production and rough cut capacity data that you want the system to use during processing
- *Single Level Master Scheduling* for more information on the master scheduling process

Setting Up Order Policy Rules



You must set up order policy rules to control how multi-level master scheduling calculates dates and quantities. The order policy rules that you set up are:

- Planning code – Include the item in the DRP, MRP, or MPS planning runs.
- Order policy code – Designate several different rules for reordering inventories, including fixed order quantity, lot for lot, or number of days supplied. For example, purchasing a 90-day supply of V-8 engines.
- Leadtime level for phantom items – Indicate the transfer or purchase leadtime for an item to ensure that you have it in stock on time.

What You Should Know About

Assigning a planning code

The system uses planning codes to process the item. Use planning codes 1, 2, or 3 for multi-level master scheduling. Use planning codes 4 and 5 for forecasting with a planning bill.

Assigning leadtime level for a phantom item

You must set the leadtime of the phantom to zero so that the parent planned orders are recorded directly to the options as a gross requirement without being offset by the leadtime.

The system multiplies the planned orders by the feature planning percentage before placing the planned orders as component gross requirements.

► **To set up order policy rules**

On Item/Branch Plant Information

1. Choose Plant Manufacturing Data.

2. To locate the item for which you want to plan orders, complete the following fields:
 - Branch/Plant
 - Item Number
3. To control how multi-level master scheduling calculates dates and quantities, complete the following fields:
 - Order Policy Code
 - Planning Code
 - Leadtime Level

On Item/Branch Plant Information

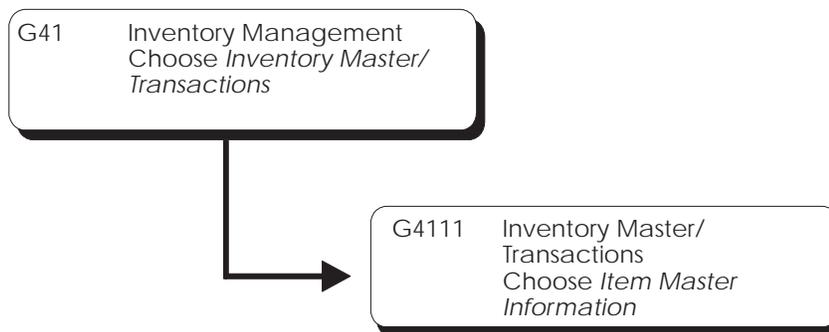
1. Choose Plant Manufacturing Data.

2. To locate the item for which you want to plan orders, complete the following fields:
 - Branch/Plant
 - Item Number
3. To control how multi-level master scheduling calculates dates and quantities, complete the following fields:
 - Order Policy Code
 - Planning Code
 - Leadtime Level

Field	Explanation
Order Policy Code	A code that designates the rules for inventory reordering in the MPS/MRP/DRP systems. Valid codes are: <ul style="list-style-type: none">0 Reorder point (Not planned by MPS/MRP/DRP)1 Lot-for-lot or as required2 Fixed order quantity3 Economic order quantity (EOQ)4 Periods of supply5 Rate scheduled item

The codes above are hard coded.

Setting Up a Stocking Type



Set up a stocking type to identify how you stock an item (for example, as finished goods or raw materials).

► **To set up a stocking type**

On Item Master Information

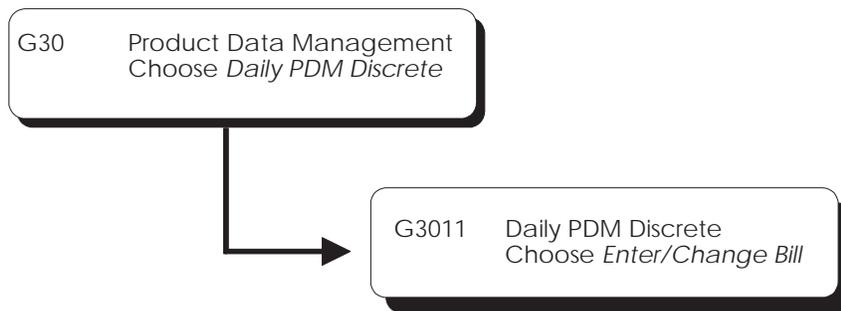
The screenshot shows the 'Item Master Information' window for item 13160. The 'Product No' is 2100 and 'Desc' is 'Sports Car'. The 'Stocking Type' is 'K'. Other fields include 'G/L Class' (IN20), 'Unit of Measure' (EA), 'Line Type' (S), 'Bulk/Packed Flag' (P), 'Inventory Cost Level' (3), 'Sales Price Level' (3), 'Purchase Price Level' (3), 'Kit Pricing Method' (2), 'Backorders Allowed' (Y), 'Check Availability Y/N' (Y), 'Shelf Life Days' (empty), 'ABC Codes' (- - -), 'Planner Number' (empty), 'Buyer Number' (empty), 'Print Message' (empty), 'Serial No. Required' (N), 'Lot Status Code' (empty), 'Lot Process Type' (empty), 'Commitment Method' (1), 'Item Flash Message' (empty), and 'Std UOM Conversion' (empty). The window title is '[4101] - Item Master Information' and the 'Item Number - Short' is 13160.

1. To locate the item for which you want to plan orders, complete the following field:
 - Item Number
2. To indicate how you stock the item for which you want to plan orders, complete the following field:
 - Stocking Type

On Item Master Information

1. To locate the item for which you want to plan orders, complete the following field:
 - Item Number
2. To indicate how you stock the item for which you want to plan orders, complete the following field:
 - Stocking Type

Setting Up a Feature Planned Percent



Set up a feature planned percent to define the percentage of demand for a specified feature based on projected sales.

When you set up a feature planned percent, you can change the percentages on which the hypothetical parent item is based. This allows you to account for any planning variations on which you might base planned orders.

▶ **To set up a feature planned percent**

On Enter/Change Bill

[3002] - Enter/Change Bill

Functions Options Tools Help

Branch/Plant: M30
 Bill Type: M
 Item Rev. Level:

Parent Item: Z100 Sports Car
 Batch Quantity: EA
 As of Date: *
 Drawing #:
 Skip to Comp Line No:

0	Component Item	Description	Quantity	Per	UM	FV	I
	Z200	Engine	1		EA	V	I
	Z300	Transmission	1		EA	V	I
	Z400	Radial Tire	5		EA	V	I

Opt: 1=Item Master 2=Next Lvl 6=Subs 7=Text F8=Inquiry F12=Prv Lvl F24=More MW

1. To locate the item for which you want to plan orders, complete the following fields:
 - Branch/Plant
 - Parent Item
2. Access the fold area.

3. Complete the following field:
 - Feature Planned Percent

On Enter/Change Bill

1. To locate the item for which you want to plan orders, complete the following fields:
 - Branch/Plant
 - Parent Item
2. Access the fold area.
3. Complete the following field:
 - Feature Planned Percent

Field	Explanation
Item Number	<p>A number that the system assigns to an item. It can be in short, long, or 3rd item number format.</p> <p>..... <i>Form-specific information</i></p> <p>Header: The Parent field contains the item number of the parent item.</p> <p>Detail: The Component Item field contains the item number of the component item listed.</p>
Feature Planned Percent	<p>The percentage of demand for a specified feature based on projected sales. For example, a company might sell 35% of their computers with a standard keyboard and 65% of them with an extended keyboard, based on customer demand.</p> <p>The Material Planning system uses this percentage to accurately plan for a feature's component items. Enter percents as whole numbers: 5% as 5.0. The default value is 100%.</p>

Generate a Multi-Level Master Schedule



Generating a Multi-Level Master Schedule

When you run the MPS Regeneration program, the system compiles a master schedule. Choose the MPS Net Change program when you want to include only those items that have changed since the last generation. You can create a version of the MPS Net Change program specifically for multi-level master scheduling.

When you generate a multi-level master schedule, the system explodes planned orders to the bill of material components. This generation program identifies the percentages of all component items. By exploding the bill of material against the total number of expected sales of a parent item, you can obtain the total requirements for each item at each level in the bill of material.

When you generate a master schedule, the system evaluates selected information, performs calculations, and recommends a time-phased planning schedule for all selected items.

Before You Begin

- Set up multi-level master scheduling

See Also

- *Setting Up a Multi-Level Master Schedule (P3482)*
- *Generating a Single Level Master Schedule (P3482)* for more information on generating master schedules and to review the processing options

- *Working with the Master Schedule (P3482)* for information on how to review time series and action messages that are an output of generating a multi-level master schedule
- *Validating the Master Schedule (P3482)* for information on how to validate the master schedule, to ensure that you have sufficient work center capacity
- *Setting Up a Multi-Level Master Schedule*
- *Generating a Single Level Master Schedule* for more information on generating master schedules and to review the processing options
- *Working with the Master Schedule* for information on how to review time series and action messages that are an output of generating a multi-level master schedule
- *Validating the Master Schedule* for information on how to validate the master schedule, to ensure that you have sufficient work center capacity

What You Should Know About

Generation definition You must set the processing option to specify the type of schedule you want to generate. You must use generation type 3 to process multi-level MPS items. If there is a forecast for the product family, you must also define this forecast in the appropriate processing option.

Phantom items Set the appropriate processing option to generate messages and time series records for phantom items.



Exercises

See the exercises for this chapter.

Manufacturing and Distribution Environments

Manufacturing and Distribution Environments

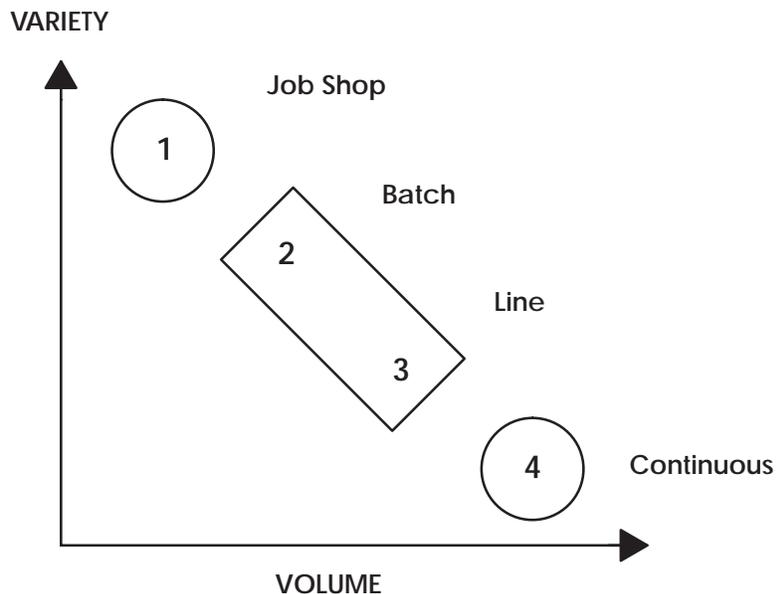
Objectives

- To use the Manufacturing and Distribution Planning (MDP) system to manage a variety of manufacturing and distribution environments

About Manufacturing and Distribution Environments

Today's customer-driven manufacturing strategies require flexible manufacturing and distribution systems.

The following graphic shows manufacturing and distribution environments that vary along a continuum from discrete, low-volume production of customized designs to process, high-volume production of commodities.



Depending on the products manufactured, companies tend to create manufacturing and distribution environments along the diagonal of the graph. Competitive advantages occur when a company can move upward and to the right (that is, manufacture more volume along with more variety).

Sometimes a firm can gain a competitive advantage by creating a mixed-mode manufacturing environment. In mixed mode, some high-volume products and some high-variety products are made within the same company, but in different manufacturing and distribution environments.



The Manufacturing and Distribution Planning system's shared database provides mixed-mode capability. Manufacturing and Distribution Planning can simultaneously manage discrete items for a job shop, rate based items for a flow shop, and continuous items for a process industry.

Working with manufacturing and distribution environments includes the following tasks:

- Working with batch manufacturing
- Working with rate based manufacturing
- Working with process manufacturing

Discrete Manufacturing

Discrete manufacturing uses bills of material and routings. The bill of material contains individual parts or components, such as a nut, bolt, wire, or a plastic or metal part of a fixed or variable quantity. Products are further divided into subassemblies that are used in various larger assemblies.

Typical examples of products of discrete manufacturing are:

- Cars
- Furniture
- Electronics
- Airplanes

Discrete manufacturing is usually further characterized by the strategy used, such as:

- Make-to-stock, using either a highly repetitive or process order based system
- Any of the "to-orders," such as make-to-order, assemble-to-order, or engineer-to-order
- The "one-off" or job shop environment

Batch Manufacturing

With batch manufacturing, you produce products from formulas or recipes in a standard run or lot size that is determined by vessel size or standard run length.

Rate Based Manufacturing

Use rate based manufacturing for highly repetitive production for which you do not need to account for each work order's labor and inventory in detail.

Process Manufacturing

Process manufacturing uses recipes or formulas and resources or ingredients. The manufacturing process either consumes or produces these resources. Many processes create co-products and by-products. In a process or discrete formula, the quantity of a component can vary according to its grade or potency.

Unique features of process manufacturing are:

- Pacing co-products
- Planned co-products (by-products are unplanned)
- Additional processing options in MPS/MRP

Distribution

Distribution systems work together with manufacturing systems to ensure that the right item is in the right place at the right time to meet customer demand. Supply and demand components must balance to ensure that this can occur. For example, the Inventory Management system does the following:

- Stores item information for the manufacturing systems
- Stores sales and purchasing costs and quantities available by location
- Tracks holds for locations from which you should not sell
- Updates the inventory account balances in the general ledger with any change in inventory valuation, count variances, or movement

Work with Batch Manufacturing

Working with Batch Manufacturing

With batch manufacturing, a product is made from a formula or recipe in a standard run or lot size determined by vessel size or standard run length. Typical products for batch manufacturing include:

- Pharmaceuticals
- Foods
- Glues
- Fermented beverages
- Paints

The objective for batch manufacturing is to process work orders with a batch quantity that corresponds to a batch bill of material and to use these orders for MRP processing. Just as the bill type uniquely defines a bill of material, you can use the batch quantity with bill type to further define a unique bill.

With this manufacturing method, some restrictions on capacity determine the size of the batch produced. For example, you might need to fill the vats to a certain level for the process to perform properly.

In addition, the system specifically defines the component quantities for the batch. For example, a 50-gallon vat requires a given quantity of one component, but the system does not necessarily double the component for a 100-gallon vat. Such components are often enzymes or catalysts.

Vats are often physically located close to a more repetitive downstream process. For example, in the making of bread, the process mixes the dough in a batch and leaves it to rise before forming individual loaves and sending it for baking and packaging.

You often express units of measure for batches in terms of volume or weight, such as:

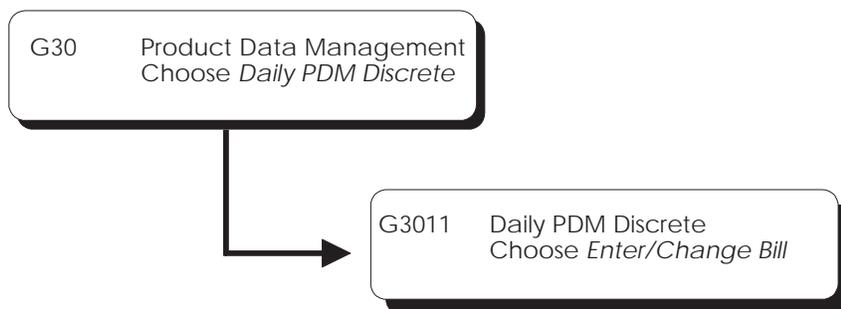
- Liters or gallons
- Kilograms or pounds

After you create a batch bill of material and batch routing for the work order header, process the batch work order to attach the parts list and routing instructions to the work order header. Then, generate a master schedule of batch work orders and review the output.

Working with batch manufacturing consists of the following tasks:

- Creating a batch bill of material
- Creating a batch routing
- Processing batch work orders
- Generating MPS for batch bills
- Reviewing batch output from the MPS generation (optional)

Creating a Batch Bill of Material



You use batch bills of material to accommodate physical constraints. For example, some industries, such as the pharmaceutical or food industries, use ovens or vats to make products in fixed quantities or batches. You can enter many combinations of batch sizes and bill types.

Before You Begin

- Set the appropriate processing option to display the Batch Quantity field

► **To create a batch bill of material**

On Enter/Change Bill

Component Item	Description	Quantity Per	UOM	V	I
12706	Vitamin A	250	GM	F	I
12731	Vitamin B1	500	GM	F	I
12749	Vitamin B2	500	GM	F	I
12757	Vitamin B6	6000	GM	F	I
12765	Vitamin B12	1320	GM	F	I
12773	Vitamin C	3000	GM	F	I
12781	Minerals, complex	60	GM	F	I
12845	Buffer, inert	13180	GM	F	I
12844	Magnesium Stearate	500	GM	F	I
12741	Microcrystalline Cellulose	500	GM	F	I

- To locate the bill of material for the parent item, complete the following fields:
 - Parent Item
 - Branch/Plant
 - Bill Type

If more than one type of batch bill exists, the system prompts you to make the proper selection from the following:

- Bill type
 - Batch quantity
 - Unit of measure
- To create a new batch bill of material for the parent item, complete the following field:
 - Batch Quantity
 - Batch Unit of Measure
 - To view additional information, access the fold area.

[3002] - Enter/Change Bill

Functions Options Tools Help

Branch/Plant: M30
 Bill Type: M
 Item Rev. Level: RB

Parent Item: 1261 Multivitamin Tablets
 Batch Quantity: 10000 PC
 As of Date: *
 Drawing #:
 Skip to Comp Line No:

0	Component Item	Description	Quantity Per	UM	FV	I
	12706	Vitamin A	250	GM	F	I
	Effective From	08/13/93	Feature Planned %	100.00	Stocking Type	M
	Effective Thru	12/31/10	Feature Cost %	100.00	Line Type	S
	Leadtime Offset		Unit Price		Revision Level	
	Comp. Br/Pl	M30	Unit Cost	.0000	From Grade	
	Operation Sequence	1.00	Standard/Optional/Feature		S Thru Grade	
	Percent of Scrap		Required (Y/N)	N	From Potency	
	Operation Scrap %	.00	Default Component		Thru Potency	
	Component Line Nr	1.0	Remark			
	Bubble Sequence		Drawing Number			
	Partials Allowed (Y/N)	Y				

Opt: 1=Item Master 2=Next Lvl 6=Subs 7=Text F8=Inquiry F12=Prv Lvl F24=More MW

See Also

- *Working with Bills of Material in the Product Data Management Process Manufacturing Guide* for more information about batch bills of material

Processing Options for Bill of Material Revisions

INVENTORY VALIDATION:

1. Enter a '1' to validate for an existing Branch/Item record. _____

VERSIONS TO EXECUTE:

Enter the DREAM Writer version to use for each program listed. If left blank, version 'ZJDE0001' will be used.

NOTE: Processing options 2a - 2b are ONLY used to set Printer Overrides. No Data Selection or Sequencing is possible.

- 2a. Single Level BOM Print (P30410) _____
- 2b. -or- Multi-Level BOM Print (P30415) _____
3. ECO Workbench (P30225) _____
4. Component Maintenance (P3015) _____

VERSION TO EXECUTE FROM REVISIONS

WINDOW:

5. Enter the version of the ECO header to call from the Revisions Window (P30BREV). If left blank version ZJDE0001 will be used. _____

COMPONENT BRANCH:

6. Enter a '1' to change the Component Branch (ADDITIONS ONLY) to that which is displayed at the top of the screen. _____

FIELD DISPLAY:

7. Enter a '1' by the following fields to activate them:
 - a. Bill Type _____
 - b. Batch Quantity _____

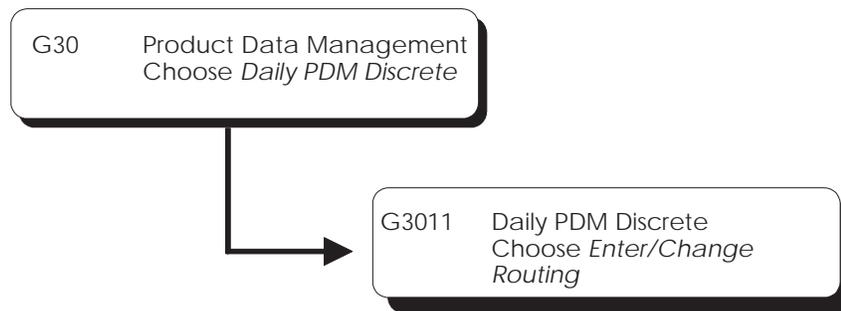
SCREEN DEFAULTS:

8. Enter the default Bill Type: _____
- 8b. Enter a '1' to default the as of date to the current date. If left blank, all dates will be shown. _____

COMPONENT SEQUENCING:

9. Enter a _____
 - '1' to sequence components by component line number
 - '2' to sequence components by operation sequence number(If left blank, components will be sequenced by component line number)

Creating a Batch Routing



Batch routings are useful in industries, such as pharmaceuticals or foods, where products are manufactured in fixed quantities or batches. Each batch bill, as defined by the batch quantity, has its own routing.

You can create different routings for the same item by branch, type, batch quantity produced, or a combination.

Before You Begin

- Set the appropriate processing option to activate routing batch and type functions

► **To create a batch routing**

On Enter/Change Routing

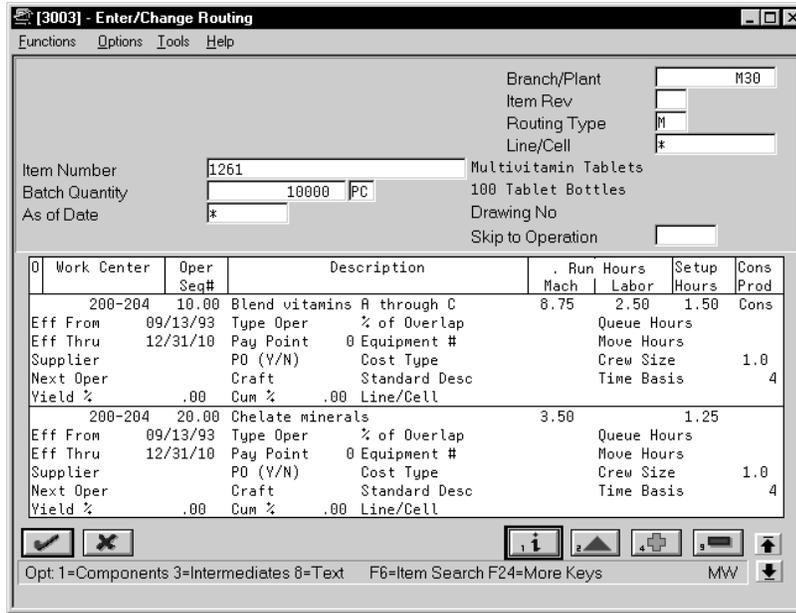
The screenshot shows a software window titled "[3003] - Enter/Change Routing". It contains several input fields and a table. The fields include: Item Number (1261), Batch Quantity (10000), As of Date (*), Branch/Plant (M30), Item Rev, Routing Type (M), Line/Cell (*), Multivitamin Tablets, 100 Tablet Bottles, Drawing No, and Skip to Operation. Below these fields is a table with columns: Work Center, Oper Seq#, Description, Mach, Run Hours, Labor, Setup Hours, and Cons Prod.

Work Center	Oper Seq#	Description	Mach	Run Hours	Labor	Setup Hours	Cons Prod
200-204	10.00	Blend vitamins A through C	8.75	2.50	1.50	Cons	
200-204	20.00	Chelate minerals	3.50		1.25		
200-204	30.00	Blend vitamins and minerals	6.00	.75	2.00		
200-204	40.00	Blend with inert buffer	3.00	1.00	.50		
200-204	50.00	Form Tablets	16.00	2.50	1.25		

1. To locate the routing for the item, complete the following fields:
 - Item Number
 - Batch Quantity
 - Branch/Plant
 - Routing Type
2. To create a new batch routing for the item, complete the following fields:
 - Batch Quantity
 - Batch Unit of Measure

If the bill type and quantity on the work order do not match a batch bill, the system generates an error and creates the work order header for the amount specified.

3. To view additional information, access the fold area.



See Also

- *Working with Routings* in the *Product Data Management Process Manufacturing Guide* for more information about batch routings

Processing Options for Routing Master Revisions

FIELD DISPLAY:

1. Enter a '1' by the following fields to activate them:
 - a. Line/Cell
 - b. Routing Type
 - c. Batch Quantity

SCREEN DEFAULTS:

Enter the values to preload to the screen at initial inquiry. If left blank, no value will be preloaded.

2. Routing Type

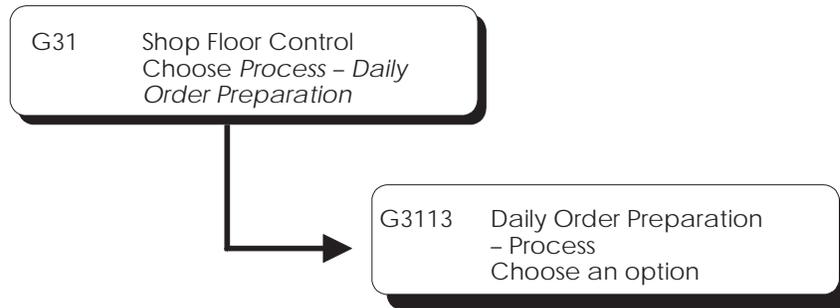
UPDATE OPTIONS:

3. Enter a '1' to update the component operation scrap percent in the Bill of Material for the components on the operation and the Cumulative Yield Percent on the Routing, when updating the operation yield percent

COMPONENT BRANCH:

4. Enter a '1' to change component Branch (Additions Only) to that of the Routing Parent Branch Plant.

Processing Batch Work Orders



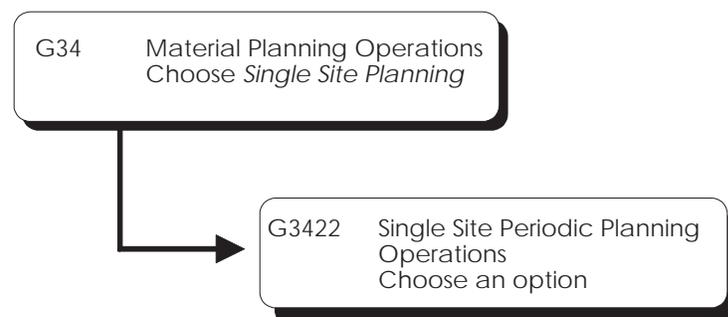
Use either Enter/Change Order or Order Processing to attach a parts list or routing instructions to the work order header. Because the bill or routing must exist for the associated type on the work order header, the attachment process will fail if the system cannot validate the bill or routing types.

If a batch quantity exists on the bill or routing, the quantity on the work order header and the type must match the bill or routing. Otherwise, the copy function will fail for the bill, routing, or both.

See Also

- *Creating Work Orders (P48013)* in the *Shop Floor Control Process Manufacturing Guide* for information about attaching parts lists and routing instructions interactively
- *Processing Work Orders (P31410)* in the *Shop Floor Control Process Manufacturing Guide* for information about attaching parts lists and routing instructions using the batch program

Generating MPS for Batch Bills



Use MPS Regeneration or MPS Net Change to generate a master schedule for all items or for selected items. These programs function differently depending on whether more than one batch bill exists.

If only one batch bill exists, MPS uses the batch quantity as follows:

- As a multiple, if the net requirements are greater than the batch quantity
- As a minimum, if the net requirements are less than the batch quantity

In either case, the program generates a separate planned order for each batch quantity. For example:

Batch Quantity	MPS Requirement	Resulting MPS Planned Order
1000	1500	1000 1000
1000	967	1000

In either case, the program generates a separate planned order for each batch quantity. For example, if the batch quantity is 1,000 and the MPS requirement is:

- 1,500, the program generates two planned orders for 1,000 each
- 967, the program generates a planned order for 1,000

If one batch bill is greater than all of the batch quantities, the program uses the largest batch quantity in combination with any of the other quantities to most accurately satisfy the requirement. For example:

Batch Quantity	MPS Requirement	Resulting MPS Planned Order
400	1500	1000
600		
800		
1000		
400	3000	1000
600		
800		
1000		

- Batch quantities are:
 - 400
 - 600
 - 800
 - 1,000
- MPS requirement is for 1,500

- The program generates a planned order for 1,000, and a planned order for 600. Using the batch quantities, 1,600 is the quantity that most accurately satisfies the requirement.

If multiple batch bills exist and the net requirement is less than the largest batch quantity, the program uses the next highest batch quantity to satisfy the requirement. For example:

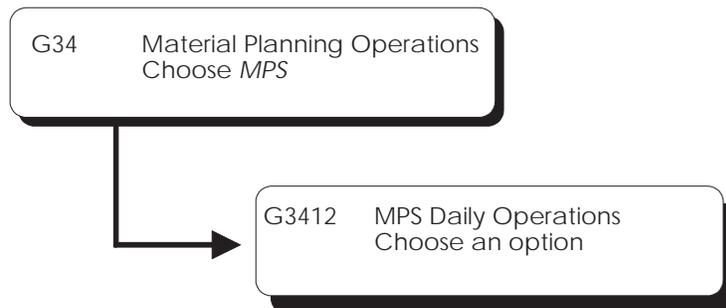
Batch Quantity	MPS Requirement	Resulting MPS Planned Order
400	780	800
600		
800		
1000		

If multiple batch bills exist and the net requirement is less than the largest batch quantity, the program uses the next highest batch quantity to satisfy the requirement.

See Also

- *Generating a Master Schedule (P3482)* for the processing options for this program

Reviewing Batch Output from the MPS Generation



After you generate a master schedule, use MPS Time Series Inquiry and MPS Detail Message Review to review the time series and messages from the MPS generation.

The time series is a record of time-phased supply and demand netting for selected items. The messages reflect how the system used batches to generate order quantities for net requirements for each time period.

Reviewing batch output consists of the following:

- Reviewing the time series

- Reviewing action messages

See Also

- *Reviewing DRP/MPS Time Series (P3413)* for more information on MPS Time Series Inquiry, and for the processing options
- *Working with Messages (P3411)* for the processing options for MPS Detail Message Review

▶ To review the time series

On MPS Time Series Inquiry

Branch/Plant: M30
 Start From Date:
 Unit of Measure: PC
 Item Number: 1261
 Leadtime Level: 5 Fixed
 Multivitamin Tablets
 100 Tablet Bottles

	Past Due	02.01.98	09.01.98 L	16.01.98	23.01.98	30.01.98
+BAU	89000	89000	26667	35666-	97999-	160332-
+BR	89000	89000	26667	14334	12001	9668
+WOU						
+WU			20000			
-FSCU		62333	62333	62333	62333	62333
-FCST		62333	62333	62333	62333	62333
=EAU	89000	26667	35666-	97999-	160332-	222665-
=EA	89000	26667	14334	12001	9668	7335
+PLO			30000	60000	60000	60000
ATPU		89000				
ATP		89000	50000	60000	60000	60000
CATPU		89000	89000	89000	89000	89000
CATP		89000	139000	199000	259000	319000

F8=Code F13=Peg F14=Msg F16=Sup/Dem F19=Left F20=Right F24=More Keys MW

To locate the time series for your item, complete the following fields:

- Branch/Plant
- Item Number

For example, review the net quantities for planned orders (+PLO) for the item during the 01/09/98 and 01/16/98 time periods. Planned orders (+PLO) are based on batch sizes of:

- 1/9/98: 3000 and 1000 = 4000
- 1/16/98: 3000 and 3000 = 6000

What You Should Know About

Suppressing blank lines You can use a function key to suppress the quantity types that have no quantity in the time series.

► **To review action messages**

On MPS Detail Message Review

[3411] - MPS Detail Message Review

Functions Options Tools Help

Cleared (Y)

Demand Branch... M30

Supply/Demand D

Unit of Measure PC

Item Number 1261 Multivitamin Tablets

Leadtime Level . . . 5 Fixed 100 Tablet Bottles

O	T	Message	Order	Ty	Quantity	Required	Planner Remarks
R		Warning Mess				02.01.98	Shop Calendar not Setup
E		Expedite	133760	WO	10000	01.07.98	
E		Expedite	133823	WO	10000	02.07.98	
F		Frozen Order	2292	WO		16.03.98	Frozen Order
O		Order		WO	30000	09.01.98	
O		Order		WO	30000	16.01.98	
O		Order		WO	30000	16.01.98	
O		Order		WO	30000	23.01.98	
O		Order		WO	30000	23.01.98	
O		Order		WO	30000	30.01.98	
O		Order		WO	30000	30.01.98	
O		Order		WO	30000	06.02.98	

Opt: 2=Process 4=Del 5=BOM Avl 6=PO F5=Sched F8=TS F16=Peg F24=More MW

To locate the message for your item, complete the following fields:

- Demand Branch
- Item Number

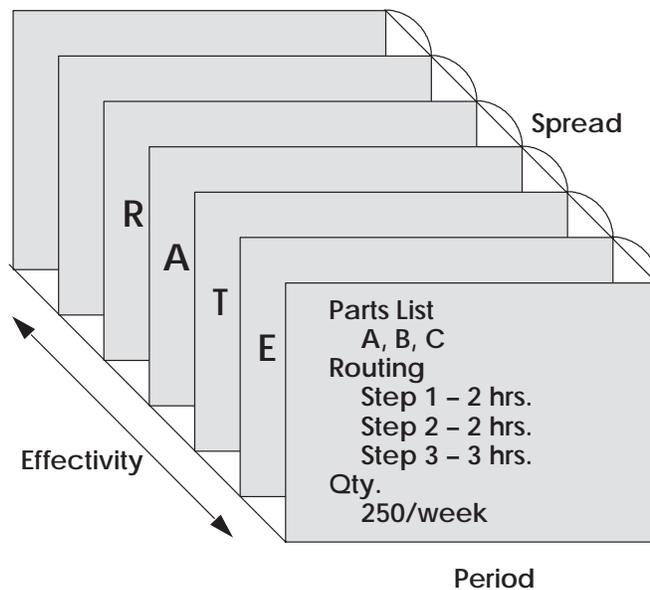
For example, review the messages that reflect how batches were used to generate order quantities for net requirements for each time period.

Work with Rate Based Manufacturing

Working with Rate Based Manufacturing

Use rate based manufacturing for a highly repetitive production that relies on a daily, weekly, or monthly quantity, or “rate” of production. Rate based manufacturing enables you to specify a rate schedule by effective date. You can also:

- Schedule based on a frequency rate, such as monthly, weekly, or daily
- Spread the scheduled quantity across all workdays or consolidate on a specific day of the week or month



Rate based manufacturing reflects the following characteristics:

- Production volume is stable and predictable.
- Lead time is short.
- Factory layout is product oriented and often characterized as cellular manufacturing. Dissimilar operations are physically grouped so that the product flows rapidly from one operation to the next.

- Setups are short, so that switching between products does not impact the time available for production.
- Group technology is often incorporated into the design engineering and manufacturing engineering to accommodate some variety with low impact on cost or production speed.
- Unit of measure is often “each.” However, it can also be volume- or weight-related when it is used in an environment that is closer to process manufacturing.

Some examples of rate based products are:

- Electronic goods
- Automobiles
- Cigarettes

To plan for rate based items, you:

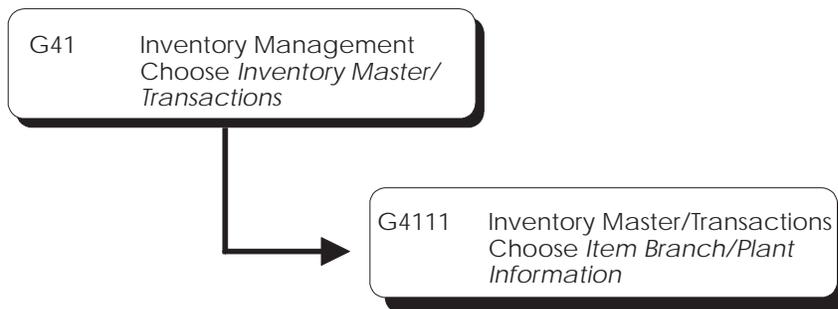
- Identify the item as a rate based item for a specific branch/plant.
- Create a routing for the item.
- Create a rate schedule for items that you want to produce regularly. This eliminates the need to create multiple work orders.
- View the component items that are also sold separately as service parts.

After you process the rate based items, generate a master schedule and output that you can review. This output consists of time series and messages. You can then validate the load on lines or cells by viewing the effects of a rate schedule on a given work center and adjusting the priorities of the schedule.

Working with rate based manufacturing consists of the following tasks:

- Defining order policy for rate based items
- Creating rate based routings
- Creating rate schedules
- Reviewing rate based components (optional)
- Generating MPS for rate based items
- Reviewing rate based output from the MPS generation
- Validating load on lines or cells (optional)

Defining Order Policy for Rate Based Items



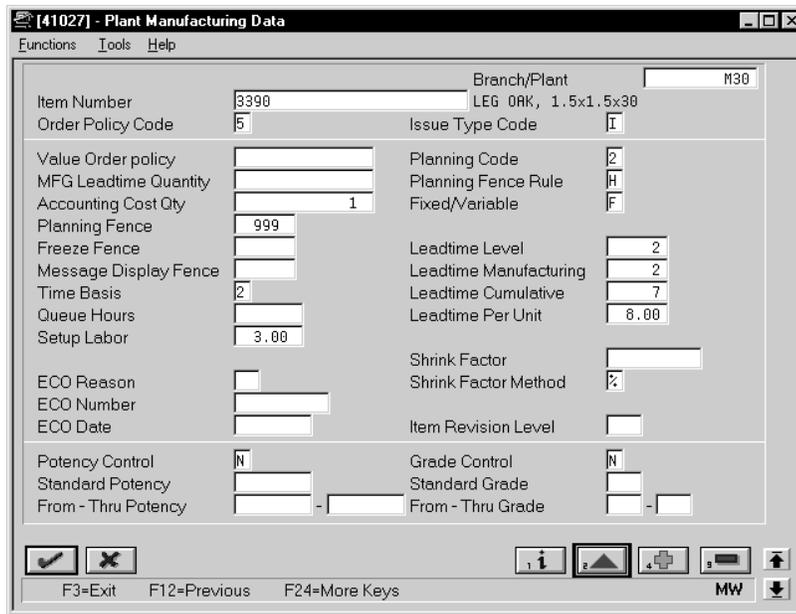
You must identify the item as a rate based item for a specific branch/plant for the MPS/MRP/DRP system to process the item as rate based.

► To define order policy for rate based items

On Item Branch/Plant Information

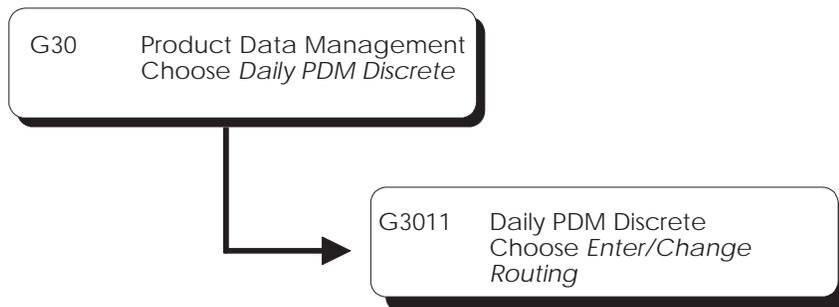
The screenshot shows the 'Item Branch/Plant Information' window for item 3390. The window title is '[41026] - Item Branch/Plant Information'. The 'Branch/Plant' field is set to 'M30'. The 'Item Number' is '3390' and the description is 'LEG ORK, 1.5x1.5x30'. The 'Stocking Type' is 'M' and 'Line Type' is unchecked. The 'G/L Class' is 'IN20'. The 'Item Price Group' and 'Basket Reprice Group' are empty. 'Sales Taxable' and 'Purchasing Taxable' are checked. 'Order Reprice Group' is empty. 'Backorders Allowed' is checked. 'Check Availability Y/N' is checked. 'Shelf Life Days' is empty. 'ABC Codes' are '- -'. 'Margin Maintenance (%)' is empty. 'Serial No. Required' is unchecked. 'Lot Status Code' is empty. 'Lot Process Type' is empty. 'Commitment Method' is '1'. 'Country of Origin' is 'USA'. 'Planner Number' is '9200'. 'Buyer Number' is '8200'. 'Supplier' is empty. 'Print Message' is empty. The status bar at the bottom shows 'F5=Codes F6=Cost F9=Price F10=Manufacturing F15=Bulk Info F24=Keys MW'.

1. To locate the item record, complete the following fields:
 - Branch/Plant
 - Item Number
2. Choose Manufacturing.



3. On Plant Manufacturing Data, identify the item as a rate based item in the following field:
 - Order Policy Code

Creating Rate Based Routings



A routing is a list of the operations and resources that are required to complete a process. The rate based routing includes line and cell information in the header as well for each operation.

► To create rate based routings

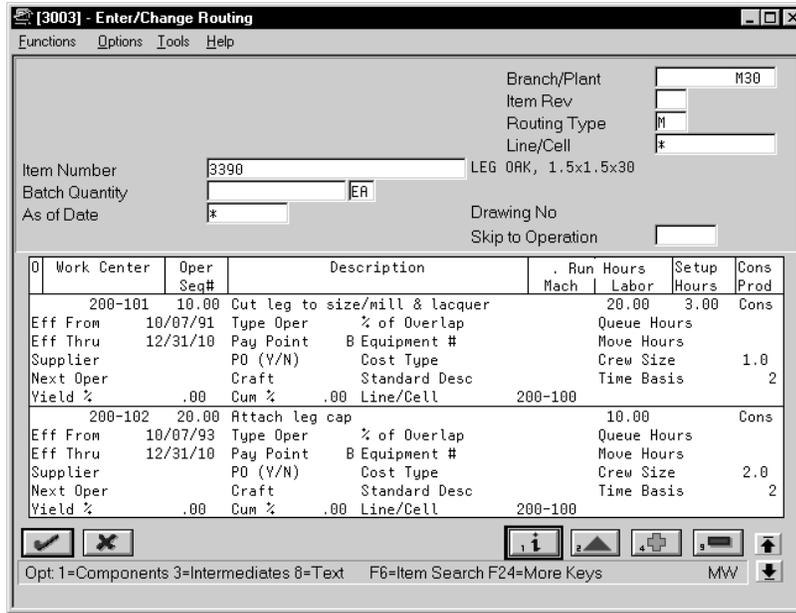
On Enter/Change Routing

The screenshot shows a software window titled "[3003] - Enter/Change Routing". The window contains several input fields and a table. The input fields are: Branch/Plant (M30), Item Rev, Routing Type (M), Line/Cell (*), Item Number (3390), Batch Quantity (ER), As of Date (*), LEG ORK, 1.5x1.5x30, Drawing No, and Skip to Operation. The table below has the following data:

0	Work Center	Oper Seq#	Description	Run Mach	Hours Labor	Setup Hours	Cons Prod
	200-101	10.00	Cut leg to size/mill & lacquer		20.00	3.00	Cons
	200-102	20.00	Attach leg cap		10.00		Cons
	200-103	30.00	Inspect	5.00	8.00		

At the bottom of the window, there are several icons and a status bar with the text: "Opt 1=Components 3=Intermediates 8=Text F6=Item Search F24=More Keys MW".

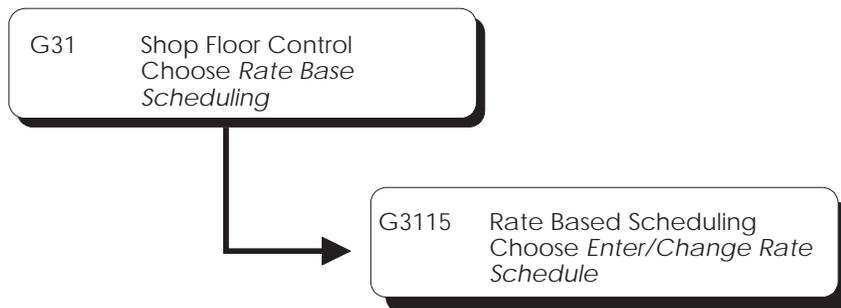
1. To locate the routing for your item, complete the following fields:
 - Branch/Plant
 - Line/Cell
 - Item Number
2. Access the fold area.



3. View the information for each operation sequence.

Field	Explanation
Line/Cell Identifier	Defines a production line or cell. Detailed work center operations can be defined inside the line or cell. For rate based manufacturing to use this value for reporting, this value must match the line cell in the header.

Creating Rate Schedules



A rate schedule is a request to produce a certain quantity of items on a specified periodic basis for a given length of time. Rate schedules eliminate the need to create multiple work orders for items you want to produce monthly, weekly, or daily in regular quantities. You generally use rate schedules in repetitive manufacturing.

Whether the rate is for an individual work center or a production line or cell that encompasses several work centers, the basic processing is the same.

To create a rate schedule, you specify engineering information, such as schedule types and effective dates, and production information, such as the item and quantities on which the rate is based.

You can use processing options to define a default schedule type, schedule period, and spread value. You can also choose to display only active schedules. In addition, you can access associated forms by indicating the version of these forms in the processing options. You can use these forms to view and modify information for routing, work center, MPS/MRP/DRP time series, rate generation, and scheduling.

Before You Begin

- Set up your work centers. See *Setting Up Work Centers* in the *Shop Floor Control Discrete Manufacturing Guides*
- Set up your routing instructions. See *Creating Work Orders* in the *Shop Floor Control Discrete Manufacturing Guides*

► To create rate schedules

On Enter/Change Rate Schedule

0	Scheduled Qty	UM	P	Eff From	Eff Thru	W/C or Line	Item Number
	2546	EA	2	01/05/96	09/23/96	200-100	3390
	2596	EA	2	01/07/97	12/22/97	200-100	3390
	800	EA	2	01/12/98	01/30/98	200-100	3390

1. Complete the following fields:

- Branch/Plant

- Schedule Type
- Item Number
- Work Center or Line
- Effective From
- Effective To
- Scheduled Quantity
- Unit of Measure

2. Access the fold area.

The screenshot shows a software window titled "[3104] - Enter/Change Rate Schedule". It contains several input fields and a data table. The input fields include: Branch/Plant (M30), Schedule Type (AC), Item Number (3390), W/Center or Line, and Effective From (with a "to" field). The data table below has columns for Line, Scheduled Qty, UM, P, Eff From, Eff Thru, W/C or Line, and Item Number. It lists three entries for item 3390 with different effective dates and rates.

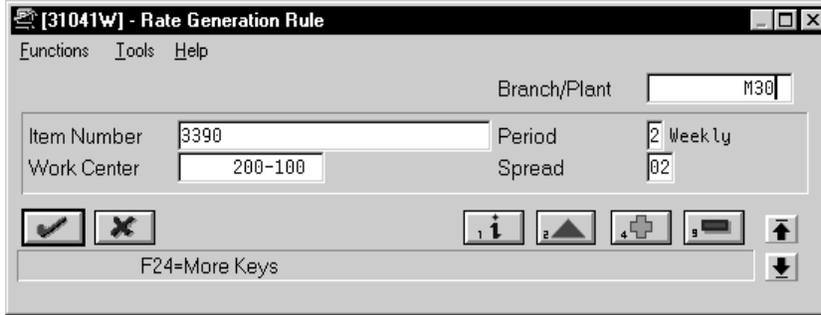
Line	Scheduled Qty	UM	P	Eff From	Eff Thru	W/C or Line	Item Number
0	2546	EA	2	01/05/96	09/23/96	200-100	3390
Spread 02 Rate ***CLOSED*** W/C Desc Machine Shop							
Sequence Document 90000080 Item Desc LEG OAK, 1.5x1.5x30							
Total Completed							96748
Total Scrapped							
2	2596	EA	2	01/07/97	12/22/97	200-100	3390
Spread 02 Rate ***CLOSED*** W/C Desc Machine Shop							
Sequence Document 90000090 Item Desc LEG OAK, 1.5x1.5x30							
Total Completed							134992
Total Scrapped							
2	800	EA	2	01/12/98	01/30/98	200-100	3390
Spread 02 Rate Weekly W/C Desc Machine Shop							
Sequence Document 90001036 Item Desc LEG OAK, 1.5x1.5x30							
Total Completed							30
Total Scrapped							10

3. Review the following default information:

- Period
- Spread

You can define schedule data for the rate. The system uses this as the default to generate Create Rate messages.

4. To define the schedule data for the rate, choose Rate Generation Rule.



5. On Rate Generation Rule, complete the following fields:

- Branch/Plant
- Work Center
- Period
- Spread
- Item Number

Field	Explanation
Schedule Type	A user defined code (system 31, type ST) that identifies the type of schedule, for example, AC for actual schedule and PL for planned schedule.
Quantity – Scheduled	The rate quantity, in production units of measure, scheduled to go through a work center.
Effective From	<p>A date that indicates one of the following:</p> <ul style="list-style-type: none"> • When a component part goes into effect on a bill of material • When a routing step goes into effect as a sequence on the routing for an item • When a rate schedule is in effect <p>..... <i>Form-specific information</i></p> <p>A date identifying when the rate schedule is in effect.</p>
Month/Week/Day/Shift	<p>A code that determines the frequency of the schedule.</p> <p>Valid codes are:</p> <ul style="list-style-type: none"> 1 Monthly 2 Weekly 3 Daily 4 Per Shift

Field	Explanation
Schedule Spread	<p>A code that determines whether the schedule quantity is to be spread across all workdays or consolidated on a specific day. Valid codes are:</p> <ul style="list-style-type: none">00 Spread across all workdays.01 Consolidated on the first day of the week (Sunday) if the schedule is weekly. Consolidated on the first day of the month if the schedule is monthly.07 Consolidated on the seventh day of the week (Saturday) if the schedule is weekly. Consolidated on the seventh day of the month if the schedule is monthly.08-31 Consolidated on that day of the month. Valid only with monthly schedules.

What You Should Know About

Changing data

If you change the work center or line cell, the system creates a new schedule. The only data that you can change on Enter/Change Rate Schedule without creating a new schedule includes the following:

- Quantity
- Unit of measure
- Period
- Spread
- Effective dates

Deleting a rate schedule

You cannot delete a rate schedule. You must close out the schedule.

Duplicating or overlapping schedules

You cannot enter duplicate schedules or overlap schedules for an item. The system does not take into account closed rate schedule records.

Bill of material and routing

Items that are included in rate schedules require a bill of material and routing. The system uses routings with a type value of blank. You can also use type value R (Routing) for alternate or substitute routings. Use type value R routings whenever you want to route an item differently than normal, but you do not want to duplicate or affect the costing for the item. You can define the routing type on the routing instructions.

See Also

- *Creating Rate Schedules* in the *Shop Floor Control Process Manufacturing Guide* for more information Processing Options for

Rate Schedule Revisions

SCREEN DEFAULTS:

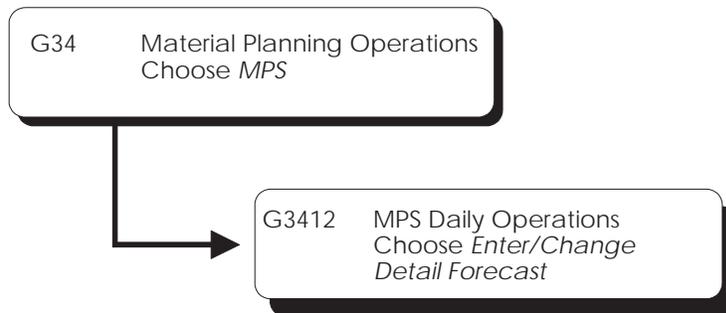
1. Enter a Schedule Type for inquiry. _____
2. Enter a '1' to display only active schedules, no closed schedules will be displayed. If left blank, all schedules will be displayed. _____
3. Enter the default schedule Period to use. If left blank, data dictionary default will be used. _____
4. Enter the default schedule Spread to use. If left blank, data dictionary default will be used. _____

VERSIONS TO EXECUTE:

Enter the Dream Writer version to use for each program listed. If left blank, version ZJDE0001 will be used.

- | | | |
|------------------------------|----------|-------|
| 5. Rate Scheduling Review | (P31224) | _____ |
| 6. Rate Scheduling Workbench | (P3114) | _____ |
| 7. MPS/MRP/DRP Time Series | (P3413) | _____ |
| 8. Routing Revisions | (P3003) | _____ |

Reviewing Rate Based Components



You can view the component items that are also sold separately as service parts. The system uses service part forecasts in the MPS calculation.

► To review rate based components

On Enter/Change Detail Forecast

The screenshot shows a window titled "[3460] - Enter/Change Detail Forecast". It contains several input fields and a data table. The fields include "Bch/Plt" (M30), "Forecast Type" (BF), "U/M" (EA), "Item Number" (3390), and "Skip to date". The table below shows forecast data for item 3390, with columns for "Fc Ty", "Request Date", "Adjusted", "Original", "Pass", "Cust. No", and "Description". The "Adjusted" and "Original" columns both show a value of 4000 for all dates from 01/02/98 to 04/03/98. The "Pass" column shows "N" for all entries. The "Description" column is empty. At the bottom of the window, there are keyboard shortcuts: "F15=Amounts/Quantities", "F24=More Keys", and "MW".

Fc Ty	Request Date	Quantity		Pass	Cust. No	Description
		Adjusted	Original			
BF	01/02/98	4000	4000	N		
BF	01/09/98	4000	4000	N		
BF	01/16/98	4000	4000	N		
BF	01/23/98	4000	4000	N		
BF	01/30/98	4000	4000	N		
BF	02/06/98	4000	4000	N		
BF	02/13/98	4000	4000	N		
BF	02/20/98	4000	4000	N		
BF	02/27/98	4000	4000	N		
BF	03/06/98	4000	4000	N		
BF	03/13/98	4000	4000	N		
BF	03/20/98	4000	4000	N		
BF	03/27/98	4000	4000	N		
BF	04/03/98	4000	4000	N		

To locate the item record, complete the following fields:

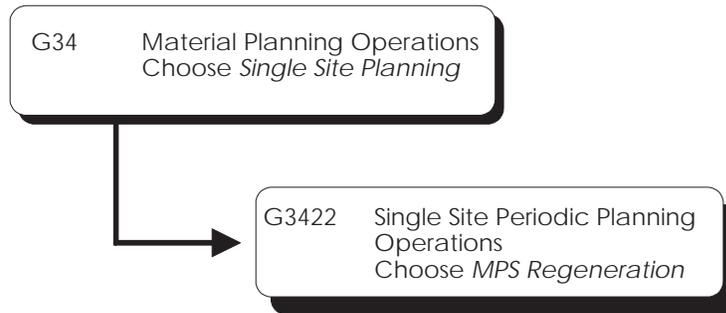
- Branch/Plant
- Item Number

Review item 3390 to see that, although it is a component item, it is also sold separately as a service part. The service part contains a forecast that is used in the MPS calculation.

See Also

- *Revising Detail Forecasts (P3460)* for processing options for this program

Generating MPS for Rate Based Items



When you run the MPS Net Change or Regeneration program, the system:

- Evaluates selected information
- Performs calculations
- Generates a time series and messages for the selected items

What You Should Know About

Rate Based Scheduling Information

You must set the processing options to generate the rate based master production schedule.

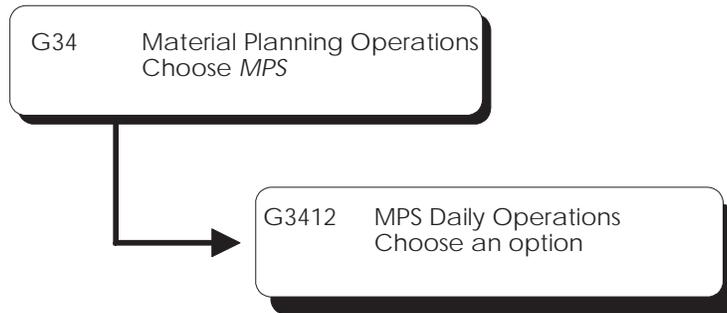
Enter the type of rate based schedule you want to use for processing.

You can also set a processing option to extend rate based adjustments to lower-level items.

See Also

- *Generating a Master Schedule for All Items (P3482)* for the processing options for this program
- *Generating a Master Schedule for Selected Items (P3482)*

Reviewing Rate Based Output from the MPS Generation



After you generate a master production schedule, use MPS Time Series Inquiry and MPS Detail Message Review to review the time series and messages that the system has generated.

The time series is a record of time-phased supply and demand netting for selected items. The system links the planned order releases for the parent item to the gross requirements of component items.

If a component does not have its own rate schedule, the system applies the demand from the parent item. The demand from the rate schedule parent follows the same logic as regular work orders. When a rate schedule is added for a component of a rate based parent, the calculation includes the information for the component in both the rate schedule (+RS) and unadjusted rate schedule (-RS) lines of data. The component is processed as supply, and regular MRP logic applies.

The messages reflect how the system used rate based items to generate quantities for net requirements for each time period. The MPS/MRP program produces three main action messages that pertain to rate based items:

- | | |
|-----------------------------|--|
| I = Increase rate to | Updates an existing rate to the increased quantity. |
| H = Decrease rate to | Updates an existing rate to the decreased quantity. |
| N = Create rate | Treats messages as a group from the MPS/MRP Detail Message Review form. You may answer more than one message at a time. The system creates one rate that averages the total of all Create Rate messages processed. |

When the system processes messages to create and update rates, it does not check the validity of the dates received. The MPS/MRP regeneration produces messages with valid dates. However, you can change these dates before processing the message. To avoid creating invalid rates, ensure the validity of the dates you enter whenever you change message dates before processing.

Reviewing rate based output consists of the following tasks:

- Reviewing the time series
- Reviewing action messages

▶ **To review the time series**

On MPS Time Series Inquiry

The screenshot shows a window titled '[3413] - MPS Time Series Inquiry'. It contains several input fields: Branch/Plant (M30), Start From Date, Unit of Measure (ER), Item Number (3390), and Leadtime Level (2 Fixed). Below these is a 'Data' section with a table. The table has columns for 'Past Due', '02.01.98', '09.01.98LM', '16.01.98 C', '23.01.98', and '30.01.98'. The rows list various quantity types such as +BAU, +BA, +RSU, +RS, -FSCU, -FCST, -FWOU, -FWO, -PWO, =ERU, =ER, ATPU, ATP, CATPU, and CATP. At the bottom, there are navigation keys: F8=Code, F13=Peg, F14=Msg, F16=Sup/Dem, F19=Left, F20=Right, F24=More Keys, and MW.

	Past Due	02.01.98	09.01.98LM	16.01.98 C	23.01.98	30.01.98
+BAU	5780	5180	380	3620-	6820-	17636-
+BA	5780	2124	1876-	5876-		
+RSU				800	800	800
+RS				10676	11616	4000
-FSCU		4000	4000	4000	4000	4000
-FCST		4000	4000	4000	4000	4000
-FWOU	600	800				
-FWO	3656			800		
-PWO					7616	
=ERU	5180	380	3620-	6820-	17636-	20836-
=ER	2124	1876-	5876-			
ATPU		1324		800		
ATP		1324		10676	4000	4000
CATPU		1324	1324	2124	4692-	51068-
CATP		1324	1324	12000	16000	20000

To locate the time series for your item, complete the following fields:

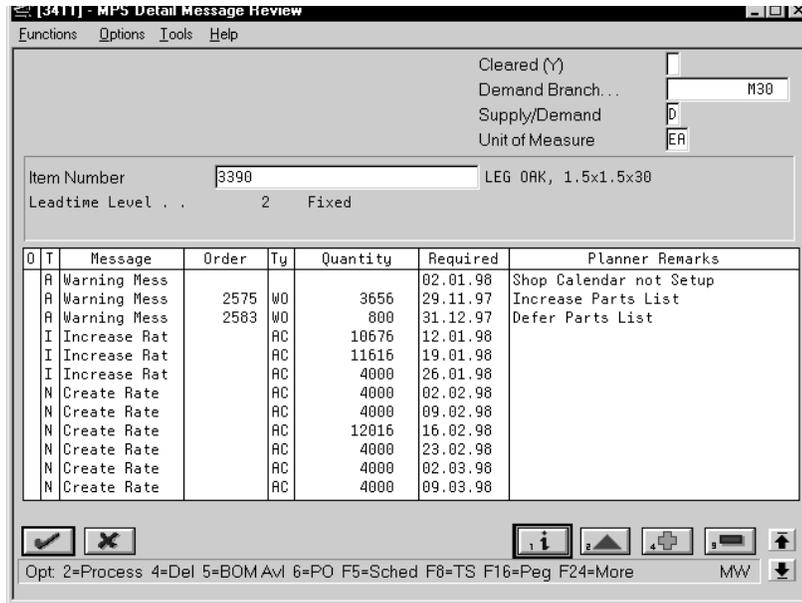
- Branch/Plant
- Item Number

What You Should Know About

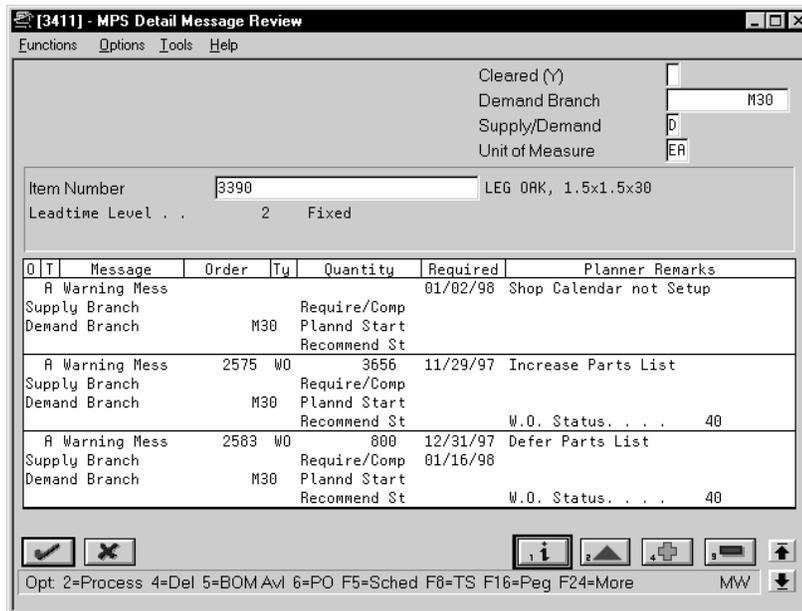
Suppressing blank lines You can use a function key to suppress the quantity types that have no data in the time series.

▶ To review action messages

On MPS Detail Message Review



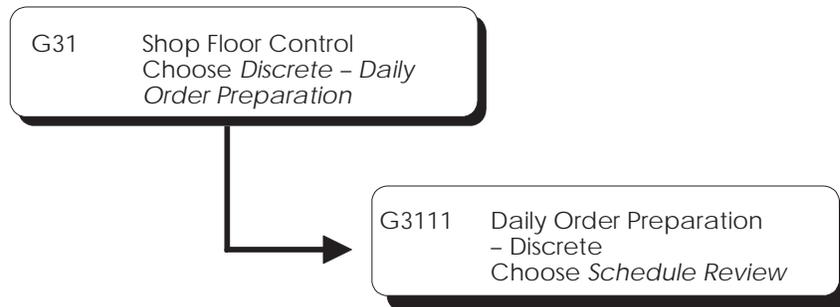
- To locate the messages for your item, complete the following fields:
 - Demand Branch
 - Item Number
- To view additional message information, access the fold area.



See Also

- *Working with Messages (P3411)* for the processing options for this program

Validating Load on Lines or Cells



Use Schedule Review to validate the load on lines or cells. You can view the effects of a rate schedule on a given work center and adjust the priorities of the schedule.

You can also:

- View rate schedule load for:
 - A specific work center by day, week, or month
 - A specific date range
- Revise rate schedules
- Revise resource units
- Review rate based load only, or rate based load and work order load together

▶ **To validate load on lines or cells**

On Schedule Review

Work with Process Manufacturing

Working with Process Manufacturing

Process manufacturing produces products such as liquids, fibers, powders, or gasses. Pharmaceuticals, foodstuffs, and beverages are typical examples of process products and represent a significant share of the manufacturing market. Products such as these are usually manufactured by a two-step process:

- Mixing or blending
- Filling or packaging

There might also be intermediate steps, such as curing, baking, or preparation.

Process manufacturing uses recipes or formulas and resources or ingredients. These resources can be either consumed or produced during the manufacturing process. In a process recipe or formula, the quantity of a component can vary according to its grade or potency.

The process produces co-products and by-products. A co-product is a saleable end item that results from a process. A by-product is a material that is produced incidental to or as a residual of the process.

The different types of processing in process manufacturing are:

- Batch
- Continuous

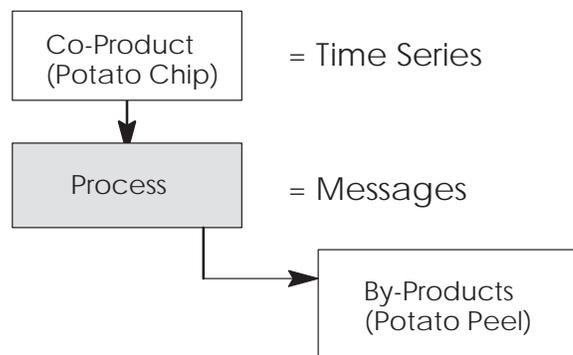
In batch processing, you usually produce a product in a standard run or lot size determined by vessel size, line rates, or standard run length. Because of the life cycle of the product after its completion, you typically schedule items made this way in short production runs. Co-products and by-products can be generated during batch processing. Typical items produced with batch processing include:

- Pharmaceuticals
- Foods
- Inks and paints
- Glues
- Oil or chemical products

In the continuous flow environment, production runs typically continue for an extended duration. Equipment is dedicated to one product or product line. This method of manufacturing is characterized by difficulty in matching output volume with demand and varying yield from process operations. Examples are petroleum-based products and water purification. Co-products and by-products are generally more prevalent in continuous processing than in batch processing.

Usually, both batch and continuous processing methods require extensive record keeping, recording of quality and tolerance values during the process, and strict adherence to lot tracing and tracking.

The following illustration shows that MPS calculates the time series for co-products. Demand for the co-product generates MPS order messages to drive the production process. Co-products that are 100% planned by the process do not receive order messages. The figure shows that the process also makes a by-product. This by-product might have some value, but it is not the central purpose of the process. For example, potatoes would not be processed primarily to obtain potato peels.

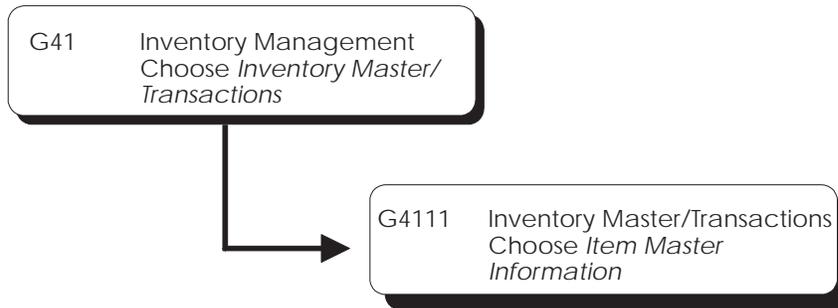


To identify items for process manufacturing, you must define the item's stocking type to distinguish process items from co-products or discrete items. You must then specify both the percentage of the demand for co-products that is satisfied from process work orders and the percentage that is satisfied from work orders for the co-products. You can then generate and review a master schedule of all process work orders and output. This output consists of time series and messages for the co- and by-products.

Working with process manufacturing consists of the following tasks:

- Defining the stocking type for the process
- Defining co- and by-products
- Generating MPS for the process industry
- Reviewing process output from the MPS generation

Defining the Stocking Type for the Process



You define the stocking type to distinguish the process from its co-products or discrete items.

► To define the stocking type for the process

On Item Master Information

[4101] - Item Master Information
 Functions Tools Help
 Item Number - Short: 65701

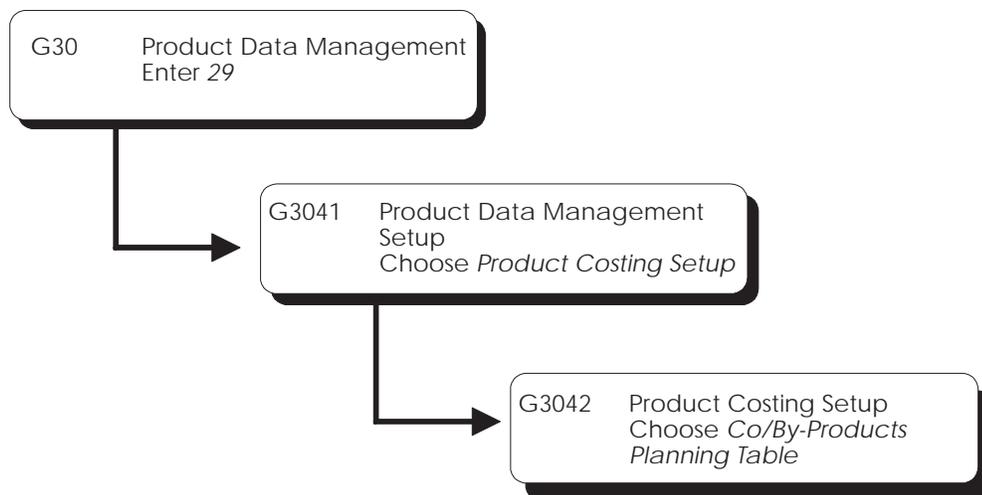
Product No	777	Desc	Potato Chip Process
Catalog No	777	Srch	Process, Chip
Stocking Type	R	Line Type	M
G/L Class	IN40	Bulk/Packed Flag	P
Unit of Measure	LB	Inventory Cost Level	2
Item Price Group		Sales Price Level	2
Basket Reprice Group		Purchase Price Level	3
Order Reprice Group		Kit Pricing Method	
Dispatch Group		Serial No. Required	N
Backorders Allowed	Y	Lot Status Code	
Check Availability Y/N	Y	Lot Process Type	1
Shelf Life Days		Commitment Method	1
ABC Codes	- - -	Item Flash Message	
Planner Number	6002	Std UOM Conversion	
Buyer Number	6001		
Print Message			

F5=Codes F8=Measures F10=Manufacturing F13=Branch/Plant F24=More Keys MW

1. To locate your item record, complete the following field:
 - Product Number
2. Complete the following field:
 - Stocking Type

Field	Explanation
Stocking Type	A user defined code (system 41/type I) that indicates how you stock an item (for example, as finished goods, or as raw materials). The following stocking types are hard coded and you should not change them: B Bulk Floor Stock C Configured item F Feature K Kit parent item N Non-stock

Defining Co- and By-Products



Use the Co/By-Products Planning Table to set up co- and by-product processes for MPS and MRP. This table specifies the percentage of the demand for co-products that is satisfied from process work orders and the percentage that is satisfied from the work orders for the co-products.

You can also specify special circumstances. For example, by entering 75% in the table, you specify that 75% of demand is satisfied from process work orders and 25% from co-product work orders. The system automatically satisfies the remainder by planning co-product work orders.

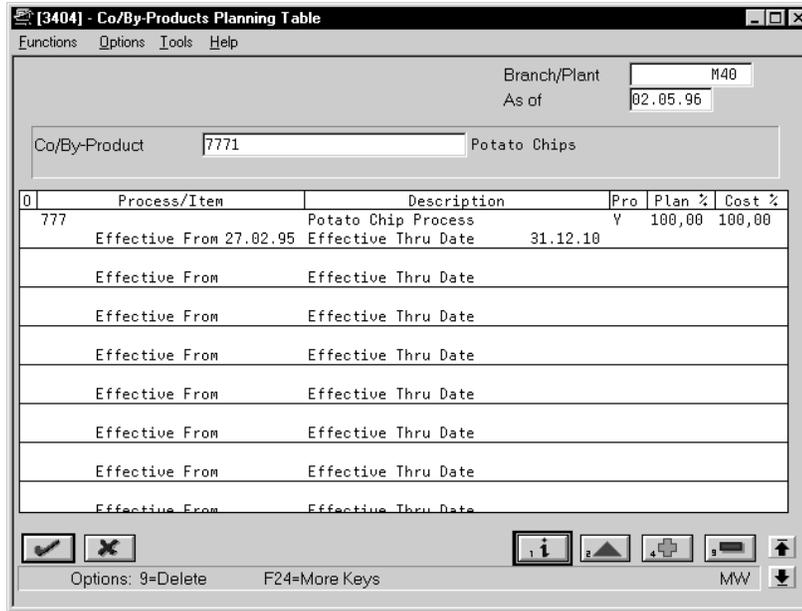
If a co-product can be produced by more than one process, both processes appear in the table when you locate the co-product. For example, a 75% – 25% relationship can exist between the two processes.

► **To define co- and by-products**

On Co-/By-Products Planning Table

Process/Item	Description	Pro	Plan %	Cost %
777	Potato Chip Process	Y	100.00	100.00

1. To locate the co-/by-product table, complete the following fields:
 - Co-/By-Product
 - Branch/Plant
2. Complete the following fields:
 - Process/Item
 - Process
 - Plan Percentage
 - Cost Percentage
3. Access the fold area.



4. Complete the following fields:

- Effective From
- Effective Thru Date

Generating MPS for the Process Industry



When you choose MPS Regeneration, the system:

- Evaluates selected information
- Performs calculations
- Generates a time series and messages for the selected items

See Also

- *Generating a Master Schedule for Selected Items (P3482)* for the processing options for this program

What You Should Know About

Process Planning

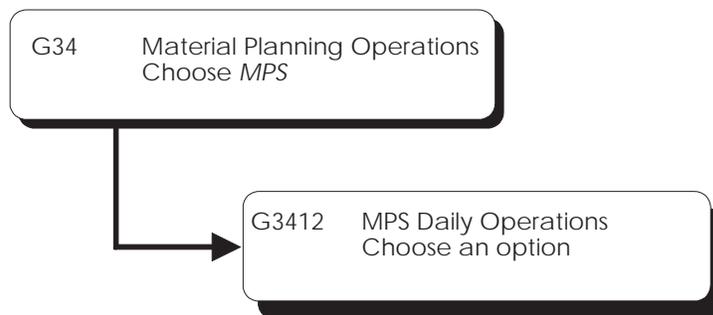
Set the process planning processing option for the net change versions you use for MRP and MPS planning.

Set this option to create the resource list records for co-/by-products when the system creates the process work order. If you leave this field blank, the system creates the resource list records for the co-/by-products when it creates the ingredients list.

Forecast Consumption

Forecast consumption does not apply to process manufacturing. Leave this processing option blank for the net change versions for MRP and MPS and when you run the regeneration programs.

Reviewing Process Output from the MPS Generation



After you generate a master schedule, use MPS Time Series Inquiry and MPS Detail Message Review to review the time series and messages that the system has generated.

Many processes produce multiple co-products. In these cases, one co-product might have a higher demand than other co-products. This is the pacing co-product. For example, a process might produce both plastic and ethylene-glycol (anti-freeze). Producing to meet demand for plastic might result in excess anti-freeze production, forcing a decrease in the price of anti-freeze in order to sell it. The pacing co-product requires the greater amount of the process to be produced in a given time period (based on demand) to obtain the co-product quantity required.

The time series is a record of time-phased supply and demand netting for selected co- and by-products. Co-products that are 100% planned by the process do not receive order messages. Instead, the system creates warning messages for co-products that are planned by a process.

Reviewing process output from the MPS generation includes the following tasks:

- Reviewing time series for co- and by-products
- Reviewing messages for processes

▶ **To review time series for co- and by-products**

On MPS Time Series Inquiry

	Past Due	01/02/98	01/09/98	01/16/98	01/23/98	01/30/98
+BAU	49252	49252	49252	49252	17948-	17948-
+BA	49252	49252	49252	49252		
+WOU						
+WO				17948		
-FSCU		13604	13604	13604	13604	13604
-SOU				67200		
-SO				67200		
=EAU	49252	49252	49252	17948-	17948-	17948-
=EA	49252	49252	49252			
+PLO						
ATPU		93548-				
ATP		49252				
CATPU		93548-	93548-	93548-	93548-	93548-
CATP		49252				

To locate the time series for your co- or by-product, complete the following fields:

- Branch/Plant
- Item Number

What You Should Know About

Process item numbers Process item numbers do not have a time series.

Suppressing blank lines You can use a function key to suppress the quantity types that have no data in the time series.

Example: Reviewing Time Series for Pacing Co-Products

In the potato chip example, there is a peeling process (888). This process produces the following co-products:

- Potato slices
- Peelings

View the MPS Time Series Inquiry for the pacing co-product. Notice that the planned orders (+PLO) satisfy the demand requirements and that the Ending Available (=EA) is balanced by 01/09/98.

	Past Due	01/02/98	01/09/98 L	01/16/98	01/23/98	01/30/98
+BRU	68875	68875	68875	68875	68875	68875
+BA	68875	261730-				4
+WO		261730	431400			
-FWOU						
-FWO	330605		431400		43208	43208
-PWO						
=EAU	68875	68875	68875	68875	68875	68875
=EA	261730-				4	8
+PLO					43212	43212
ATPU		261730-			43212	43212
ATP			431400		43212	43212
CATPU		261730-	261730-	261730-	218518-	175306-
CATP			431400	431400	474612	517824

View the time series for the product which is not the pacing co-product. Review the quantities in period 01/23/98.

[3413] - MPS Time Series Inquiry

Functions Tools Help

Branch/Plant: M40
 Start From Date:
 Unit of Measure: 0Z
 Item Number: 8455
 Leadtime Per Unit. Variable

Data

	Past Due	01/02/98	01/09/98	01/16/98	01/23/98	01/30/98
+BAU	300939	143083	64155	14773-	193253-	292805-
+BA	300939	300939	388182	531982	531982	546386
+W0		87243	143800			
-W0U	157856	78928	78928	178480	99552	99552
=EAU	143083	64155	14773-	193253-	292805-	392357-
=EA	300939	388182	531982	531982	546386	560790
+PLO					14404	14404
ATPU		371733-				
ATP		230326				
CATPU		371733-	371733-	371733-	556433-	741133-
CATP		230326	140690-	140690-	325390-	510090-

F8=Code F13=Peg F14=Msg F16=Sup/Dem F19=Left F20=Right F24=More Keys MW

In this example, you continually build ending available (EA) inventory. To get enough potato slices to cover demand, you continue to accumulate peelings, even though you have no demand for it.

► **To review messages for processes**

On MPS Detail Message Review

[3411] - MPS Detail Message Review

Functions Options Tools Help

Cleared (Y)
 Demand Branch... M40
 Supply/Demand D
 Unit of Measure 0Z
 Item Number 7771
 Leadtime Per Unit. Variable
 Potato Chips

O	T	Message	Order	Ty	Quantity	Required	Planner Remarks
	A	Warning Mess					No BOM, Co/By product item
	A	Warning Mess					Leadtime is Zero

Opt 2=Process 4=Del 5=BOMAvl 6=PO F5=Sched F8=TS F16=Peg F24=More MW

1. To locate the messages for your item, complete the following fields:

- Demand Branch
- Item Number

Review the detail messages for the co-product 7771. Co-products that are 100% planned by the process do not receive order messages. Warning messages are typical for co-products planned by a process.

2. To locate the messages for process 777, complete the following field:

- Item Number

The net requirement for the co-products act as requirements for the process. The +PLO for potato chips is ordered on the potato chip process.



What You Should Know About

Co-product messages

Co-products that are 100% planned by the process do not receive order messages.

See Also

- *Working with the Master Schedule (P3413)* for the processing options for MPS Time Message Inquiry
- *Working with Messages (P3411)* for the processing options for Detail Message Review

DRP/MPS Multi-Facility Scheduling



DRP/MPS Multi-Facility Scheduling

Objectives

- To understand multi-facility scheduling concepts
- To define supply and demand relationships between your branch/plants
- To use the branch relationships chart to review your supply and demand relationships in a graphical hierarchical format
- To generate a multi-facility schedule
- To review the time series for the multi-facility schedule
- To review and process transfer messages for the multi-facility schedule

About DRP/MPS Multi-Facility Scheduling

In a multi-facility operation, planned orders at the demand facility are the source of demand at the supply facility. You set up and maintain multi-facility schedules to:

- Manage the movement of material through distribution networks and multiple production facilities
- Formalize the process of transferring items among your facilities
- Create internal transfer orders to help ensure traceability of material and their costs between facilities
- Ensure that the branch from which you are ordering has enough inventory in stock to fill the order
- Schedule production according to realistic time frames

Multi-facility schedules allow greater control of your enterprise. You can define facility relationships at any level of detail for an entire facility, a product group, master planning family, or an individual item number. In addition, you can incorporate all your facilities into a single planning schedule.

DRP/MPS multi-facility scheduling consists of the following tasks:

- Setting up a multi-facility schedule
- Generating a multi-facility schedule



- Working with multi-facility planning output

The system records multi-facility information in the following tables:

Bill of Materials Master (F3002)	Contains warehouse or facility level information about bills of material, such as: <ul style="list-style-type: none">• Costs and quantities of components• Features and options• Levels of detail for each bill
Branch Relationships Master (F3403)	Contains the supply/demand relationship among the branches.
MPS/MRP/DRP Lower Level Requirements (F3412)	Contains the source of gross requirements that are posted to items from parent items.
MPS/MRP/DRP Detail Message Review (F3411)	Contains the action messages generated by an MPS or MRP scheduling run.
MPS/MRP/DRP Summary (F3413)	Contains the time series data for forms and reports.
Item Master (F4101)	Contains basic information about each item that has been defined in inventory, such as: <ul style="list-style-type: none">• Item numbers and descriptions• Category codes• Units of measure
Item Branch (F4102)	Contains warehouse or plant level information, such as: <ul style="list-style-type: none">• Costs• Quantities• Location• Branch level category codes

What are the Different Types of Multi-Facility Scheduling?

Two types of multi-facility scheduling are available:

- Consolidation
- Branch relationships

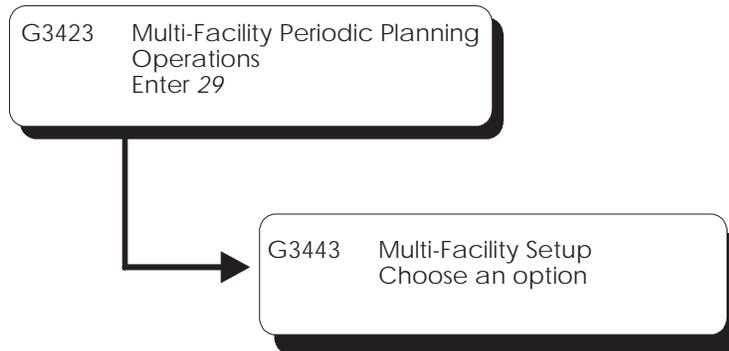
Consolidation multi-facility scheduling allows you to:

- Combine all planning activity under one specific facility
- View total requirements throughout your network for an overall corporate projection
- View individual facilities' contribution to supply and demand, item availability, and sales
- Select processing options that generate planning for non-consolidated branches
- Consolidate all planning requirements at a selected branch
- Create schedules for each of your individual facilities as well as an overall plan for the parent company

Branch relationships multi-facility scheduling allows you to:

- Use the branch/plant relationships to explode demand through the supply network
- Provide a manufacturing or transfer facility code for a component item within a bill of material
- Pick or manufacture a part at another nearby facility without creating an inter-facility transfer order
- Specify any number of different supply facilities for each component
- Pass all or part of the demand from the demand plant to the supply plant

Set Up a Multi-Facility Schedule



Setting Up a Multi-Facility Schedule

You set up multi-facility schedules to track supply, demand, and movement of material among the individual facilities of your enterprise. Multi-facility scheduling provides a flexible method for planning supply and resupply activities.

In multi-facility scheduling you must set up a table of supply and demand relationships among your facilities. The system uses these relationships to generate and maintain multi-facility schedules.

Setting up multi-facility schedules consists of the following tasks:

- Setting up supply and demand relationships
- Reviewing branch relationships on the relationships chart

The following describes how to set up multi-facility schedules using bill of material components.

Before You Begin

- Verify that DRP/MPS/RCCP has been set up
- Understand the concepts and terms described in *Single Level Master Scheduling*

See Also

- *Setting Up DRP/MPS/RCCP (P00051)* for information on how to define DRP, MPS, or RCCP data to use during processing
- *Single Level Master Scheduling* for more information on the master scheduling process
- *Setting Up DRP/MPS/RCCP* for information on how to define DRP, MPS, or RCCP data to use during processing
- *Single Level Master Scheduling* for more information on the master scheduling process

Setting Up Supply and Demand Relationships

Use Branch Relationships Revisions to set up supply and demand relationships for any level of detail you choose, including:

- Branch/plant
- Product group
- Master planning family
- Individual item number

This approach allows you to maintain your supply and demand relationships in one central location and reduce inventory errors caused by complex facility relationships. In addition, when you set up your supply and demand relationships, you can include the following optional features:

Mark up

You can have the system automatically mark up the cost of an item when you create a transfer order. The system can adjust the cost by a fixed amount or percentage.

Availability Checking

You can ensure that the branch from which you are ordering has enough inventory in stock to fill the order. If the required quantity is not available, the system checks subsequent facilities in the sequence that you define.

NOTE: To allow the system to generate transfer order messages, you must activate availability checking.

Effective dates

Use effectivity dates to control the demands that are placed on your supply branches. If an effective date that was assigned to a supply branch has expired, the system checks for another facility.

► **To set up supply and demand relationships**

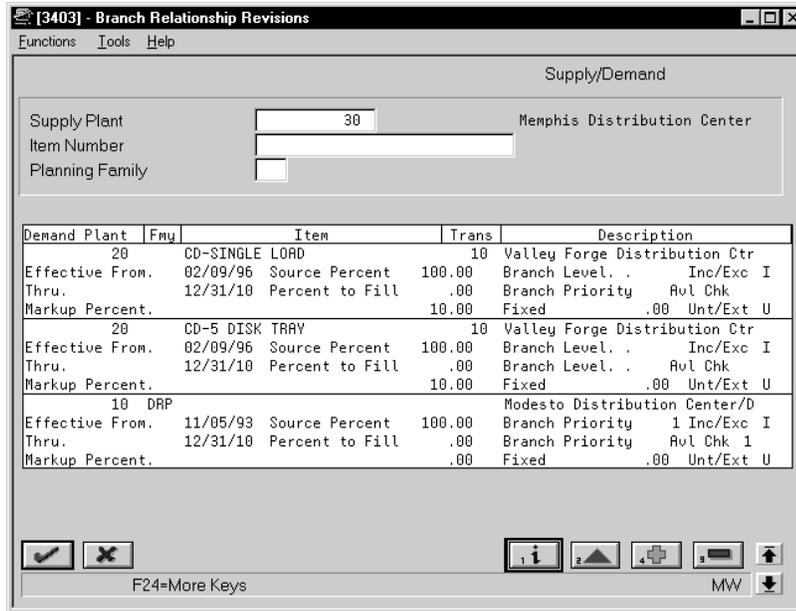
On Branch Relationship Revisions

The screenshot shows a software window titled "[3403] - Branch Relationship Revisions". The window has a menu bar with "Functions", "Tools", and "Help". Below the menu bar is a "Supply/Demand" section with input fields for "Supply Plant" (containing "30"), "Item Number", and "Planning Family". The "Supply Plant" field is also labeled "Memphis Distribution Center". Below this is a table with the following columns: "Demand Plant", "Fwy", "Item", "Trans", and "Description".

Demand Plant	Fwy	Item	Trans	Description
20		CD-SINGLE LOAD	10	Valley Forge Distribution Ctr
20		CD-5 DISK TRAY	10	Valley Forge Distribution Ctr
10	DRP			Modesto Distribution Center/D
20	DRP			Valley Forge Distribution Ctr
10	DR2			Modesto Distribution Center/D
20	DR2			Valley Forge Distribution Ctr
40	OFS		10	Ft. Worth Distribution Ctr/Of

At the bottom of the window, there are several icons and a status bar. The status bar contains the text "F24=More Keys" and "MW".

1. Complete the following fields:
 - Supply Plant
 - Demand Plant
2. Complete the following optional fields:
 - Supply/Demand
 - Family
 - Item
 - Transit Leadtime
3. Access the fold area.



4. Complete the following optional fields:
 - Branch Level
 - Branch Priority
 - Availability Check
5. Complete the following fields or allow the system to enter defaults:
 - Effective From
 - Effective Thru
 - Source Percent
 - Percent to Fill
 - Markup Percent
 - Fixed
 - Include/Exclude
 - Unit Extended

On Branch Relationship Revisions

1. Complete the following fields:
 - Supply Plant
 - Demand Plant
2. Complete the following optional fields:
 - Supply/Demand

- Family
 - Item
 - Transit Leadtime
3. Access the fold area.
 4. Complete the following optional fields:
 - Branch Level
 - Branch Priority
 - Availability Check
 5. Complete the following fields or allow the system to enter defaults:
 - Effective From
 - Effective Thru
 - Source Percent
 - Percent to Fill
 - Markup Percent
 - Fixed
 - Include/Exclude
 - Unit Extended

Field	Explanation
Branch/Plant	<p>Represents a high-level business unit. It can be used to reference a branch or plant that might have departments or jobs, which represent lower-level business units (data item MCU), subordinate to it. For example:</p> <ul style="list-style-type: none"> • Branch/Plant (MMCU) • Dept A (MCU) • Dept B (MCU) • Job 123 (MCU) <p>Business unit security is based on the higher-level business unit.</p> <p>..... <i>Form-specific information</i></p> <p>Depending on the entry in the Supply/Demand field, this field will be either the branch/plant receiving the items (the demand branch/plant) or the branch/plant producing the items (the supply branch/plant).</p>

Field	Explanation
Supply or Demand Plant	<p>This field allows you to view messages from the viewpoint of either the supply or demand branch. Changing this field from S to D also changes the Supply Plant field immediately below the Action Code field to Demand Plant.</p> <p>S Supply branch/plant D Demand branch/plant</p> <p>..... <i>Form-specific information</i></p> <p>If you are viewing messages for the supply branch/plant, the fold area shows branch/plants generating demand for each resupply order.</p> <p>If you are viewing messages for the demand branch/plant, the fold area shows branch/plants to which each resupply order is directed.</p>
Family	<p>This is a user defined code from system 41, type P4, under which you can organize logically-related items.</p> <p>You can simplify the master planning process by concentrating on only the top 10% of the inventory value. This is similar to using the ABC Analysis, except that you can use this code to allow exceptions to hard-and-fast ABC rules.</p> <p>Generally, you should only include items with high inventory investment in Master Planning. Excess stock can be carried for inventory items with little financial impact.</p> <p>..... <i>Form-specific information</i></p> <p>In the header line, use this field to display all branches either supplying or demanding items associated with the planning family. If you leave this field blank, you will see all branch relationships associated with a branch/plant regardless of planning family. You can enter a value in the Item Number field or the Planning Family field, but not both.</p> <p>In the detail line, this field displays the master planning family, if any, with which you have associated an item.</p>
Branch	<p>A number that the system assigns to an item. It can be in short, long, or 3rd item number format.</p> <p>..... <i>Form-specific information</i></p> <p>On this form, this is the item involved in transfers between supply and demand branches. You can leave this field blank to see all items involved in transfers regardless of item number. You can enter a value in this field or in the Planning Family field, but not both.</p> <p>For more information, see the cursor-sensitive help for the Planning Family field.</p>

Field	Explanation
Transit Leadtime	<p>The number of days to ship items from the supply branch to the demand branch. This leadtime is set up in the Branch Relationships Master table and can vary for different category codes or even for different items.</p> <p>..... <i>Form-specific information</i></p> <p>The planning system uses transit leadtime to calculate start dates for transfer orders between supply and demand branches.</p>
Branch Level	<p>Determines the level at which a component branch should be processed in multi-plant processing. The lowest level branches (which are assigned a higher numerical value) are processed first, followed by the higher level branches (which are assigned a lower numerical value).</p> <p>NOTE: Assign branch levels carefully so that the planning system generates all demand before allocating supply.</p>
Branch Priority	<p>Determines the sequence within a level that the branches are processed in multi-plant DRP/MPS/MRP. Use this field along with the Branch Level field to check inventory availability first in one branch, and then another.</p>
Availability Check	<p>Indicates if the planning system will check availability of the item or family at the supply branch/plant. If you enable availability checking on the item or family being demanded, the available inventory at the branch/plant will be committed until there is a zero balance. If you disable availability checking, the inventory balance in the supplying branch/plant can be negative.</p>

Field	Explanation
Effective – From	<p>A date that indicates one of the following:</p> <ul style="list-style-type: none"> • When a component part goes into effect on a bill of material • When a routing step goes into effect as a sequence on the routing for an item • When a rate schedule is in effect <p>The default is the current system date. You can enter future effective dates so that the system plans for upcoming changes. Items that are no longer effective in the future can still be recorded and recognized in Product Costing, Shop Floor Control, and Capacity Requirements Planning. The Material Requirements Planning system determines valid components by effectivity dates, not by the bill of material revision level. Some forms display data based on the effectivity dates you enter.</p> <p>..... <i>Form-specific information</i></p> <p>On this form, this field shows, along with the Effective To field, the dates for which a branch relationship is effective. If the Effective From and Thru dates are no longer in effect, the relationship has expired, and the planning system plans for supply at one of the following alternate locations:</p> <ul style="list-style-type: none"> • The demand branch • Another supply branch for which an effective from/through date has been defined
Effective–Thru	<p>A date that indicates one of the following:</p> <ul style="list-style-type: none"> • When a component part is no longer in effect on a bill of material • When a routing step is no longer in effect as a sequence on the routing for an item • When a rate schedule is no longer active <p>The default is December 31 of the default year defined in the Data Dictionary for Century Change Year. You can enter future effective dates so that the system plans for upcoming changes. Items that are no longer effective in the future can still be recorded and recognized in Product Costing, Shop Floor Control, and Capacity Requirements Planning. The Material Requirements Planning system determines valid components by effectivity dates, not by the bill of material revision level. Some forms display data based on the effectivity dates you enter.</p>

Field	Explanation
Percent – Source	<p>The system uses source percent to determine what percent of the planned order should be supplied by the source branch.</p> <p>For example:</p> <p style="padding-left: 40px;">Demand Branch — ATL Supply Branch — DEN source percent = 40%, CHI source percent = 60%</p> <p>If ATL needs 100 parts, the system generates a message to transfer 40 parts from DEN and 60 parts from CHI.</p> <p>A source percent of 100 transfers the entire supply from that Branch/Plant.</p>
Include / Exclude Code	<p>A code that indicates whether the system includes or excludes the item/category code in the Branch Relationships Master table (F3403) when generating a multi-plant schedule. If an item/category code is excluded, then that item/category code will be purchased or manufactured at the demand branch.</p>
Percent to Fill	<p>A field used during multi-plant processing to determine what percent of an order should be filled to place a transfer order message. For example:</p> <ul style="list-style-type: none"> • Percent to Fill — 75% • Demand — 200 • If the supply branch has 150 (75 percent of 200) or more available, then the planning system places the transfer order message. <p>A zero percent to fill results in the system always generating the transfer order message.</p> <p>NOTE: In order to allow the system to generate transfer order messages, you must activate availability checking.</p>
Percent Markup	<p>The percent markup is the percent the cost is to be marked up when the item is transferred from one branch to another.</p>
Fixed Markup Amount	<p>The amount the cost is to be marked up when being transferred from one branch to another.</p>
Unit / Extended	<p>This code determines if the fixed cost markup is to be added to the unit cost or the extended cost. Valid values are:</p> <p style="padding-left: 40px;">U Add markup to the unit cost E Add markup to the extended cost</p>

What You Should Know About

- | | |
|--|--|
| Deleting supply and demand relationships | When you delete a supply and demand relationship, the system deletes the entire record. |
| Locating existing supply and demand relationships | When locating a relationship, you can narrow your search by entering either an item number or planning family. Enter an item number to display all plants that either supply or demand a certain part. Enter the planning family to display all plants that either supply or demand parts that belong to a specific master planning family. |
| Defining the branch level | <p>You must set the appropriate processing option to determine the level of the component branch to be one level higher than the header for the source branch.</p> <p>The branch level, along with the branch priority, determines the sequence in which the the system processes supply and demand plants. The system processes the branches with the highest numerical branch level first.</p> |

Processing Options for Branch Relationships Revisions

SUPPLY OR DEMAND MODE:

1. Enter the default mode for entry of Branch Relationships. _____
'D' = Demand branch in header.
'S' = Supply branch in header.

DISPLAY FORMAT:

2. Enter a '1' to display the sales transfer format. The default is to display the branch relationship format. _____

LEVEL UPDATE:

3. Enter a '1' to automatically update the Branch Level field. _____

Reviewing Branch Relationships on the Relationships Chart

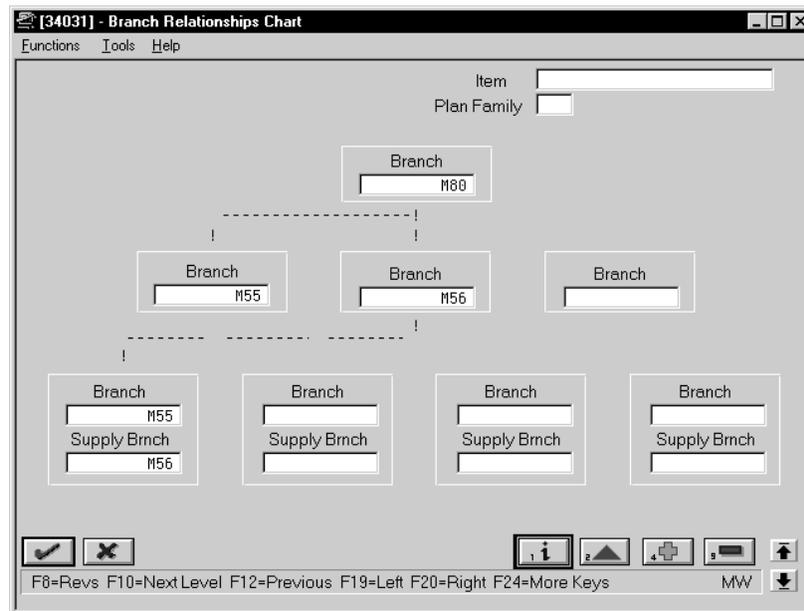
Use the Branch Relationships Chart to review your supply and demand relationships in a graphical hierarchical format. The Branch Relationships Chart displays the:

- Branch
- Level of the branch

- Supply branches for the corresponding demand branch

► **To review branch relationships on the relationships chart**

On Branch Relationships Chart



1. To locate the branch/plant for which you want to display supply and demand relationships, complete the following field:
 - Branch
2. To narrow your search to a specific level of detail, complete one of the following optional fields:
 - Item
 - Plan Family

On Branch Relationships Chart

1. To locate the branch/plant for which you want to display supply and demand relationships, complete the following field:
 - Branch
2. To narrow your search to a specific level of detail, complete one of the following optional fields:
 - Item
 - Plan Family

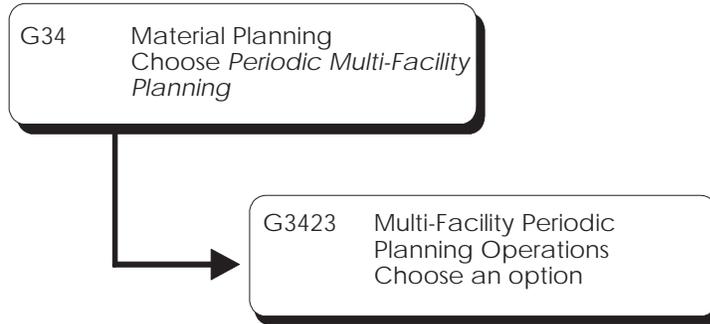
Field	Explanation
Branch	<p>Represents a high-level business unit. It can be used to reference a branch or plant that might have departments or jobs, which represent lower-level business units (data item MCU), subordinate to it. For example:</p> <ul style="list-style-type: none">• Branch/Plant (MMCU)• Dept A (MCU)• Dept B (MCU)• Job 123 (MCU) <p>Business unit security is based on the higher-level business unit.</p> <p>..... <i>Form-specific information</i></p> <p>On this form, the business units are arranged with the lowest level supply branch/plants at the top, and each successive demand branch/plant below.</p>

Processing Options for Branch Relationships Chart

BRANCH RELATIONSHIP REVISIONS:

1. Enter the DREAM Writer Version of Branch Relationship Revisions to call. Default is ZJDE0001.

Generate a Multi-Facility Schedule



Generating a Multi-Facility Schedule

After you have set up the supply and demand relationships among your branch/plants, you can use DRP or MPS Regeneration or DRP or MPS Net Change to generate a multi-facility schedule.

When you generate a multi-facility schedule, the system evaluates selected information, performs calculations, and recommends a time-phased planning schedule for all selected items.

Before You Begin

- Set up DRP/MPS multi-facility scheduling. See *Setting Up a Multi-Facility Schedule*.

Processing Options for Master Planning Schedule – Multiple Plant

BUCKET INFORMATION:

1. Enter the Generation Start Date. _____
(Default is current date)
2. Enter the number of past due periods, (0, 1 or 2). _____
(Default is 0)
3. Enter the planning horizon periods, (maximum of 52 periods):
 - a. Days (e.g. 5) _____
 - b. Weeks (e.g. 25) _____
 - c. Months (e.g. 6) _____

GENERATION DEFINITION:

4. Enter the Generation Mode: _____
1 - Net Change
2 - Gross Regeneration

5. Enter the Generation Type: _____
1 - Single Level MPS/DRP
3 - Multi Level MPS Items
4 - MRP with/without MPS
5 - MRP with Frozen MPS

PHANTOM ITEMS:

6. Enter a '1' to generate messages and time series records for phantoms. _____

ON HAND ADJUSTMENTS:

7. Enter a '1' to decrease beginning available by safety stock quantity. _____

8. Enter the lot hold codes (up to 5) to be considered on hand, or enter a '*' to consider all held lots as on hand. If left blank, held lots will not be considered on hand. _____

9. Enter a '1' by the following Receipt Routing quantities to be considered on hand. _____

- a. Quantity in Transit _____
- b. Quantity in Inspection _____
- c. User Defined Quantity 1 _____
- d. User Defined Quantity 2 _____

NOTE: Any quantity not included will be placed in the On Receipt bucket.

DAMPER DAYS:

10. Enter the Defer Damper days, (no defer message if less than 'X' number of days). _____

11. Enter the Expedite Damper days, (no expedite message if less than 'X' number of days). _____

SAFETY LEADTIME:

12. Enter the purchased item leadtime days. _____

13. Enter the manufactured item leadtime days. _____

FORECASTING INFORMATION:

14. Enter the Forecast Type to include. Up to 5 types can be included, (e.g. '0102BF'). If left blank, no forecast will be included. _____

RATE BASED SCHEDULING INFORMATION:

15. Enter the Schedule Type for rate based items. (Default is 'AC') _____

16. Enter a '1' to extend rate based adjustments to lower level items. _____

PURCHASE ORDER INFORMATION:

17. Enter the Document Type for purchase orders. (Default is 'OP') _____

WORK ORDER INFORMATION:

18. Enter the Document Type for work orders. (Default is 'WO') _____

19. Enter the Work Order Status at which messages will no longer be exploded to lower level items. If left blank, all messages will be exploded to lower level items. _____

INCLUSION RULES:

20. Enter the Version of Supply/Demand Inclusion Rules to be used. _____

PERFORMANCE ISSUES:

21. Enter a '1' to initialize the MPS/MRP Print Code. This code is used for selecting records during the MPS/MRP print. (See glossary for MRPD.) _____

NOTE: If left blank, the run time of the generation will be reduced.

22. Enter the User Defined Code Type that contains the list of quantity types to be calculated & written to the Time Series file (F3413). User Defined Code 34/QT contains a master list of quantity types that can be written and will be used as the default. _____

23. Enter a '1' clear the DRP/MPS/MRP files before a Regeneration. This option should be used with EXTREME CAUTION. It will totally clear the following files: _____

- F3411 - Message Detail
- F3412 - Pegging
- F3413 - Time Series

NOTE: If a '1' is entered, it will improve performance and clean up any bad data in the files.

24. Enter a '1' to process each branch from the Branch Relationship table at each level that branch occurs: This is only used when the Branch Relationships are used for Multi-Facility and will increase the generation time. _____

25. Enter the default branch for retrieving the Shop Floor Calendar to reduce processing time. If left blank, the calendar for each branch will be used. _____

MULTI-FACILITY INFORMATION:

26. Enter one of the following methods of Multi-Facility processing: _____

- 1 - Simple Consolidation
 - a. Enter a '1' to also run a regular generation on the non-consolidated branches. _____
 - b. Enter the Branch to consolidate to. _____
 - 2 - Use Branch Relationships
 - a. Enter the Category Code (1-5) to be used. _____
 - b. Enter a '1' to make all manufactured items in the originating branch. _____
 - 27. Enter the Document Type for transfer orders. (Default is 'OT') _____
- PROCESS PLANNING:
- 28. Enter a '1' to generate planning in Process mode. _____
NOTE: If left blank, the run time of the generation will be reduced.
- LOT EXPIRATION:
- 29. Enter a '1' to consider lot expiration dates in calculations. _____
- FORECAST CONSUMPTION PROCESSING:
- 30. Enter a '1' to use Forecast Consumption logic. _____

What You Should Know About Processing Options

Generation definition (5)

You must specify in the processing option the type of plan to generate the multi-facility DRP or MPS items. Depending upon the type of master schedule you need, you can use any of the generation types listed in the processing option.

Multi-facility information (26)

You must set the appropriate processing option to control whether to run a consolidated or a full multi-facility DRP or MPS Regeneration.

Consolidation adds the item's time series data in the same time buckets for selected branch/plants and includes the combined totals into a consolidation branch/plant.

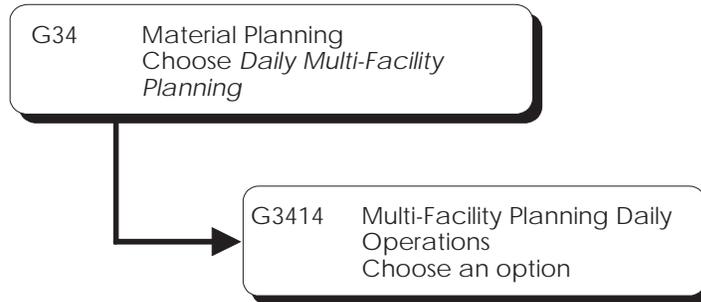
The system combines the supply and demand data for selected branch/plants and includes the combined totals into a consolidation branch/plant. The system generates a new time series only for the consolidation branch and not the individual branches.

Transfer orders (27)

Transfer order messages are an output of multi-facility scheduling. You must set the appropriate processing option to identify the document type to use for transfer orders.

When the system processes a transfer order, it creates a sales order at the supply plant and a purchase order at the demand plant.

Work with Multi-Facility Planning Output



Working with Multi-Facility Planning Output

To review information for MPS, choose MPS on the Material Planning Operations menu. Then, choose an MPS option on the MPS Daily Operations menu.

Multi-facility planning output consists of information in the time series and transfer order messages. Use the time series information to either accept the planning that is suggested by the system or to override it. You should review the transfer order messages for individual item numbers to determine which action, if any, you need to take.

Working with multi-facility planning output consists of the following tasks:

- Reviewing the multi-facility time series
- Processing multi-facility transfer order messages

Before You Begin

- Generate a current multi-facility schedule. See *Generating a Multi-Facility Schedule*.

Reviewing Multi-Facility Time Series

Use Time Series Inquiry to review the times series for the multi-facility schedule. The multi-facility schedule is a record of time-phased supply and demand for selected items.

This data is derived from the most recent regeneration or net change run. Processing options in the DRP/MPS regeneration program enable you to set up daily, weekly, or monthly time periods (buckets).

The time series for multi-facility items uses quantity type ID (inter-plant demand) to indicate the net demand that the system transfers to the supply branch/plant for all demand branch/plants.

► **To review the time series**

On Time Series Inquiry

The screenshot shows a software window titled "[3413] - DRP Time Series/ATP Inquiry". It contains several input fields: "Branch/Plant" (30), "Start From Date", "Unit of Measure" (EA), "Item Number" (DRP4), and "Leadtime Level" (7 Fixed). Below these is a "Data" section with a table. The table has columns for "Past Due", "02.01.98", "09.01.98 L", "16.01.98", "23.01.98", and "30.01.98". The rows represent different quantity types and their values for each date.

	Past Due	02.01.98	09.01.98 L	16.01.98	23.01.98	30.01.98
+BA	9850	9850	9473	9473	9473	9473
+IR						
+P0						
-LEXP						
-FCST		377				
-Ship		150				
-SO						
-ID						
=EA	9850	9473	9473	9473	9473	9473
+DRP						
ATP		9720				
CATP		9720	9720	9720	9720	9720

To locate the time series for your item complete the following fields:

- Branch/Plant
- Item Number

On Time Series Inquiry

To locate the time series for your item complete the following fields:

- Branch/Plant
- Item Number

See Also

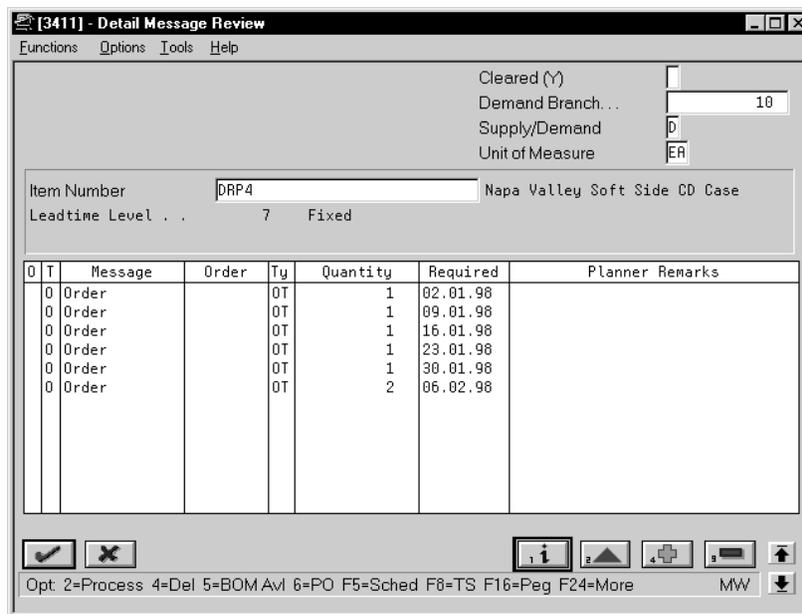
- *Reviewing DRP/MPS Time Series (P3413)*
- *Reviewing DRP/MPS Time Series*

Processing Multi-Facility Transfer Order Messages

Use Detail Message Review to review the transfer order messages for the multi-facility schedule. Multi-facility scheduling creates messages that are appropriate to the demand and supply facilities. If you choose to process the messages, the system automatically creates transfer orders. You can transfer items between facilities either at cost or at a fixed or percent markup.

► **To process transfer order messages**

On Detail Message Review



1. To locate the transfer order messages for your item, complete the following fields:
 - Demand Branch
 - Item Number

2. Choose Process Message for those transfer order messages that you want to process.

Order Date
Cancel Date
Req. Date 06.02.98
S/O No ST
P/O No OT
Skip To Line

Item Number	Quantity	UM	Price	Extended	Ty
DRP4	2				S

Opt 9=Delete F4=Detail F5=Add/Inq F13=S/O Info F14=P/O Info F24=More MW

3. On Transfer Order, accept the order to create the following:
 - Transfer order for the item
 - Purchase order number for the demand plant
 - Sales order number for the supply plant
4. Review the information for the new orders in the following fields:
 - Order Date
 - Cancel Date
 - Requested Date
 - Promised Date
 - Sales Order Number
 - Purchase Order Number
 - Ship From Branch
 - Ship To Branch
 - Landed Cost
 - Quantity
 - Item
 - Unit of Measure
 - Price

- Extended Cost
- Line Type

On Detail Message Review

1. To locate the transfer order messages for your item, complete the following fields:
 - Demand Branch
 - Item Number
2. Choose Process Message for those transfer order messages that you want to process.
3. On Transfer Order, accept the order to create the following:
 - Transfer order for the item
 - Purchase order number for the demand plant
 - Sales order number for the supply plant
4. Review the information for the new orders in the following fields:
 - Order Date
 - Cancel Date
 - Requested Date
 - Promised Date
 - Sales Order Number
 - Purchase Order Number
 - Ship From Branch
 - Ship To Branch
 - Landed Cost
 - Quantity
 - Item
 - Unit of Measure
 - Price
 - Extended Cost
 - Line Type

Field	Explanation
Date – Order/Transaction	The date that an order was entered into the system. This date determines which effective level is used for inventory pricing.

Field	Explanation
Cancel Date	The date that the order should be canceled if the goods have not been sent to the customer or the goods have not been received from the supplier. This is a memo-only field and does not cause the system to perform any type of automatic processing.
Date – Requested	The date that an item is to arrive or that an action is to be complete.
Date – Promised Shipment	The promised shipment date for either a sales order or purchase order. The Supply and Demand Programs use this date to calculate Available to Promise information. This value can be automatically calculated during sales order entry. This date represents the day that the item can be shipped from the warehouse.
Ship To Branch	A code that identifies a business unit in the company.
Landed Cost	A code (table 41/P5) that indicates the landed cost rule for an item, which defines purchasing costs that exceed the actual price of the item. These costs might be for broker fees, commissions, and so forth. You set up landed cost rules on Landed Cost Revisions.
Amount – Price per Unit	The list or base price to be charged for one unit of this item. In sales order entry, all prices must be set up in the Base Price table (F4106).
Amount – Extended Price	The number of units multiplied by the unit price.

See Also

- *Working with Messages (P3411)*
- *Working with Messages*



Exercises

See the exercises for this chapter.

Single Facility Material Requirements Planning



Single Facility Material Requirements Planning

Objectives

- To generate Material Requirements Planning (MRP)
- To validate the material requirements plan
- To review MRP action messages
- To set up Capacity Requirements Planning (CRP)
- To set up MRP and capacity requirements display
- To generate and process work orders

About Single Facility MRP

Material Requirements Planning (MRP) uses information from the bill of material and inventory records to calculate the time-phased net material requirements for every component item and subassembly. MRP suggests a replenishment plan to support the production of the quantities that are specified in the Master Production Schedule.

A single facility requirements plan critically impacts lower-level components or resources, such as skilled labor or revenues. Single facility implies material requirements planning at the component level.

The MRP process consists of:

- Determining what you need (forecast, customer orders, and interplant demands)
- Subtracting what you have (inventory, purchase orders, and work orders)
- Calculating what you need and when you need it

You can process a material requirements plan in one of two ways:

- Freeze the MPS and generate MRP
- Validate the MPS and then generate a combination of MPS and MRP

When you process a material requirements plan, the system summarizes gross material requirements for each assembly, component, and raw material part number. The requirements plan supports the MPS for each time period in the planning horizon.



You can generate a material requirements plan for all items or for a net change generation, which includes only the items that have changed since the last generation. After you generate MRP output, you can review and respond to messages.

The system uses the following inputs to MRP:

- Demand
 - Service part's forecast and sales orders
 - Parent's planned and firm work order demand
- Supply
 - Firm work orders
 - Rate schedules
 - Purchase orders
 - Inventory
 - In-receipt routing
- Product data
 - Item Branch (F4102)
 - Bill of Materials Master (F3002)

The system generates the following outputs from MRP:

- Messages
 - Action
 - Warning
- Time series with calculated quantities for:
 - Ending Available (EA)
 - Available to Promise (ATP)
 - Cumulative Available To Promise (CATP)
 - Planned orders

Material requirements planning consists of the following tasks:

- Generating a material requirements plan
- Working with the material requirements plan
- Validating the material requirements plan

-
- Setting up Material and Capacity Requirements Planning
 - Processing orders for MRP

The system records material planning information in the following tables:

Bill of Materials Master (F3002)	Contains warehouse or facility level information about bills of material, such as: <ul style="list-style-type: none">• Costs and quantities of components• Features and options• Levels of detail for each bill
Rate Schedule Master (F3104)	Contains supply rate schedules for rate based items.
Branch Relationships Master (F3403)	Contains the supply and demand relationship among the branches.
Forecast Consumption Periods (F3405)	Contains the forecast consumption periods that you defined on Forecast Consumption Periods.
MPS/MRP/DRP Detail Message Review (F3411)	Contains the action messages that were generated by an MPS or MRP scheduling run.
MPS/MRP/DRP Lower Level Requirements (F3412)	Contains the source of gross requirements that are posted to items from parent items.
MPS/MRP/DRP Summary (F3413)	Contains the time series data for forms and reports.
Forecast (F3460)	Contains the forecast data that MRP uses for calculations.
Item Master (F4101)	Contains basic information about each item that has been defined in inventory, such as: <ul style="list-style-type: none">• Item numbers and descriptions• Category codes• Units of measure
Item Branch (F4102)	Contains warehouse or plant-level information, such as: <ul style="list-style-type: none">• Costs• Quantities• Location• Branch level category codes

Using Bills of Material in MRP

The bill of material provides product structure information that MRP uses to explode the master production schedule to all component items. If a parts list does not exist for a work order, MRP generation uses the standard bill of material to explode demand.

The following features determine which components explode, how to modify the quantity, and how the system calculates schedule dates:

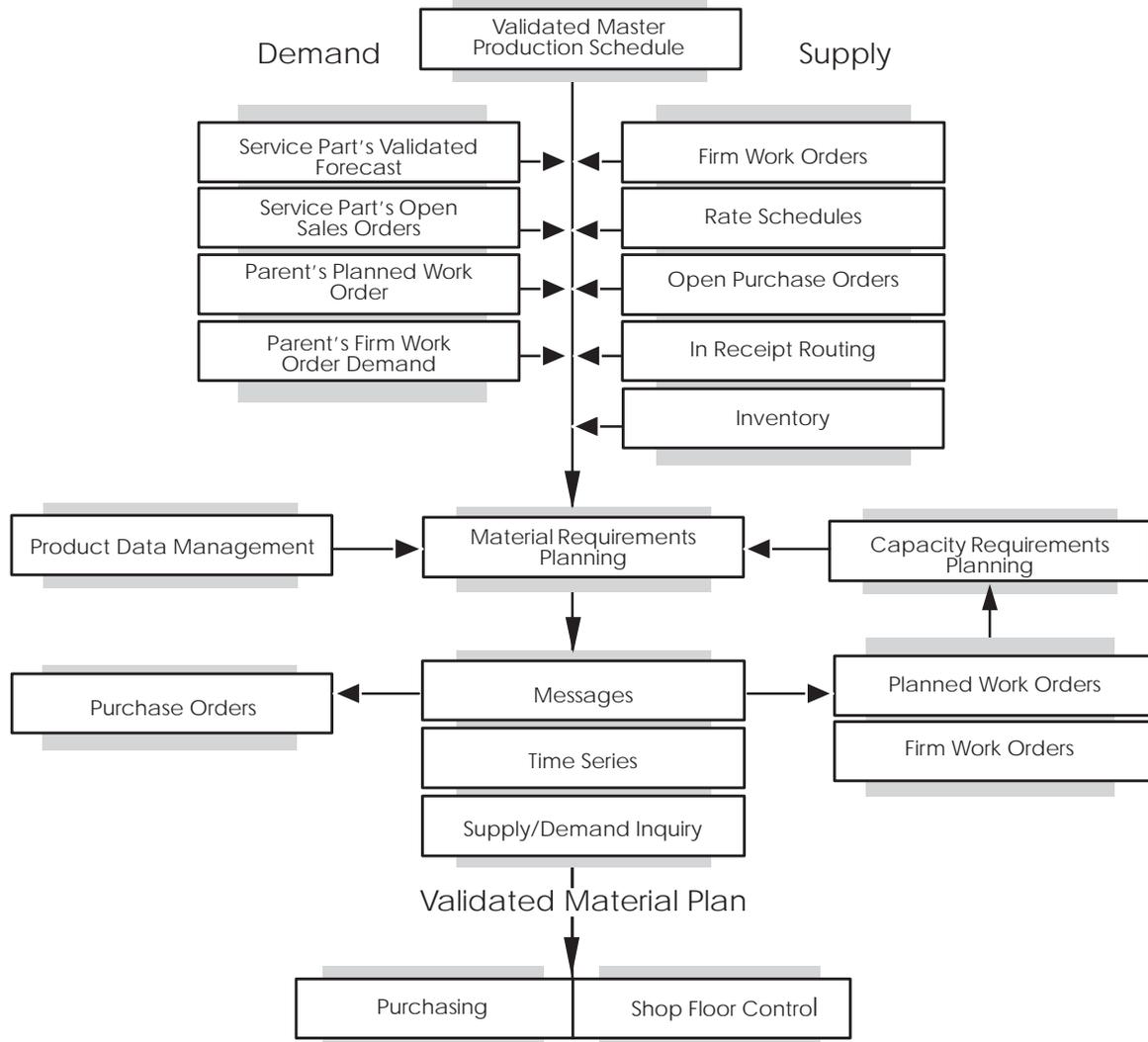
- Effectivity checking
- Feature planning percentage
- Quantity per
- Bill of material scrap factor
- Leadtime offset
- Operation scrap
- Fixed or variable quantity per assembly

What are the Differences Between MRP and MPS?

MPS generally has independent demand, while MRP has dependent demand. Independent demand is demand for an item that is unrelated to the demand for other items, such as demand for finished goods. Dependent demand is demand that is directly related to or derived from the bill of material structure for other items or end products. MRP might also include forecast and sales orders if items are sold as service (spare) parts. The majority of demand, however, is demand from parent orders. The demands on MRP include:

- Parent's firm work orders
- Parent's planned work orders
- Interplant demands
- Service part forecast
- Service part sales orders

The following illustration compares the flow of MRP to that of MPS.



Running MRP Effectively

MRP runs most effectively when you ensure the accuracy and validity of the following items:

Master schedule

Ensure that the master schedule is at least 95% accurate. Accuracy is measured by comparing the creation of an end product to the performance of the schedule.

Bill of material

Ensure that the bill of material is at least 98% accurate and contains the correct components and quantities. Accuracy is measured by comparing how the item is built in the factory to the correct components and quantities contained in the bill of material.

If you find a discrepancy between the parts list and the bill of material, you cannot count the bill of material as accurate.

Inventory

Ensure that your inventory count is at least 95% accurate. You can achieve this accuracy through the cycle count process.

Leadtimes

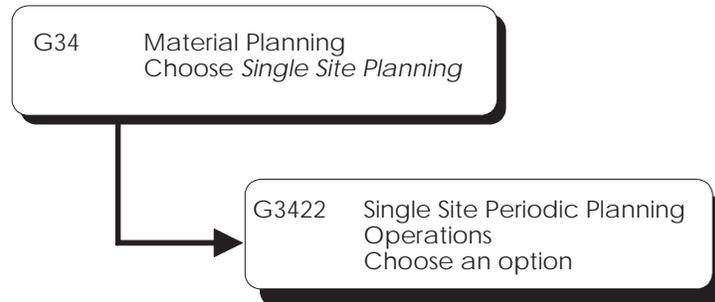
Ensure that your leadtimes are valid.

Keep in mind that the system gives you planned leadtimes. In execution, the actual time it takes to complete an order can vary.

See Also

- *About Time Fences (P3413)*
- *About System Messages (P3413)*
- *About Time Fences*
- *About System Messages*

Generate a Material Requirements Plan



Generating a Material Requirements Plan

Use MRP Regeneration or MRP Net Change to produce a single facility MRP planning schedule for the items that you select. You can generate a material requirements plan for:

- A single item
- All items
- Only items that are affected by transactions since the last generation

When you generate a material requirements plan, the system evaluates selected information, performs calculations, and recommends a time-phased replenishment plan for all selected items.

MRP generation uses the same programs as DRP/MPS generation. The following summarizes these programs:

MRP Regeneration

MRP Regeneration is a DREAM Writer program that produces an MRP schedule for all items that are selected in the data selection criteria. When you run MRP Regeneration, the system:

- Reads the selected forecast
- Uses data from the MRP inclusion rules to calculate requirements for master planned items
- Generates a time series and messages for the selected items and components of selected items

MRP Net Change

MRP Net Change is the same DREAM Writer batch program as MRP Regeneration. The data selection is further defined to include only the items that you selected on Net Change Review. When you run MRP Net Change, the system:

- Evaluates selected information
- Performs calculations
- Generates a time series and messages for the selected items and components of selected items

Before You Begin

- Verify that MRP/CRP has been set up.
- Understand the concepts and terms described in *Single Level Master Scheduling*. See *Single Level Master Scheduling*.
- Generate a forecast for independent demand items. See *Generating Detail Forecasts* in the *Forecasting Guide*.

What You Should Know About

Bill of material

MRP uses the bill of material to explode demand to all component items. If a parts list does not exist for a work order, MRP generation uses the standard bill of material to explode demand.

You should define a bill of material type M (standard manufacturing bill) for work order headers without a parts lists and for parent planned orders. The MRP generation uses bill type M to sequence items according to how the product is built.

Low level code

The system uses the low level code to determine when to generate a time series for an item. MRP generation explodes lower level demand only for manufactured items. The system does not explode demand to levels below a purchased item, even if that item has a bill of material.

Generation type

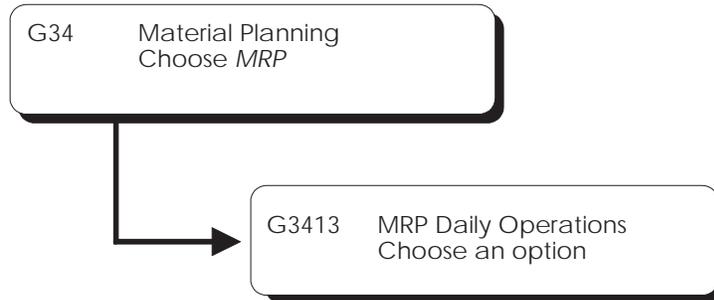
You must use generation types 4 and 5 to generate a master planning schedule for MRP items. If the status of MPS is frozen, generation type 5 explodes only the component items of the master scheduled item. Select generation type 4 to explode MPS items and component items.

Frozen orders	If you identify work orders or purchase orders for an item as frozen, the program does not replan any orders for the item. Instead, you receive a frozen order message for that item.
Data selection	<p>To run an MRP regeneration, base your selection on branch/plant, category codes, and planning code. The system can process any selection from based-on table fields.</p> <p>To run a net change generation, set the net change flag to 1 to select items that have changed since the last generation of the program.</p>

See Also

- *Setting Up MRP and Capacity Planning (P0005A)* for information on how to define MRP/CRP data to use during processing
- *Reviewing Items for Master Schedule Selection (P3402)* for information on how to use the Net Change Review program to review items that have changed, either through planned or unplanned activities
- *Processing Options for Master Planning Schedule*
- *Setting Up MRP and Capacity Planning* for information on how to define MRP/CRP data to use during processing
- *Reviewing Items for Master Schedule Selection* for information on how to use the Net Change Review program to review items that have changed, either through planned or unplanned activities
- *Processing Options for Master Planning Schedule*

Work with the Material Requirements Plan



Working with the Material Requirements Plan

MRP output consists of information in the time series and action messages. Use the time series information to decide whether to accept the planning suggested by the system or to override it. You should review the action messages for individual item numbers to determine which action, if any, that you need to take.

Working with the material requirements plan consists of the following tasks:

- Reviewing MRP time series
- Reviewing planning families for MRP
- Working with messages for MRP
- Working with scheduling information

Reviewing MRP Time Series

Use the MRP Time Series Inquiry program to review the item series for the material requirements plan. The time series is a record of time-phased supply and demand netting for selected items. The system retrieves this data from the most recent generation or net change run. Use processing options to set up daily, weekly, or monthly time periods (buckets).

MRP Time Series Inquiry uses the same program as DRP/MPS Time Series/ATP Inquiry. You can vary the settings in the processing options to accommodate the different requirements for MRP.

Before You Begin

- Generate a current material requirements plan that includes the start and end dates for the planning periods that you want to review. See *Generating a Material Requirements Plan*.

See Also

- *Reviewing DRP/MPS Time Series (P3413)*
- *Reviewing DRP/MPS Time Series*

Reviewing Planning Families for MRP

After you generate MRP, you can review all item numbers that have messages. You can display the list of items with messages by using the following filters:

- Branch/Plant
- Thru Date
- Planning Code
- Message and Stocking Type
- Planner Number
- Buyer Number
- Master Planning Family

MRP Planning Family Inquiry uses the same program as DRP/MPS Planning Family Inquiry. You can vary the settings in the processing options to accommodate the different requirements for MRP.

See Also

- *Reviewing Planning Families (P3401)*
- *Reviewing Planning Families*

Working with Messages for MRP

Access the messages directly using the Detail Message Review program. Complete the following tasks:

- Review MRP detail messages
- Review quantity types for MRP

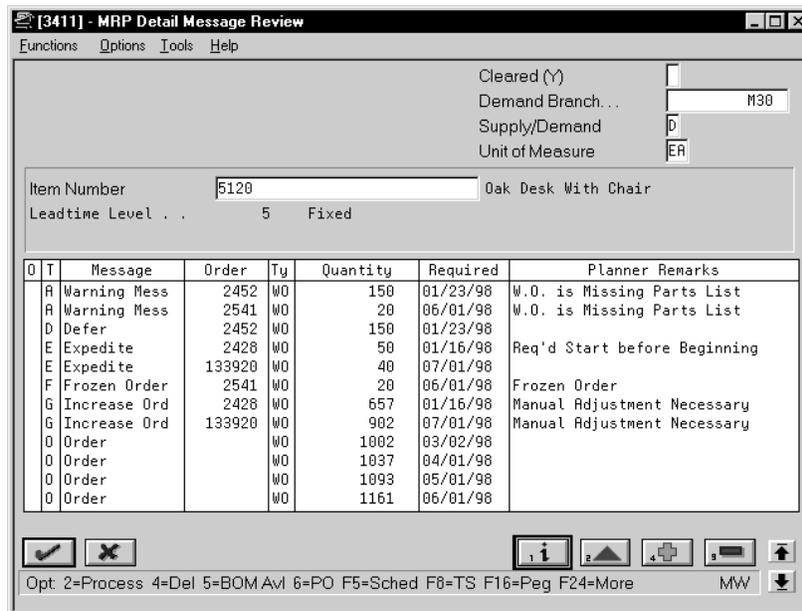
- Process purchase order messages for MRP

Each time that you run a generation for MRP, the system produces action messages to identify situations in which demand requires one of the following:

- Changing the existing supply orders
- Placing new orders

Use Detail Message Review to review exception messages from the latest planning generation. These messages might help you evaluate planned and existing orders. You can review the most critical messages first and review other items in the order that you will process them.

MRP Detail Message Review uses the same program as DRP Detail Message Review. You can vary the settings in the processing options to accommodate the different requirements for MRP.



See Also

- *Working with Messages (P3411)* for information on the Detail Message Review processing options
- *Working with Messages* for information on the Detail Message Review processing options

Reviewing MRP Detail Messages

Detail messages include all of the messages on Detail Message Review. After you generate MRP, you review the action messages for the individual item numbers. After you review the message, you can place the message on hold, or clear, delete, or process the message.

What You Should Know About

Component warning messages

Based on the messages for the parent item, the direct components also receive warning messages.

At the component level, there are special S messages that are similar to warning messages (A). Both types of messages originate from the parent. The S messages, however, indicate that the parent demand is firm planned.

See Also

- *Reviewing Detail Messages (P3411)*
- *Reviewing Detail Messages*

Reviewing Quantity Types for MRP

Use Detail Message Review to review the quantity types that are generated for the material requirements plan. These quantity types include:

Planned order (+PLO)

Represents recommended replenishment orders for an item.

Planned work order (-PWO)

Represents demand for components that will be consumed when you manufacture the parent's planned work order.

Work order (+WO)

Represents a manufacturing order that is currently in process or that has been authorized to be worked on.

Firm work order (-FWO)

Represents demand for components that will be consumed while manufacturing the parent's released work order.

Firm planned order (+FPO)

Processed similarly to planned orders, but allows the planner to firm up requirements at the next level. The system does not allow the component items to assume the action messages from the parent level.

The following describes how the system uses document types, quantity types, and work order codes during the MRP generation process. Status codes are user defined.

Planned orders (+PLO)

MRP automatically changes schedule dates and quantity for each planning generation.

The status code for document type +PLO is P.

The component demand is -PWO.

Firm orders (WO)

MRP creates messages that require the planner to balance supply and demand.

+WO does not always equal +WOU in schedule dates or quantities.

A status code for document type WO of 10 indicates that the system has released the work order.

The component demand is -FWO and -FWOU. Message type A warns of parent supply and demand imbalances. A firm work order does not always equal a firm work order unadjusted in schedule dates or quantity.

Firm orders (WO)

These orders contain parts lists and routing instructions. MRP creates messages that require the planner to balance supply and demand.

+WO does not always equal +WOU in schedule dates or quantities.

A status code for document type WO of 40 indicates that the system has committed inventory to the order and has attached a parts list and routing instructions.

The component demand is -FWO and -FWOU. Message type A warns of parent supply and demand imbalances. A firm work order does not always equal a firm work order unadjusted in schedule dates or quantity.

Firm orders (WO)

The system plans these orders when you run the MRP planning generation. MRP creates messages that require the planner to balance supply and demand. The messages contain FPO planner remarks.

+WO does not always equal +WOU in schedule dates or quantities.

A status code for document type WO of 41 indicates a firm planned order.

The component demand is -FWO and -FWOU. Message type S warns of firm planned order parent supply and demand imbalances. A firm work order always equals a firm work order unadjusted in schedule dates or quantity.

Work orders (WO)

The system creates the work order based on the requested date and the date set by the freeze fence on Plant Manufacturing Data. MRP does not create action message types inside the freeze fence. Supply and demand imbalance inside the freeze fence is satisfied by order message type O immediately outside the freeze fence.

+WO does not always equal +WOU in schedule dates or quantities.

Any status code for document type WO inside the freeze fence.

The component demand is -FWO and -FWOU. The system does not create any messages from the parent demand.

Work orders (WO)

Frozen orders. MRP does not create action messages for this work order. It creates warning message types (A) and frozen order message types (F). New order message type O is created to satisfy additional demand.

Any status code for document type WO indicates a freeze code on the work order header.

The component demand is -FWO and -FWOU. The system does not create any messages from the parent demand.

Processing Purchase Order Messages for Material Requirements Planning

Purchase order messages appear on Detail Message Review with an order type of OP. When you process a purchase order message, you can:

- Process a single action message without blanket order checking or consolidation.
- Process one or more action messages with blanket order checking.
- Process messages using purchase order consolidation to place more than one item on a purchase order.
- Process purchase order messages using a planning family.
- Process messages using the Supplier Scheduling system.

See Also

- *Processing Purchase Order Messages (P3411)*
- *Reviewing Planning Families for MRP (P3401)*

Working with Scheduling Information

In daily operations, you might need to identify detail information about items, work centers, or planning families. Use the MRP inquiry programs to determine the status of items or work centers.

Complete the following tasks:

- Review MRP pegging demand
- Review MRP supply and demand
- Review shop floor workbench for material requirements planning
- Review leadtime for material requirements planning

Reviewing MRP Pegging Demand

Use Pegging Demand Inquiry to determine the source of demand for dependent requirements. Pegging Demand Inquiry displays only those parents that contain planned or open orders. Pegging Demand Inquiry allows you to:

- Display the work orders for a particular item
- Trace the source of demand for each item
- Display the different levels in a bill of material, so that you can peg demand from the beginning level through the parent item

You can trace the path of dependent requirements up through parent items to the final assembled item and even to the sales order or forecast. You can use this information to determine if you need to reschedule or change orders.

► To review MRP pegging demand

On Pegging Inquiry

Request	Quantity	Parent	Ty	Description
09.01.98	50	5120	FO	Firm Work Order W/Parts List
16.01.98	150	5120	WO	Real (firm) Work Orders
23.02.98	1002	5120	WP	Planning Work Orders
25.03.98	1037	5120	WP	Planning Work Orders
24.04.98	1093	5120	WP	Planning Work Orders
25.05.98	20	5120	WO	Real (firm) Work Orders
25.05.98	1161	5120	WP	Planning Work Orders
24.06.98	40	5120	FO	Firm Work Order W/Parts List
24.06.98	1584	5120	WP	Planning Work Orders

1. To locate the item for which you want to review pegging demand, complete the following fields:
 - Item Number
 - Branch/Plant
2. To narrow your search to a specific date, complete the following optional field:
 - Requested

On Pegging Inquiry

1. To locate the item for which you want to review pegging demand, complete the following fields:
 - Item Number
 - Branch/Plant
2. To narrow your search to a specific date, complete the following optional field:
 - Requested

Field	Explanation
Requested	The date that an item is to arrive or that an action is to be complete. <i>Form-specific information</i> As of date for pegging.
Parent (short) Item Number	The system provides for three separate item numbers. <ol style="list-style-type: none"> 1. Item Number (short) – An eight-digit, computer assigned, completely non-significant item number. 2. 2nd Item Number – The 25-digit, free form, user defined alphanumeric item number. 3. 3rd Item Number – Another 25-digit, free form, user defined alphanumeric item number. <i>Form-specific information</i> On this form, you see the item number for the parent of this component part.

Processing Options for Pegging

MESSAGE FILE REVISIONS:

1. Enter the version of Message File Revisions to be used. Default is ZJDE0001.

TIME SERIES:

2. Enter the version of Time Series to be used. Default is ZJDE0001.

SUPPLY/DEMAND INQUIRY:

3. Enter the version of Supply/Demand Inquiry to be used. Default is ZJDE0001.

Reviewing MRP Supply and Demand

Use Supply and Demand Inquiry to review the current demand for a selected item. Supply and Demand Inquiry allows you to:

- Display the current inventory position, including all scheduled supply and demand.
- Review item quantity supply, demand, and order availability in date order.

► **To review MRP supply and demand**

On Supply/Demand Inquiry

The screenshot shows a window titled "[4021] - Supply/Demand Inquiry". It contains several input fields: "Branch/Plant" (M30), "Unit of Measure" (EA), "Item Number" (5120), "Leadtime Level" (5), and "Thru Date" (blank). Below these fields is a table with the following columns: Demand, Supply, Available, Promise Date, Order No, Ty, and Customer/Supplier Name. The table contains multiple rows of data, with some rows having "Available to Promise" in the Customer/Supplier Name column. At the bottom of the window, there are navigation buttons and a status bar with options like "Opt: 1=WO 3=SO 4=PO 7=Rate F10=Sched F14=Msg F16=Peg F24=More".

0	Demand	Supply	Available	Promise Date	Order No	Ty	Customer/Supplier Name
	1210		4996-	28.02.98		FR	
	922		5918-	28.02.98		FR	
		1002	4916-	02.03.98		WO	
			1002	02.03.98			Available to Promise
	1152		6068-	31.03.98		FR	
	878		6946-	31.03.98		FR	
		1037	5909-	01.04.98		WO	
			1037	01.04.98			Available to Promise
	1193		7102-	30.04.98		FR	
	909		8011-	30.04.98		FR	
		1093	6918-	01.05.98		WO	
			1093	01.05.98			Available to Promise
	1257		8175-	31.05.98		FR	
	958		9133-	31.05.98		FR	
		20	9113-	01.06.98	2541	WO	
		1161	7952-	01.06.98		WO	

1. To locate the item for which you want to review supply and demand, complete the following fields:
 - Item Number
 - Branch/Plant
2. To narrow your search to a specific order date, complete the following optional field:
 - Thru Date
1. To locate the item for which you want to review supply and demand, complete the following fields:
 - Item Number
 - Branch/Plant
2. To narrow your search to a specific order date, complete the following optional field:
 - Thru Date

Field	Explanation
Quantity – Current Demand	The quantity subtracted from the available balance as a result of the record processed. Typically, the sources of demand are safety stock, sales orders, or work order parts lists. When using system forecasting, you can set up a processing option to include quantities used for forecast demands.
Quantity – Current Supply	The quantity added to the available balance as a result of the record processed on each line. Sources of supply are typically on-hand inventory, purchase order receipts, or manufacturing work orders. A processing option allows for the inclusion of planned order receipts when using MPS/MRP/DRP.
Quantity Available	The quantity available can be on-hand balance minus commitments, reservations, and backorders. Availability is user defined and can be set up on Branch/Plant Constants form.

Processing Options for Supply/Demand Inquiry

DISPLAY OPTIONS:

1. Enter a '1' to deduct Safety Stock from Availability. _____
 2. Enter a '1' by the following Routing Quantities to be considered on hand. Any quantity not included will be displayed on the appropriate date.
 - 1 - Quantity in Transit _____
 - 2 - Quantity in Inspection _____
 - 3 - User Defined Quantity 1 _____
 - 4 - User Defined Quantity 2 _____
 3. Enter a '1' to summarize all In Receipt Routing steps into one line. _____
- DISPLAY OPTIONS (cont.):
4. Enter a '1' to summarize Item Location records. _____
 5. Enter one of the following:
 - ' ' = No Available to Promise Line _____
 - '1' = Available to Promise Line _____
 - '2' = Cumulative ATP Line _____
 6. Enter the version of Supply/Demand Inclusion Rules to be used. _____
 7. Enter a '1' to display the window format if called from another program. _____

DREAMWRITER VERSIONS:

Enter the Dream Writer version to use for each program listed. If left blank, version ZJDE0001 will be used.

8. Purchase Order Entry (P4311) _____

- 9. Purchase Order Inquiry (P430301) _____
- 10. Sales Order Entry (P4211) _____
- 11. Sales Order Inquiry (P42045) _____
- 12. Scheduling Workbench (P31225) _____
- 13. MPS/MRP/DRP Pegging Inq. (P3412) _____
- 14. MPS/MRP/DRP Time Series (P3413) _____
- 15. MPS/MRP/DRP Message Detail(P3411) _____

OPTIONAL RECORDS:

- 16. Enter a '1' to include Planned Orders from MPS/MRP/DRP generations. If left blank, Planned Orders will not be displayed. _____
- 17. Enter the Forecast Type(s) to be included. Up to 5 types can be included. If left blank, no forecast records will be included. (Enter multiple forecasts, for example '01' '02' & 'BF', as '0102BF'). _____

OPTIONAL RECORDS (cont.):

- 18. Enter the number of days (+/-) from today's date that you wish to begin including Forecast records. A blank will use today's date to begin including Forecast records. _____
- 19. Enter a '1' to omit 'Bulk' Stocking Type records from screen. If left blank, 'Bulk' items will be included. _____

OPTIONAL RECORDS (cont.):

- 20. Enter the rate based Schedule Type to use. If left blank, no rate based schedules will be displayed. _____

POTENCY:

- 21. Enter '1' to convert Quantities to Standard Potency. _____

LOT EXPIRATION:

- 22. Enter '1' to reduce Quantity available due to lot expiration. (Note: This option will not work with ATP. If you use this option, option 5 must be set to blank or 2.) _____

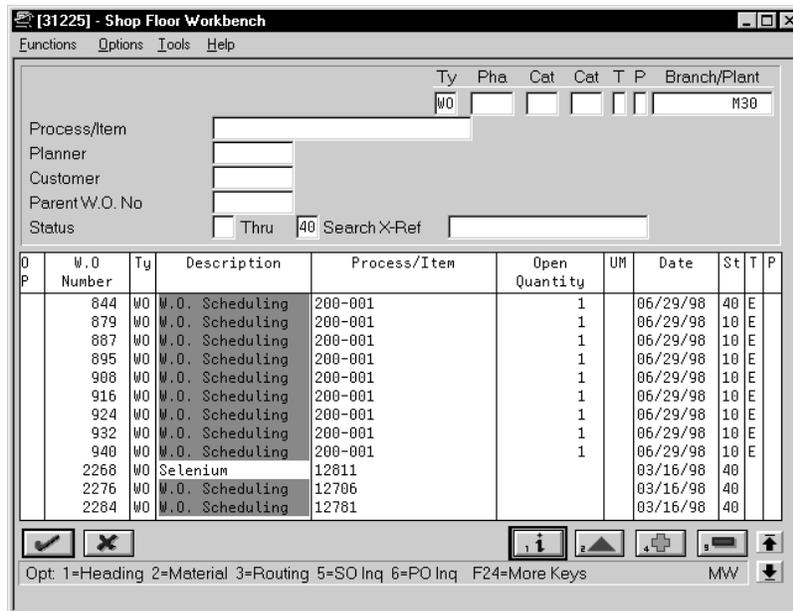
Reviewing Shop Floor Workbench for Material Requirements Planning

Reviewing for Material Requirements Planning

After a work order is on the shop floor, you must review the order and check capacity at each work center that the order is scheduled to go through. You might need to change a schedule to keep the Material Requirements Planning schedule valid.

► **To review shop floor workbench**

On Shop Floor Workbench



1. To locate the branch/plant for which you want to display the shop floor workbench, complete the following field:
 - Branch/Plant
2. To narrow your search to a specific work order, complete the following optional fields:
 - Parent Item
 - Planner
 - Customer
 - Parent Work Order Number
 - Status
 - Search Cross-Reference

On Shop Floor Workbench

1. To locate the branch/plant for which you want to display the shop floor workbench, complete the following field:
 - Branch/Plant

2. To narrow your search to a specific work order, complete the following optional fields:
- Parent Item
 - Planner
 - Customer
 - Parent Work Order Number
 - Status
 - Search Cross-Reference

Field	Explanation
Item Number – Unknown Format Entered	<p>A number that the system assigns to an item. It can be in short, long, or 3rd item number format.</p> <p>..... <i>Form-specific information</i></p> <p>Header: Enter an item number in the header to see all work orders for the item entered. You can further define and restrict your search by entering values in any of the other header fields. Leave the header Item Number field blank to see work order information about all items.</p> <p>Detail: The Item Number field in the detail section of the form indicates what item the work order on that line is for.</p>
Planner	<p>The address book number of a manager or planner.</p> <p>NOTE: A processing option for some forms lets you enter a default value for this field based on values for Category Codes 1 (Phase), 2, and 3. Set up the default values on the Default Managers and Supervisors form. After you set up the default values and the processing option, the information displays automatically on any work orders you create if the category code criterion is met. (You can either accept or override the default value.)</p> <p>..... <i>Form-specific information</i></p> <p>HEADER: Enter a planner number in this field to see all work orders scheduled by that planner. You can use this field with other fields in the header to define more specific search criteria.</p> <p>FOLD AREA: The Planner field in the fold area contains the planner number for the planner who scheduled the work order listed.</p>

Field	Explanation
Customer	<p>A number that identifies an entry in the Address Book system. Use this number to identify employees, applicants, participants, customers, suppliers, tenants, special mailing addresses, and so on.</p> <p>..... <i>Form-specific information</i></p> <p>Header: Enter a customer number in this field to see all work orders for that customer. You can use this field with other fields in the header to define more specific search criteria.</p> <p>Fold Area: The Customer field in the fold area contains the Address Book number of the customer who ordered the items on the work order listed. The system automatically enters the customer number if you create a work order was created from a sales order.</p>
Number – Parent WO Number	<p>This is the parent work order number. You can use this number to:</p> <ol style="list-style-type: none"> <li>1. Enter default values for newly added work orders, for example, Type, Priority, Status, or Manager. <li>2. Group work orders for project setup and DREAM Writer selection. <p>Specify a work order number to display related ECO work orders.</p> <p>..... <i>Form-specific information</i></p> <p>Enter the number of a parent work order in this field to see all work orders organized under that parent order. You can use this field with other fields in the header to define more specific search criteria.</p>
Status	<p>A user defined code (system 00, type SS) that describes the status of a work order or engineering change order. Any status change from 90 thru 99 automatically updates the date completed.</p> <p>..... <i>Form-specific information</i></p> <p>You can update the status for the work order on this screen without accessing the work order header.</p>

Field	Explanation
Search X-Ref	<p>An alphanumeric value used as a cross-reference or secondary reference number. Typically, this is the customer number, supplier number, or job number.</p> <p>..... <i>Form-specific information</i></p> <p>Header: Enter a reference number in this field to see all work orders with that reference number. You can use this field with other fields in the header to define more specific search criteria.</p> <p>Fold Area: The Refer (Reference) field in the fold area contains a reference number for the work order listed. The system automatically enters the sales order number here if the work order was created from a sales order.</p>
Quantity Open	<p>The quantity, in primary units of measure, open for a work order.</p>

Processing Options for Manufacturing Scheduling Workbench

PROGRAM VERSIONS:

1. Enter the Version of Sales Order Inquiry to be called. _____
Default is ZJDE0001.
2. Enter the Version of Purchase Order Inquiry to be called. _____
Default is ZJDE0001.
3. Enter the Version of Work Order Completions to be called. _____
Default is ZJDE0001.
4. Enter the Version of Work Order Entry to be called. _____
Default is ZJDE0001.
5. Enter the Version of Sales Order Entry to be called. _____
Default is ZJDE0001.
6. Enter the Version of Purchase Order Entry to be called. _____
Default is ZJDE0001.

DISPLAY OPTIONS:

7. Enter a '1' to display Requested Date or enter a '2' to display Start Date. (Default is '1'). _____
8. Enter a '1' to sequence the records by Requested date. Enter a '2' to sequence the records by Start date. If left blank the sequence will be based on values for the customer, parent work order number, cross reference, item or planner fields. _____

DEFAULT VALUES:

- 9. Enter the default value for Category Code 1. _____
- 10. Enter the default value for Category Code 2. _____
- 11. Enter the default value for Category Code 3. _____
- 12. Enter the default value for Type. _____
- 13. Enter the default value for Priority. _____
- 14. Enter the default value for Planner Number. _____
- 15. Enter the default value for From Status. _____
- 16. Enter the default value for Thru Status. _____
- 17. Enter the default value for Item Number. _____
- 18. Enter the default value for Customer Number. _____
- 19. Enter the default value for Search X-Ref. _____
- 20. Enter the default Document Type. _____

PROCESS MANUFACTURING PROCESSING:

- 21. Enter a '1' to automatically create the WO Routing Instructions when creating the WO Parts List on-line. _____
- 22. Enter a '1' to automatically create the WO Parts List when creating the WO Routing Instructions on-line. _____

COMMITMENT AND SUBSTITUTE PROCESSING:

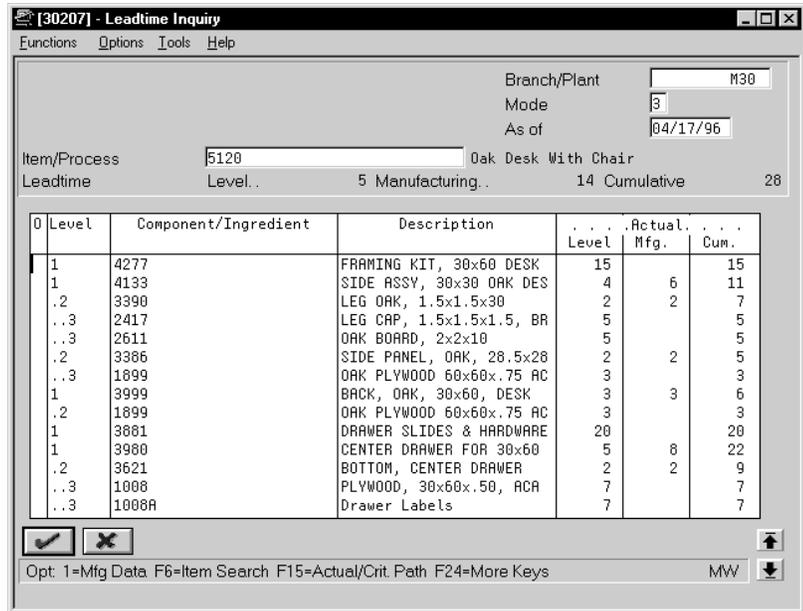
- 23. Enter commitment option for creating the WO Parts List on-line. _____
 - Blank = Commit to Primary location
 - '1' = Commit per Commitment Control in Mfg Constants (P3009)
 - '2' = Same as '1', but use substitutes for shortages
 - '3' = Same as '1', but only use substitutes if their quantity available can cover shortages
 - '4' = Same as '1' but display substitute availability window when substitute qty available can cover shortage

Reviewing Leadtime for Material Requirements Planning

Use Leadtime Inquiry to review leadtimes for a component or ingredient.

▶ To review leadtime for MRP

On Leadtime Inquiry



1. To locate the item for which you want to display leadtimes, complete the following fields:
 - Branch/Plant
 - Parent Item
2. To display specific types of bills of material, complete the following optional field:
 - Mode
3. Review the information in the following fields:
 - Parent Leadtime Level
 - Level
 - Manufacturing
 - Cumulative

On Leadtime Inquiry

1. To locate the item for which you want to display leadtimes, complete the following fields:
 - Branch/Plant
 - Parent Item

2. To display specific types of bills of material, complete the following optional field:
 - Mode
3. Review the information in the following fields:
 - Parent Leadtime Level
 - Level
 - Manufacturing
 - Cumulative

Field	Explanation
Mode – Bill of Material	<p>Indicates the display mode for the bill of material.</p> <ol style="list-style-type: none"> 1 Single Level Bill of Material. Shows level one (direct) components only. 2 Multi-Level Bill of Material. Shows all levels of components, with proximity to the parent item indicated by level 1, 2, 3, and so forth. 3 Indented Bill of Material. The multi-level bill of material with each level indented for differentiation. <p>You can also set this value in the processing options.</p>
Parent Leadtime Level	<p>The leadtime for an item at its assigned level in the production process as defined on Plant Manufacturing Data. The system uses this value to calculate the start dates for work orders using fixed leadtimes. Level leadtime is different for purchased and manufactured items:</p> <ul style="list-style-type: none"> • Purchased – The number of calendar days required for the item to arrive at your branch/plant after the supplier receives your purchase order. • Manufactured – The number of workdays required to complete the fabrication or assembly of an item once all the components are available. <p>You can enter level leadtime manually on Manufacturing Values Entry, or you can let the Leadtime Rollup program calculate it. To calculate level leadtime using the Leadtime Rollup program, you must first enter a quantity in the Manufacturing Leadtime Quantity field in the Item Branch table (F4102).</p>
Level	<p>A number indicating the level of a child in the relationship to its parent in a hierarchy.</p>

Field	Explanation
Manufacturing	<p>The total number of days required to build an item from its lowest level components to the final assembly. This value is the total of the level leadtimes for all manufactured items, plus the highest manufacturing leadtime for all its components.</p> <p>If all components are purchased, the manufacturing leadtime equals the item's level leadtime. Purchased item leadtimes are not included in the calculation of manufacturing leadtimes.</p> <p>You can enter the manufacturing leadtime manually or you can have the system calculate it when you run the Leadtime Rollup program.</p>
Cumulative	<p>The total number of days required to build an item from its lowest level components to the final assembly. The system calculates the value differently for manufactured and purchased items.</p> <p>Manufactured – The total of all level leadtimes for all manufactured items, plus the highest cumulative leadtime of all its components.</p> <p>Purchased – The item's level leadtime. Purchased item leadtimes are included in the calculation of cumulative leadtimes.</p> <p>You can enter this value manually or you can have the system calculate it when you run the Leadtime Rollup program.</p>

Processing Options for Lead Time Bill of Material

LEADTIME PREFERENCE:

1. Enter a '1' to use the leadtime values from the Item Branch File (F4102) or leave blank to display calculated leadtimes.

Validate the Material Requirements Plan

Validating the Material Requirements Plan

After you generate the material requirements plan, you must validate it to ensure that you have sufficient work center capacity. Use Capacity Requirements Planning (CRP) to determine whether the material plan can be executed with the resources that are available.

You also use CRP to:

- Analyze all active work centers
- Identify the pacing resource for work centers, which is either labor or machine, depending on which one would increase the work centers' capacity
- Calculate the rated capacity for work centers
- Calculate the MRP load for work centers

In the J.D. Edwards software, the same batch program generates capacity planning information for both CRP and Rough Cut Capacity Planning (RCCP). You can vary the settings in the processing options to accommodate the different requirements for CRP.

The primary differences between CRP and RCCP are:

- CRP analyzes all active work centers instead of only the critical work centers.
- CRP offers more alternatives to level an overloaded time frame.

The system uses the following inputs to CRP:

- Firm MRP work orders and routing instructions
- Planned MRP work orders and routings
- Service parts' forecast
- Service parts' sales orders
- Inter-plant demands

The system generates the following outputs from CRP:

- Over-capacity and under-capacity messages
- Work center load
- Work center load graph
- Period summary

Validating the material requirements plan consists of the following tasks:

- Generating Capacity Requirements Planning
- Reviewing Capacity Requirements Planning

The programs that you use to validate the material planning schedule are the same programs that you use to validate the master schedule for DRP, MPS, and RCCP.

What You Should Know About

Synchronizing the MRP and CRP systems

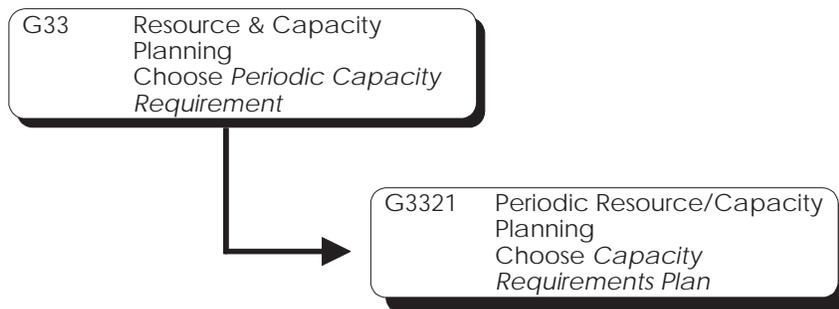
CRP follows the same level of operational planning as MRP. You should synchronize the following items for both MRP and CRP:

- The planning horizon
- The work order document types and statuses in the supply/demand inclusion rules

See Also

- *Validating the Master Schedule (P3382)* for detailed information on these programs
- *Validating the Master Schedule* for detailed information on these programs

Generating Capacity Requirements Planning



Use the Capacity Requirements Plan program to compare prospective MRP resource requirements to the capacity available in work centers. CRP indicates if you should revise the material requirements plan to create feasible work loads or improve use of limited resources.

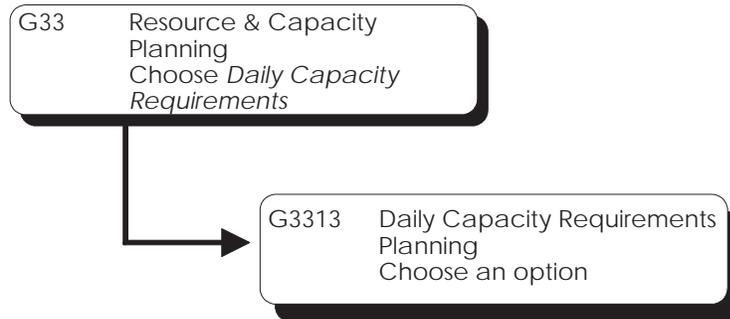
Before You Begin

- Report hours and quantities for operations that are complete or partially complete to ensure that the figures for Released Load are correct. See *Working with Hours and Quantities* in the *Shop Floor Control Discrete Manufacturing Guide*.
- Verify that resource units exist for all work centers in your generation. See *Setting Up Resource Units* in the *Shop Floor Control Discrete Manufacturing Guide*.
- Set up supply and demand inclusion rules. See *Setting Up Supply and Demand Inclusion Rules for MRP*.
- Run MRP generation. See *Generating a Material Requirements Plan*.

See Also

- *Generating RCCP (P3382)* for information on the processing options
- *Entering Resource Units Manually (P3007)*
- *Generating RCCP* for information on the processing options
- *Entering Resource Units Manually*

Reviewing Capacity Requirements Planning



When you generate a capacity requirements plan, the system creates a time series that shows the load during each planning period for a work center. You can view the time series as a spreadsheet or as a graphical display. If you have organized several work centers as a dispatch group according to common functions, similar operations, or steps in routing, you can view the group to see how capacity affects all of the work centers in the group.

You can review summaries of each period to determine the load that is placed on a work center by each item or order. You can also review messages for each work center and delete, clear, or hold messages. If the system encounters over- or under-capacity conditions, you can review the plan and identify the periods or work centers in which the conditions occur. It might be necessary to adjust the forecast or capacity and generate CRP again.

Reviewing the capacity requirements plan includes the same programs used to review the resource requirements plan.

Complete the following tasks:

- Review dispatch groups for capacity requirements planning
- Review work center load for capacity requirements planning
- Review period summaries for capacity requirements planning
- Review MRP work schedules on the dispatch list
- Review MRP rate schedule and work order loads
- Validate the capacity requirements plan

Reviewing Dispatch Groups for Capacity Requirements Planning

If you have several work centers that are organized as a dispatch group, you can view the group to determine how capacity affects all of the work centers in the group. Dispatch groups enable you to organize work centers according to common functions, similar operations, or routing steps.

When you review dispatch groups, you can also review messages about all the work centers in the group and use that information to redistribute the load within the group.

When you review dispatch groups for CRP you use the same program as when you review dispatch groups for Resource Requirements Planning. You can vary the settings in the processing options to accommodate the different requirements for CRP.

See Also

- *Reviewing Dispatch Groups (P3301)* for information on the processing options
- *Reviewing Dispatch Groups* for information on the processing options

Reviewing Work Center Load for Capacity Requirements Planning

You can review the capacity load at each work center. Use this information to determine whether to adjust capacity or the forecast. You can view the time series as a spreadsheet or as a graphical display. The spreadsheet provides a numerical breakdown, by planning period, of the load placed on a work center.

The bar graph provides the same information as Review Work Center Load. The graph uses time series information from Resource Requirements Load to generate the comparison. The system displays the capacity load at the work center for each planning period based on several calculations.

Review Work Center Load for CRP uses the same program as Review Work Center Load for Resource Requirements Planning. You can vary the settings in the processing options to accommodate the different requirements for CRP.

Before You Begin

- Verify that your resource units and capacity requirements plan are current

See Also

- *Reviewing Work Center Load (P3313)* for information on the processing options
- *Reviewing Work Center Load* for information on the processing options

Reviewing Period Summaries for Capacity Requirements Planning

In addition to reviewing the capacity load of a work center, you can also evaluate the load placed on a work center by item. You can review period summaries either online or through a printed report. You can review:

- The items that are scheduled for a work center
- The number of units of an item that make up the load
- The percent of the total load on the work center that is for a specific item's forecast

You use this information to determine whether to adjust the forecast or the capacity at the work center.

When you review period summaries for CRP you use the same program as when you review period summaries for Resource Requirements Planning. You can vary the settings in the processing options to accommodate the different requirements for CRP.

To evaluate the load placed on a work center by item, you can review the Period Summary Report.

Manufacturing and Distribution Planning

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J.D. Edwards & Company

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Date - 5/31/98

Business Unit . . . 200-204 Final Assembly/Inspection Efficiency . . . 80.00 Prime Load Code. B
 Dispatch Group . . 200-200 Assembly Department Utilization. . . 100.00 Machine plus Setup H
 Unit of Measure. . HR Hour

Item Number	Item Description	Per. End	Units	UM	Percen	Order Number	Ty	Requirement	Type
5120	Oak Desk With Chair	01/02/98	443	HR	97.15	2399	FO Firm	Work Order	W/Parts List
1261	Multivitamin Tablets	01/02/98	7	HR	1.54	133760	FO Firm	Work Order	W/Parts List
1261	Multivitamin Tablets	01/02/98	7	HR	1.54	133823	FO Firm	Work Order	W/Parts List
Total for Period Ending		01/02/98	457	HR					
5120	Oak Desk With Chair	01/09/98	654	HR	55.05	2428	FO Firm	Work Order	W/Parts List
5120	Oak Desk With Chair	01/09/98	531	HR	44.70	2410	FO Firm	Work Order	W/Parts List
5120	Oak Desk With Chair	01/09/98	3	HR	.25	2444	WO Real	(firm) Work Orders	
333	OAK SHELFL UNIT	01/09/98	1	HR	.08	2372	WO Real	(firm) Work Orders	
Total for Period Ending		01/09/98	1189	HR					
5120	Oak Desk With Chair	01/16/98	4205	HR	94.79	2428	FO Firm	Work Order	W/Parts List
5120	Oak Desk With Chair	01/16/98	223	HR	5.03	2452	WO Real	(firm) Work Orders	
12706	Vitamin A	01/16/98	3	HR	.07		WP Planning	Work Orders	
12706	Vitamin A	01/16/98	3	HR	.07		WP Planning	Work Orders	
12706	Vitamin A	01/16/98	2	HR	.05		WP Planning	Work Orders	
12706	Vitamin A	01/16/98	1	HR	.02		WP Planning	Work Orders	
5120	Oak Desk With Chair	01/16/98		HR		2444	WO Real	(firm) Work Orders	
Total for Period Ending		01/16/98	4437	HR					
5120	Oak Desk With Chair	01/23/98	1059	HR	65.65	2479	FO Firm	Work Order	W/Parts List
5120	Oak Desk With Chair	01/23/98	555	HR	34.41	2452	WO Real	(firm) Work Orders	
Total for Period Ending		01/23/98	1614	HR					
5120	Oak Desk With Chair	01/30/98	531	HR	93.82	2495	FO Firm	Work Order	W/Parts List
5120	Oak Desk With Chair	01/30/98	9	HR	1.59	123545	WO Real	(firm) Work Orders	
FORKLIFT	Forklift	01/30/98	6	HR	1.06	3615	FO Firm	Work Order	W/Parts List
5120	Oak Desk With Chair	01/30/98	3	HR	.53	133920	FO Firm	Work Order	W/Parts List
12706	Vitamin A	01/30/98	3	HR	.53		WP Planning	Work Orders	
12706	Vitamin A	01/30/98	3	HR	.53		WP Planning	Work Orders	
12781	Minerals, complex	01/30/98	3	HR	.53		WP Planning	Work Orders	
5120	Oak Desk With Chair	01/30/98	3	HR	.53	2508	WO Real	(firm) Work Orders	
12706	Vitamin A	01/30/98	2	HR	.35		WP Planning	Work Orders	
12781	Minerals, complex	01/30/98	2	HR	.35		WP Planning	Work Orders	
12706	Vitamin A	01/30/98	1	HR	.18		WP Planning	Work Orders	
12781	Minerals, complex	01/30/98	1	HR	.18		WP Planning	Work Orders	
12781	Minerals, complex	01/30/98	1	HR	.18		WP Planning	Work Orders	
Total for Period Ending		01/30/98	568	HR					
5120	Oak Desk With Chair	02/06/98	487	HR	60.65	2516	FO Firm	Work Order	W/Parts List
5120	Oak Desk With Chair	02/06/98	310	HR	38.61	123537	WO Real	(firm) Work Orders	
5120	Oak Desk With Chair	02/06/98	3	HR	.37	2524	WO Real	(firm) Work Orders	
5120	Oak Desk With Chair	02/06/98	2	HR	.25	123545	WO Real	(firm) Work Orders	
333	OAK SHELFL UNIT	02/06/98	1	HR	.12	141719	FO Firm	Work Order	W/Parts List
333	OAK SHELFL UNIT	02/06/98	1	HR	.12	141735	FO Firm	Work Order	W/Parts List

Processing Options for Print Period Summary

- Enter the Capacity Mode: _____
 "1" = Resource Requirements Planning
 "2" = Rough Cut Capacity Planning
 "3" = Capacity Requirements Planning
- Enter Unit of Measure: _____
- Enter the Starting Period Date: _____
 Blanks will default to today's date.
- Enter the Ending Period Date: _____
 Blanks will show all data after start date.

Reviewing MRP Work Schedules on the Dispatch List

Reviewing MRP Work Schedules

Use Dispatch List to locate and update work center scheduling information. This workbench environment serves as a starting point for work center scheduling and the release of work to the floor. Use this program to:

- Access work order information, such as the header and parts list
- Display work order information, such as work center, remaining labor, machine hours, and setup hours
- Sort work orders by start date, requested date, or status code operation
- Change the work order status code, start date, or requested date

Dispatch List for MRP uses the same program as Dispatch List for DRP/MPS. You can vary the settings in the processing options to accommodate the different requirements for MRP.

What You Should Know About

Leveling an overloaded time frame

If a work center is overloaded, you might consider the following alternatives to distribute material and labor requirements to make the work center load as even as possible:

- Offering Overtime
- Changing higher-level demand level by level
- Alternating routings
- Adding shifts
- Bringing in resources from other work centers
- Outsourcing

See Also

- *Reviewing Work Schedules on the Dispatch List (P31220)* for the processing options for this program
- *Reviewing Work Schedules on the Dispatch List* for the processing options for this program

Reviewing MRP Rate Schedule and Work Order Loads

Use Schedule Review to review the rate schedule load and the work order load for a work center for a day, week, or month. You can also select a specific date range to view the load for the work center. If you need to adjust the scheduled

load at the work center, you can access several different forms to make adjustments.

Schedule Review is used primarily for rate based items and is an alternative for viewing load on a work center. A processing option allows you to include work order generated loads before or after rate loads.

When you review schedules for MRP you use the same program as when you review schedules for DRP and MPS. You can vary the settings in the processing options to accommodate the different requirements for MRP.

See Also

- *Reviewing Rate Schedule and Work Center Loads (P31224)* for the processing options for this program
- *Reviewing Rate Schedule and Work Center Loads* for the processing options for this program

Validating the Capacity Requirements Plan

Validating the capacity requirements plan consists of identifying the overloaded work centers, making adjustments in forecast or resources, and generating the plan again to see if the adjustments you have made have evenly distributed the loads on the work centers.



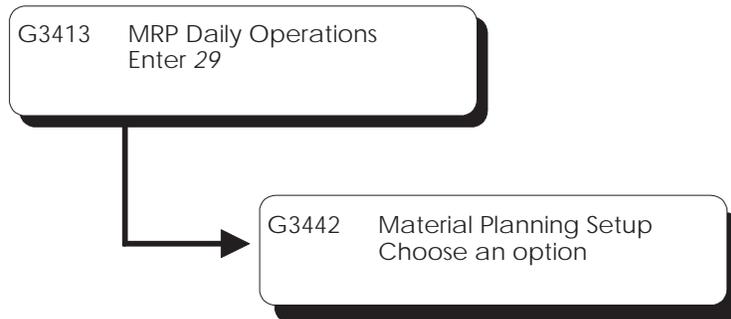
To validate the capacity requirements plan

1. Complete the steps for reviewing the requirements plan.
See Reviewing CRP.
2. Revise the forecast.
See Revising Summaries of Forecasts in the Forecasting Guide.
3. Complete the steps for generating the requirements plan.
See Generating CRP.
4. Complete the steps for reviewing the revised requirements plan.
See Reviewing CRP.
5. Repeat the steps until all loads at each work center are appropriate.
 1. Complete the steps for reviewing the requirements plan.
See Reviewing CRP.
 2. Revise the forecast.

See *Revising Summaries of Forecasts* in the *Forecasting Guide*.

3. Complete the steps for generating the requirements plan.
See *Generating CRP*.
4. Complete the steps for reviewing the revised requirements plan.
See *Reviewing CRP*.
5. Repeat the steps until all loads at each work center are appropriate.

Set Up Material & Capacity Requirements Planning



Setting Up Material and Capacity Requirements Planning

Before you can run a successful Material Requirements Planning (MRP) regeneration, you must define MRP and Capacity Requirements Planning (CRP) information to use during processing. The system uses setup information to determine how to select and display data.

If you use other J.D. Edwards software, you must set up some of this information in other systems, such as Shop Floor Control and Inventory Management.

Complete the following tasks:

- Set up MRP supply and demand inclusion rules
- Set up message types for MRP
- Set up time fence rules for MRP
- Set up forecast consumption periods for MRP
- Set up the capacity requirements display

The programs that you use to set up MRP and CRP are the same programs that you use to set up Distribution Requirements Planning, Master Production Schedule, and Rough Cut Capacity Planning.

See Also

- *Setting Up DRP/MPS/RCCP (P3482)* for detailed information on these programs
- *Setting Up DRP/MPS/RCCP* for detailed information on these programs

Setting Up MRP Supply/Demand Inclusion Rules

You set up supply and demand inclusion rules to display the supply, demand, and available quantities for an item. These quantities and their formulas are as follows:

On-hand inventory	Quantity on hand – hard commits – quantity on sales orders – quantity on work orders
Purchase orders	Open quantity on purchase orders
Manufacturing work orders	Quantity entered on work order – quantity shipped
Safety stock	Safety stock
Sales Orders	Quantity entered on sales order – quantity shipped – quantity canceled
Work order requirements	Quantity required – quantity issued
Co-/by-products supply from work orders	Quantity ordered – quantity completed
Co-/by-products supply from rates	Quantity ordered – quantity completed

See Also

- *Setting Up Supply/Demand Inclusion Rules (P34004)*
- *Setting Up Supply/Demand Inclusion Rules*

Setting Up Message Types for MRP

Message type character codes are already defined for all the messages that the system can create when you generate a material requirements plan. Because the character code is hard coded, you can change the description, but not the function of the message type. You can change the description for clarity in your environment.

See Also

- *Setting Up Message Types for DRP, MPS, and RCCP (P00051)* for information on how to change the message type descriptions
- *Setting Up Message Types for DRP, MPS, and RCCP* for information on how to change the message type descriptions

Setting Up Time Fence Rules for MRP

Time fences are points in time at which you can make changes to either policy or operating procedures. The Manufacturing and Distribution Planning system supports three time fences:

F (Freeze Fence)	Within this time period, orders are neither created nor replanned.
P (Planning Fence)	Within this time period, the system uses the demand from the forecast and customer orders to calculate the ending available product.
D (Message Display Fence)	After this time period, messages are neither created nor displayed.

See Also

- *Setting Up Time Fence Rules for DRP, MPS, and RCCP (P00051)* for information on how to specify time fence rules
- *Setting Up Time Fence Rules for DRP, MPS, and RCCP* for information on how to specify time fence rules

Setting Up Forecast Consumption Periods for MRP

You define forecast consumption periods to represent a period in which all forecasts are consumed by all sales orders. This allows you to identify the range of time for the consumed forecast rather than a specific date. The system stores this information in the Forecast Consumption Periods table (F3405).

Within a forecast consumption period, the system processes sales orders against the consumed forecast (quantity type of -FCSU) on a first-in first-out (FIFO) basis. The system creates additional time periods if the forecast consumption periods do not coincide with the time series period end dates.

The additional forecast consumption time periods are incremental to the number of time periods identified in the Distribution Requirements Planning and Master Production Schedule generation program. The total for all time periods cannot exceed 52.

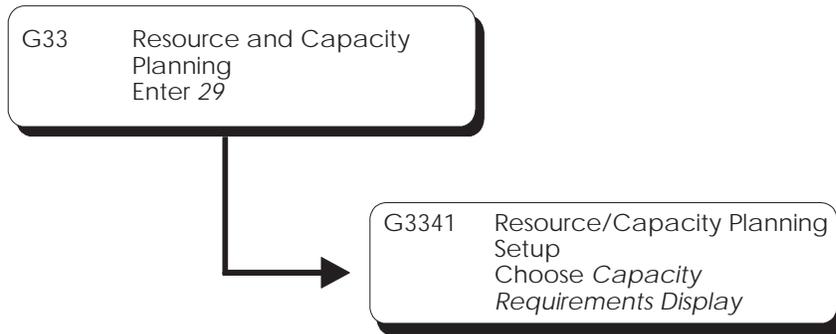
Before You Begin

- Verify that the following information has been set up:
 - The planning fence rule H in user defined code table 34/TF
 - The order types in user defined code table 40/CF that you want to include in the calculations for shipped orders
 - The order types in user defined code table 40/IU that you want to update at shipment confirmation
 - The quantity type Ship in user defined code table 34/QT that represents shipped orders quantity
 - The Planning Fence Rule field on the Plant Manufacturing Data form with a value of H
 - The Planning Fence field on Plant Manufacturing Data with a value of 999 (the end of the planning horizon)
 - The appropriate processing options in the DRP/MPS generation program

See Also

- *Setting Up Forecast Consumption Periods (P3405)*

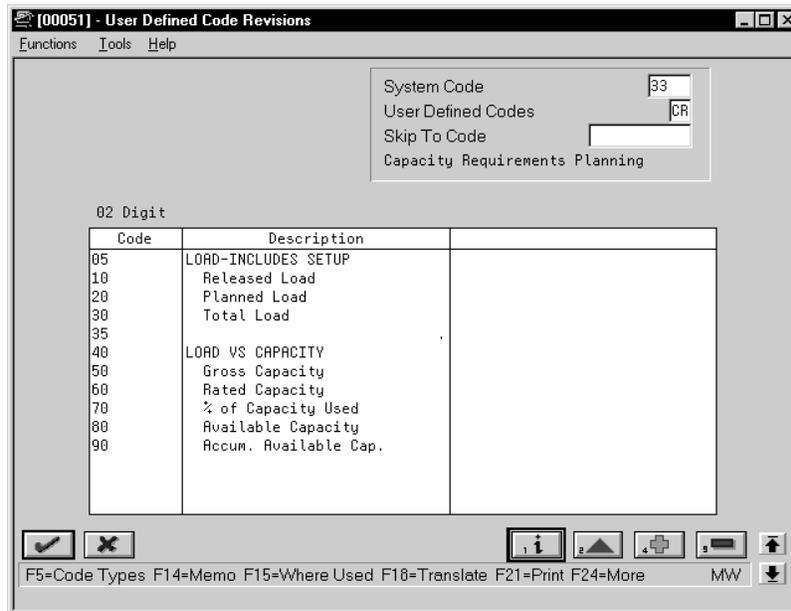
Setting Up the Capacity Requirements Display



Use Capacity Requirements Display to specify row descriptions for CRP on all forms and reports. The digit code is hard coded.

► **To set up the capacity requirements display**

On Capacity Requirements Display



Complete the following fields:

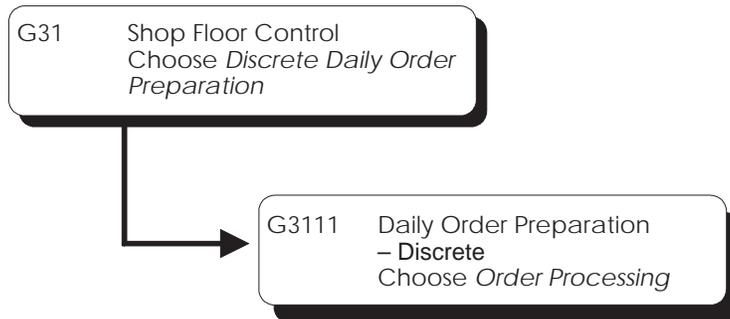
- Code
- Description

On Capacity Requirements Display

Complete the following fields:

- Code
- Description

Process Orders for MRP



Processing Orders for MRP

After you run MRP Regeneration or MRP Net Change, use the Order Processing batch program to process multiple work orders. The system:

- Attaches the parts list
- Attaches the routing instructions
- Sets an initial order status
- Generates the shop packet, including:
 - Parts list
 - Routing instructions
 - Shop packet summary
 - Component shortages

The program that you use to process orders for MRP is the same program that you use to process orders for Distribution Requirements Planning, Master Production Schedule, and Rough Cut Capacity Display.

See Also

- *Processing Work Orders (P31410)* in the *Shop Floor Control Discrete Manufacturing Guide*
- *Processing Work Orders* in the *Shop Floor Control Discrete Manufacturing Guide*



Exercises

See the exercises for this chapter.

MRP Multi-Facility Scheduling



MRP Multi-Facility Scheduling

Objectives

- To understand key MRP multi-facility scheduling concepts
- To define supply and demand relationships among your branch/plants
- To use the branch relationships chart to review your supply and demand relationships in a graphical hierarchical format
- To generate a multi-facility requirements plan
- To review the time series for the multi-facility requirements plan
- To review and process transfer messages for the multi-facility requirements plan

About MRP Multi-Facility Scheduling

In an MRP multi-facility operation, planned orders at the demand facility are the source of demand at the supply facility. You set up and maintain multi-facility schedules to:

- Manage the movement of component material through multiple production facilities
- Use assembly lines at one plant to begin the assembly of a product and a different plant for final assembly
- Handle all resupply movements throughout the manufacturing network
- Formalize the processing of transfer items among your manufacturing plants
- Create internal transfer orders to help ensure traceability of material and their costs between facilities
- Ensure that the branch from which you are ordering has enough inventory in stock to fill the order, or schedule the supply plant to produce it
- Schedule production according to realistic time frames

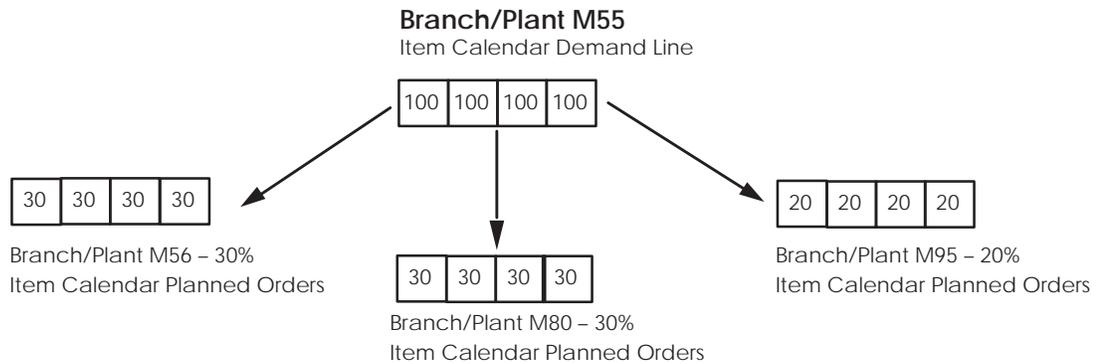
You can define facility relationships at any level of detail for an entire facility, a product group, master planning family, or an individual item number. In addition, you can incorporate all your facilities into a single planning schedule.



In MRP, the system transfers items among your manufacturing plants at the component level. The system transfers component items by:

- Generating a purchase order at the demand plant for the supply plant
- Generating a sales order from the demand plant at the supply plant

In the following example, the demand plant (M55) receives components from three different supply plants. Supply plants can also manufacture the end deliverable item.



For example, a breakdown of the percent received from each supply branch/plant indicates that M55 satisfies 80 percent of its required demands from the three supply branch/plants. In this case, the demand plant assembly also supplies the remaining 20 percent of the end item.

MRP multi-facility scheduling consists of the following tasks:

- Setting up a multi-facility requirements plan
- Generating a multi-facility requirements plan
- Working with MRP multi-facility planning output

The system records MRP multi-facility information in the following tables:

Bill of Materials Master (F3002)	Contains warehouse or plant level information about bills of material, such as costs and quantities of components, features and options, and levels of detail for each bill.
Branch Relationships Master (F3403)	Contains the supply and demand relationships among the branches.
Forecast Consumption Periods (F3405)	Contains the periods that you defined on the Forecast Consumption Periods form.

**MPS/MRP/DRP Lower
Level Requirements
(F3412)**

Contains the source of gross requirements that are required to build parent items.

Item Master (F4101)

Contains basic information about each item that has been defined in inventory, such as item numbers, description, alpha description, category codes, and units of measure.

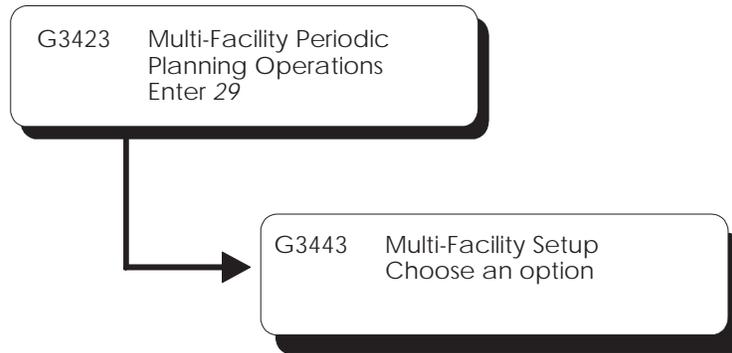
Item Branch (F4102)

Contains warehouse or plant level information, such as costs, quantities, physical location, and branch level category codes.

**MPS/MRP/DRP Detail
Message Review (F3411)**

Contains the action messages generated when you run a Master Production Schedule, Material Requirements Plan or Distribution Requirements Plan.

Set Up a Multi-Facility Requirements Plan



Setting Up a Multi-Facility Requirements Plan

You set up a multi-facility material requirements plan to track supply, demand, and movement of material among the individual facilities in your company. MRP multi-facility scheduling provides a flexible method for planning supply and resupply activities.

You must set up a table of the supply and demand relationships among your facilities. The system uses these relationships to generate and maintain multi-facility requirements planning schedules.

Setting up MRP multi-facility scheduling consists of the following tasks:

- Setting up MRP supply and demand relationships
- Reviewing MRP branch relationships on the relationships chart

MRP multi-facility scheduling uses the same programs as DRP/MPS multi-facility scheduling. The programs are summarized here.

Before You Begin

- Verify that MRP and CRP have been set up.
- Understand the concepts and terms described in *Single Facility Material Requirements Planning*. See *Generating a Material Requirements Plan*.

See Also

- *Setting Up MRP and Capacity Planning (P00051)* for information on how to define MRP and CRP data to use during processing
- *Setting Up a Multi-Facility Schedule (P3403)* for additional information on multi-facility scheduling

Setting Up MRP Supply and Demand Relationships

Use Branch Relationships Revisions to set up MRP supply and demand relationships for any level of detail you choose, including:

- Branch/plant
- Product group
- Master planning family
- Individual item number

The MRP Branch Relationship Revisions program and the DRP/MPS Branch Relationship Revisions program use the same processing options. You can vary the settings in the processing options to accommodate the different requirements for a material requirements plan.

See Also

- *Setting Up Supply and Demand Relationships (P3403)* for the processing options for this program
- *Setting Up Supply and Demand Relationships* for the processing options for this program

Reviewing MRP Branch Relationships on the Relationships Chart

Use the Branch Relationships Chart to review your MRP supply and demand relationships in a graphical hierarchical format. The Branch Relationships Chart displays the:

- Branch
- Level of the branch
- Supply branches for the corresponding demand branch

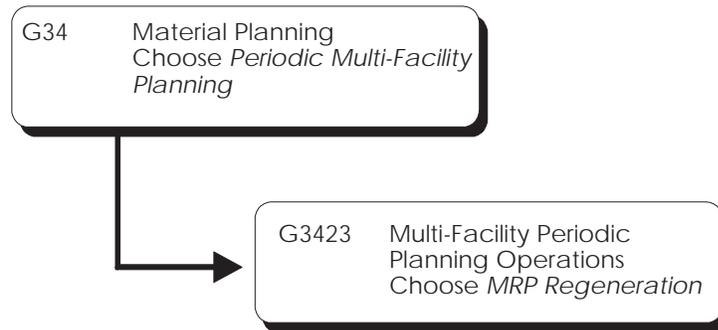
The MRP Branch Relationships Chart program and the DRP/MPS Branch Relationships Chart program use the same processing options. You can vary the

settings in the processing options to accommodate the different requirements for a material requirements plan.

See Also

- *Reviewing Branch Relationships on the Relationships Chart (P34031)* for detailed information on this program
- *Reviewing Branch Relationships on the Relationships Chart* for detailed information on this program

Generate a Multi-Facility Requirements Plan



Generating a Multi-Facility Requirements Plan

After you have set up the MRP supply and demand relationships among your branch/plants, you can use MRP regeneration to generate a multi-facility requirements planning schedule.

When you generate a multi-facility requirements planning schedule, the system evaluates selected information, performs calculations, and recommends a time-phased planning schedule for all selected items.

The Multi-facility MRP Regeneration program uses the same set of processing options as multi-facility DRP regeneration. You can vary the settings in the processing options to accommodate the different requirements for a material requirements plan.

Before You Begin

- Set up MRP multi-facility scheduling. See *Setting Up a Multi-Facility Requirements Plan*.

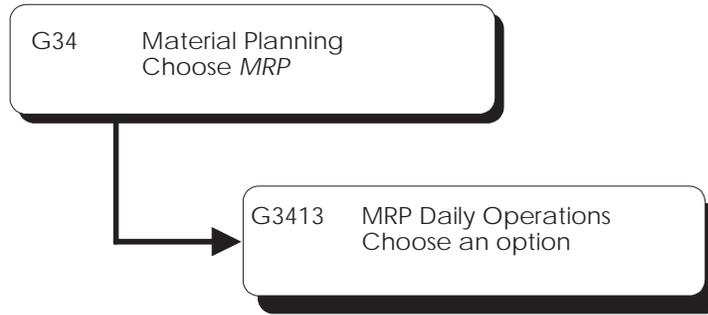
See Also

- *Generating a Multi-Facility Schedule (P3483)* for detailed information on the regeneration program
- *Generating a Multi-Facility Schedule* for detailed information on the regeneration program

What You Should Know About

Generation definition	<p>You must specify in the processing option the type of generation to use to process multi-facility MRP items. Depending on the type of requirements plan you need, you can use generation type 4 or 5.</p>
Multi-plant consolidation	<p>You must set the appropriate processing option to control whether you run a consolidated or a full multi-facility MRP Regeneration.</p> <p>Consolidation is the process of adding the item's time series data in the same time buckets for selected branch/plants and consolidating it into a Consolidation Branch/Plant.</p> <p>The system combines the supply and demand data for selected branches and consolidates it to a consolidation branch. The system generates a new time series only for the consolidation branch and not the branches that were combined.</p>
Transfer orders	<p>Transfer order messages are an output of multi-facility scheduling. You must set the appropriate processing option to identify the document type to use for transfer orders.</p> <p>When the system processes a transfer order, it creates a sales order at the supply plant and a purchase order at the demand plant.</p>

Work with MRP Multi-Facility Planning Output



Working with MRP Multi-Facility Planning Output

MRP multi-facility planning output consists of information in the time series and transfer order messages. Use the time series information to accept the planning that is suggested by the system or to override it. You should review the transfer order messages for individual item numbers to determine which action, if any, you need to take.

Reviewing MRP multi-facility planning output consists of the following tasks:

- Reviewing the time series for MRP multi-facility
- Processing MRP transfer order messages

Before You Begin

- Generate a current multi-facility material planning schedule. See *Generating a Multi-Facility Requirements Plan*.

Reviewing the Time Series for MRP Multi-Facility

Use the MRP Time Series/ATP Inquiry program to review the item series for the multi-facility requirements plan. The time series is a record of time-phased supply and demand netting for selected items. The system retrieves this data from the most recent generation or net change run. Use the processing options to set up daily, weekly, or monthly time periods (buckets).

The MRP Time Series/ATP Inquiry program uses the same set of processing options as the DRP/MPS Time Series/ATP Inquiry program. You can vary the settings in the processing options to accommodate the different requirements for a material requirements plan.

See Also

- *Reviewing the Time Series (P3413)* for the processing options for this program
- *Reviewing MRP Time Series (P3413)*
- *Reviewing DRP/MPS Time Series (P3413)*
- *Reviewing the Time Series* for the processing options for this program
- *Reviewing MRP Time Series*
- *Reviewing DRP/MPS Time Series*

Processing MRP Transfer Order Messages

Use MRP Detail Message Review to review the transfer order messages for the multi-facility material planning schedule. MRP multi-facility scheduling creates messages that relate to the demand and supply plants. If you choose to process the messages, the system automatically creates transfer orders. You can transfer items between plants at cost or at a fixed or percent markup.

The MRP Detail Message Review program uses the same set of processing options as the DRP/MPS Detail Message Review program. You can vary the settings in the processing options to accommodate the different requirements for a material requirements plan.

See Also

- *Reviewing MRP Detail Messages (P3411)* for additional information on messages generated for MRP
- *Processing Multi-Facility Transfer Order Messages (P3411)* for information on processing transfer order messages
- *Working with Messages (P3411)* for the processing options for this program
- *Reviewing MRP Detail Messages* for additional information on messages generated for MRP
- *Processing Multi-Facility Transfer Order Messages* for information on processing transfer order messages
- *Working with Messages* for the processing options for this program



Exercises

See the exercises for this chapter.

Supplier Scheduling



Supplier Scheduling

Objectives

- To understand the key supplier scheduling concepts
- To identify the steps you use to create a supplier schedule
- To enter supplier information that is related to anticipated shipment quantities and the dates that you expect the supplier to meet
- To generate a supplier schedule and create a purchase order
- To update planned ship quantities in the supplier schedule
- To review and release the current supplier schedule

About Supplier Scheduling

You set up and maintain supplier schedules to:

- Support item-specific relationships for scheduled shipments at the supplier's site
- Set up blanket purchase orders and material shipping arrangements with each supplier
- Generate a shipping schedule for all supplier scheduled demand within your release horizon
- Generate multiple supplier schedules for a single item
- Adjust the shipping schedule for unplanned events and create blanket purchase order releases

Setting up supplier schedules provides your suppliers with consistent shipping information and advanced demand profiles to support your goal of just-in-time production and delivery. Using supplier schedules enables you to convert your DRP/MPS/MRP plans into a realistic shipping schedule.

Your buyers maintain timely information to monitor contract terms against your current needs. The supplier schedule identifies both short- and long-term needs for purchased items at your facility. Suppliers can then use your supplier schedule to plan their production and shipping schedules.



What is the Effective Date Range?

The effective date range for a blanket purchase order is specified by the beginning order entry date and the expiration requested date.

Working with supplier schedules consists of the following tasks:

- Defining a supplier contract
- Generating a supplier schedule
- Revising a supplier schedule
- Releasing a supplier schedule
- Printing a supplier schedule (optional)

The system records supplier schedule information in the following tables:

**Supplier Schedule
Master (F4321)**

Contains most of the data that controls scheduling arrangements with the supplier. This table also contains information required for creating and maintaining the schedule, including:

- Ship leadtime
- Schedule days
- Ship pattern
- Shipment quantity
- Delivery location

The system uses information from the Supplier Schedule Master table for each line item on a blanket order that you use in the supplier scheduling process.

**Supplier Split
Percentages (F43211)**

Contains the data that identifies predetermined split percentages between suppliers, by item.

What is a Blanket Purchase Order?

A blanket purchase order is a standing order that you issue to a supplier for a large quantity of goods with no specific delivery date.

The process of scheduling supplier items begins in J.D. Edwards Purchase Management system with the creation of a blanket purchase order. You must create a blanket purchase order for every item that you want to schedule for supplier delivery.

Use Enter Blanket Order in the Purchasing Management system to enter blanket orders for items. You can review all blanket orders for a single item when you set up a supplier schedule.

Supplier release scheduling allows you to set up multiple blanket orders for the same supplier. The system uses a technique similar to effectivity dates to determine the active order. The system uses the blanket order date as the start date and the requested date as the end date.

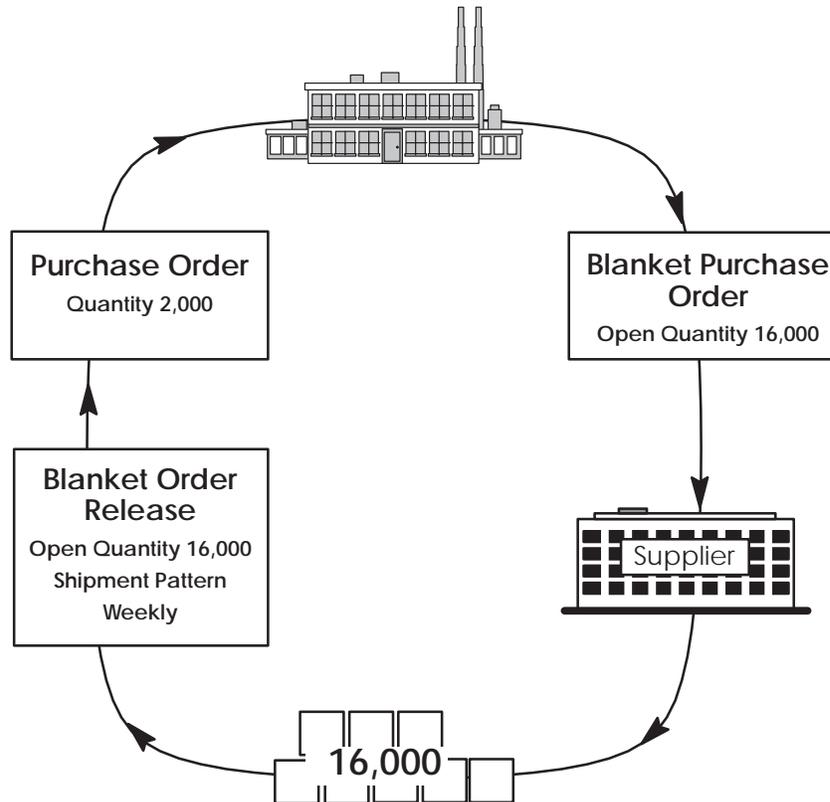
What is a Blanket Order Release?

You use a blanket order release for suppliers to whom you periodically release orders for delivery of some, but not all, of the goods on a purchase order.

For example, you might issue a blanket order release for 16,000 items from a supplier. In addition, you might have an agreement to take delivery of up to 2,000 units of the item each month until the order is filled.

When Supplier Scheduling processes the order suggestions, the system creates a purchase order against the blanket order. Receipts for the generated orders reduce the total quantity open on the blanket purchase order.

The following illustrates how the system uses blanket purchase orders and blanket order releases.

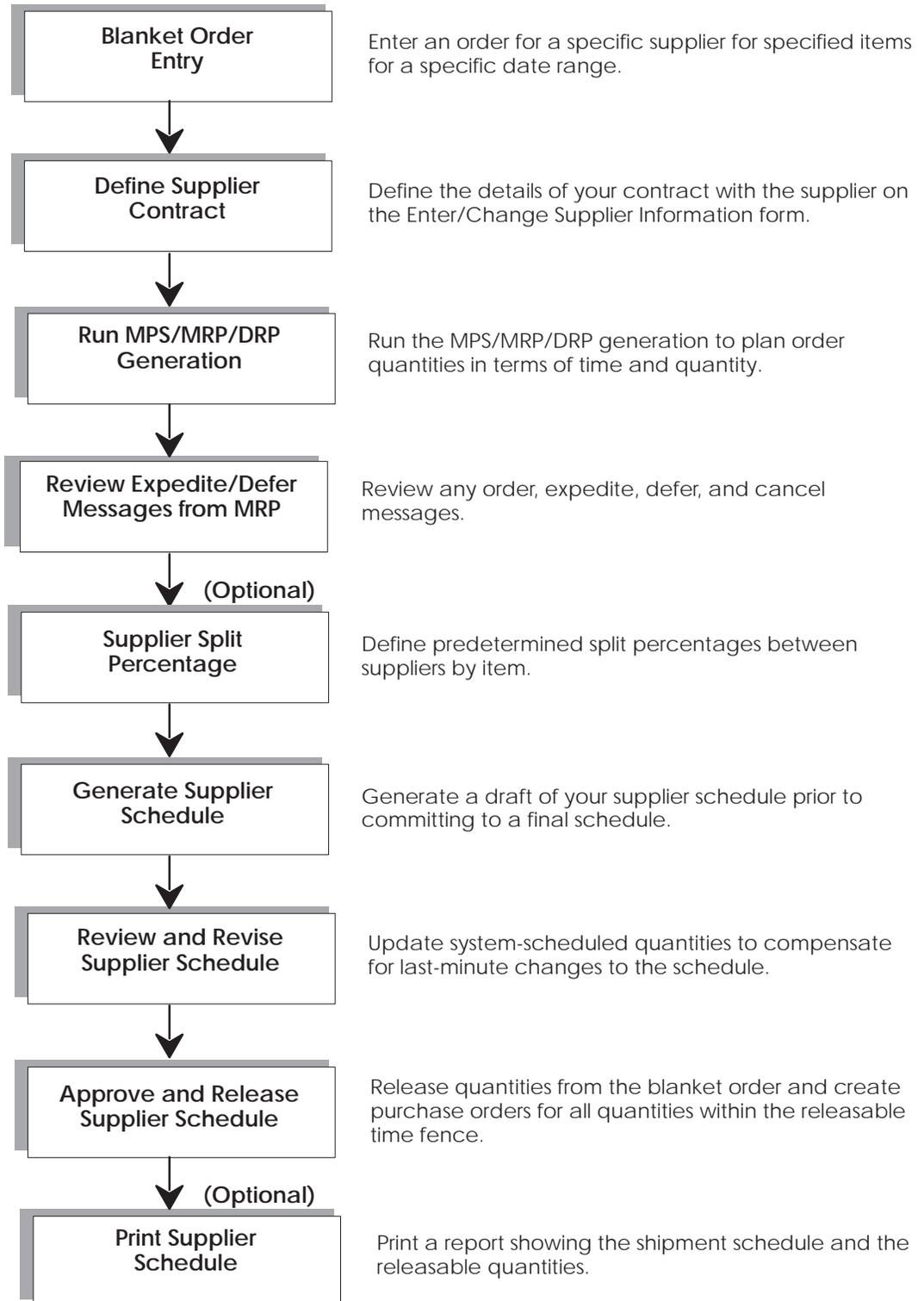


See Also

- *Entering Orders (Blanket Orders) in the Purchase Order Management Guide*
- *Entering Orders (Blanket Orders) (P4311) in the Purchase Order Management Guide*

What are the Steps for Creating a Supplier Schedule?

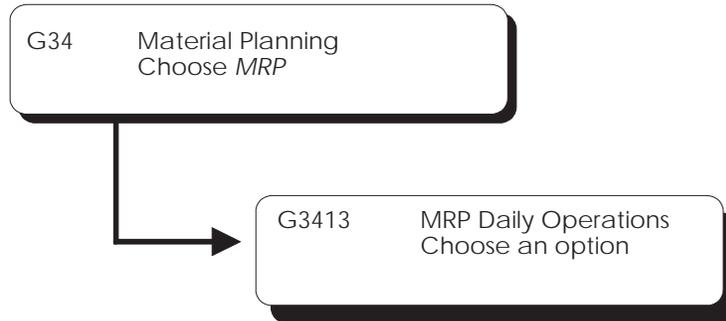
The following graphic illustrates the steps you follow to create a supplier schedule.



What are the Steps for Creating a Supplier Schedule?

Blanket Order Entry	Enter an order for a specific supplier for specified items for a specific date range.
Define Supplier Contract	Define the details of your contract with the supplier on the Enter/Change Supplier Information form.
Run MPS/MRP/DRP Generation	Run the MPS/MRP/DRP generation to plan order quantities in terms of time and quantity.
Review Expedite/Defer Messages from MRP	Review any order, expedite, defer, and cancel messages.
Supplier Split Percentage (optional)	Define predetermined split percentages between suppliers by item.
Generate Supplier Schedule	Generate a draft of your supplier schedule prior to committing to a final schedule.
Review and Revise Supplier Schedule	Update system-scheduled quantities to compensate for last-minute changes to the schedule.
Approve and Release Supplier Schedule	Release quantities from the blanket order and create purchase orders for all quantities within the releasable time fence.
Print Supplier Schedule (optional)	Print a report showing the shipment schedule and the releasable quantities.

Define a Supplier Contract



To review information for DRP, choose Daily DRP on the Material Planning Operations menu. Then, choose a DRP option on the DRP Daily Operations menu.

Defining a Supplier Contract

You must enter the terms of your contract with each of your suppliers. The system uses these contract terms to generate and maintain supplier schedules.

In addition, if you want to generate multiple supplier schedules for a single item, you must define predetermined split percentages between the suppliers, by item.

Complete the following tasks:

- Define supplier contract information
- Define supplier split percentages

Defining Supplier Contract Information

When you define a supplier contract, you can also define time fence periods for freezing delivery quantities, releasable schedule days, and future requirements. The rules for defining time fences are described below:

Frozen days	Specify the time frame from the generation start date within which deliveries are frozen.
Release days	Determine the period of time from the generation start date that purchase orders will be created for orders. Any quantities that are scheduled outside this period are still considered in planning status and do not produce actual purchase orders.
Fabrication days	Determine the time period from the generation start date, within which the customer guarantees fabrication costs for the quantities they ordered on the schedule, even if the order is canceled. This rule is optional.
Raw material days	Determine the time period from the generation start date, within which raw material costs are guaranteed by the customer, even if the order is canceled. This rule is optional.

Before You Begin

- Create a blanket purchase order for every item that you want to schedule through supplier scheduling. See *Entering Orders (Blanket Orders)* in the *Purchase Order Management Guide*.
- Define the pattern of shipments that you want to receive from the supplier in the user defined code table (40/SP).

▶ **To define supplier contract information**

On Enter/Change Supplier Information

[4321] - Enter/Change Supplier Info

Functions Tools Help

Branch/Plant M30
 Status 10 Planning
 Expiration Date 04/01/98
 First Release
 Last Release
 Last Release PO

Order Number 106 008
 Line Number 1.000
 Item Number 111 1x10x6' OAK S4S
 Supplier 4343 Vector Manufacturing Co
 Ship To 5995 Manufacturing Plant, Memphis
 Deliver to Loc 200-204 Final Assembly/Inspection
 Shipment Quantit 2000
 Ship Units/Cont 10 Unit of Measure ER
 Ship Leadtime 3 Blanket Order 16000
 Frozen Days 10 Currently Overridden Cum Received
 Releasable Days 20 Cum Frozen 4990
 Fabrication Days 25 Cum Fabricated 25070
 Raw Mater! Days 40 Cum Raw Material 46590
 Schedule D/W/M 45 / 10 / 5 Past Due
 Ship Pattern WA Early Receipt
 Weekly - Monday thru Friday

F13=Open Orders F14=PO Detail F15=Purchasing Instr F17=Percent F24=More MW

1. To set up schedule information for each line on the blanket order, complete the following fields:
 - Order Number
 - Line Number
 - Releasable Days
 - Schedule Days/Weeks/Months
 - Shipment Pattern

2. Complete the following optional fields:
 - Deliver to Location
 - Minimum Shipment Quantity
 - Shipping Units/Container
 - Shipment Leadtime
 - Frozen Days
 - Fabrication Days
 - Raw Material Days

Field	Explanation
Order Number	<p>The number that identifies an original document. This can be a voucher, an invoice, unapplied cash, a journal entry number, and so on.</p> <p>..... <i>Form-specific information</i></p> <p>This number identifies a requisition, blanket order, or purchase order.</p>
Line Number	<p>A number that identifies multiple occurrences, such as line numbers on a purchase order or other document. Generally, the system assigns this number, but in some cases, you can override it.</p>
Releasable Days	<p>A time fence that indicates the number of workdays from the generation start date to use when identifying the cutoff date for actual blanket order releases. The system uses the time fence when the supplier schedule release generation program is run.</p>
Supplier Schedule Days/Weeks/Months	<p>The number of workdays, weeks and months that will be displayed on the supplier schedule.</p>
Shipment Pattern	<p>User defined codes (system 40/type SP) that identify the shipping and delivery arrangement you have established with the supplier for this item. It can be specific Workday Calendar days on which the supplier agrees to make shipments, a range of days, such as a specific week during the month, or some other arrangement unique to your business. You can add new codes to suit your needs.</p>
Deliver to Location	<p>The location a shipment should be delivered to, such as a particular receiving dock or work center.</p>
Shipment Quantity	<p>This is the quantity the supplier is willing to ship as a minimum.</p>
Shipping Units Per Container	<p>The standard quantity of containers that move through the manufacturing process (typically used in a repetitive manufacturing environment). The quantity you enter determines the number of bar code labels that you need for shipping and it will also modify order release quantities.</p>
Shipment Leadtime	<p>The time it takes a shipment to move from the supplier's dock to the customer's dock. The system uses this value to offset the required date to determine the actual date that the shipment should take place. Also known as Transit Time.</p>
Frozen Days	<p>The number of workdays from the generation start date that the quantity buckets will be frozen with no changes and releases possible. This value is also used to calculate the cumulative frozen quantity (see CFRO).</p>

Field	Explanation
Fabrication Days	The number of workdays, from the generation start date, that the customer guarantees the fabrication costs for the quantity ordered.
Raw Material Days	The number of workdays, from the generation start date, that the customer guarantees the raw material costs for the quantity ordered.

What You Should Know About

Deleting supplier information	When you delete supplier information, the system deletes the entire record, including the history.
Shipment leadtime	<p>Shipment leadtime determines the number of days that are required for the items on the scheduled blanket order release to leave the supplier's dock and arrive at your delivery location.</p> <p>Depending on where the supplier is located, the shipment leadtime might be zero, or as many days as it takes for the supplier to transport the released shipment to your facility.</p>
Level leadtime	The level leadtime for a purchased item should include the shipment leadtime.
Shipping units per container	The Shipping Units Per Container field identifies the container requirements of the supplier. When the system generates the supplier schedule, it calculates the shipping units per container as a multiple and adjusts the planned quantities as needed.
Shipment quantity	The Shipment Quantity field identifies the minimum shipment quantity that the supplier is willing to accept.

Defining shipment patterns for supplier deliveries

You define shipment patterns in the user defined code table (40/SP).

The first character of the 2-character code specifies the weeks for which you want to define a shipment pattern. The second specifies the days of the week. For example, WA indicates weekly deliveries, Monday through Friday.

The first through fifth week of the month are interpreted as the first through the fifth occurrence of the day in the month. For example, 4D would be considered the fourth Monday of the month.

Processing early and past due receipts

When you generate a schedule, the system sorts outstanding blanket order releases into appropriate time periods. The system accumulates past due quantities and quantities that you received prior to the requested date.

When you regenerate the schedule, the system displays the quantities in the Past Due and Early Receipt fields on Enter/Change Supplier Information.

The system expresses past due amounts as positive numbers in the Past Due field and adds the amounts to the cumulative received quantity. The system expresses early receipt amounts in the Early Receipt field.

Processing Options for Supplier Schedule Master Revisions

DREAM WRITER VERSIONS:

Enter the version of each program.
If left blank, ZJDE0001 will be used.

- | | | |
|------------------------------|-----------|-------|
| 1. Purchase Order Entry | (P4311) | _____ |
| 2. Open Order Inquiry | (P430301) | _____ |
| 3. Supplier Schedule | (P34301) | _____ |
| 4. Supplier Split Percentage | (P43211) | _____ |

DEFAULT SCREEN VALUES:

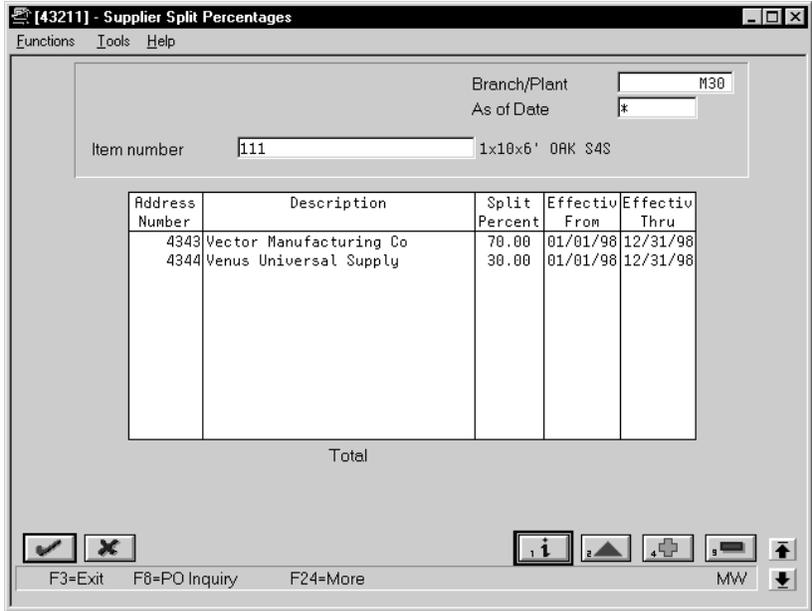
- | | |
|--|-------|
| 5. Enter the Document Type to display. | _____ |
|--|-------|

Defining Supplier Split Percentages

Buyers often order from multiple suppliers for the same item to avoid relying on a single supplier. Supplier scheduling allows multiple suppliers to supply a single item based on a predetermined split percentage. Use Supplier Split Percentages to define the predetermined split percentages among the suppliers, by item.

► To define supplier split percentages

On Supplier Split Percentages



1. To define split percentages among suppliers, complete the following fields:
 - Item Number
 - Branch/Plant
 - Split Percent
 - Effective From
 - Effective Thru
2. Complete the following optional field:
 - As of Date

Field	Explanation
Percentage – Split	The percentage applied. For Supplier Release Scheduling: The percentage of the planned quantity that the system applies to the corresponding supplier.

Processing Options for Supplier Split Percentages Revisions

DREAM WRITER VERSIONS:

1. Enter the version of the purchase order inquiry program. If left blank ZJDE0001 will be used.

Generate a Supplier Schedule



Generating a Supplier Schedule

Use Generate Supplier Schedule to generate a draft of your supplier schedule prior to committing to a final schedule. You can review the draft of your supplier schedule using Enter/Change Schedule.

When you generate the supplier schedule, the system uses the messages from the most recent MRP generation, blanket orders, and the information defined in the Supplier Schedule Master table to create a supplier schedule. The system determines demand from the MRP messages.

In addition, the system creates multiple supplier schedules for a single item. It does this by splitting the MRP messages by the predetermined percentages that you defined in the Supplier Split Percentages table (F43211).

Before You Begin

- Verify that the following information has been set up:
 - The DRP or MPS system
 - An active blanket order for the item
 - Associated supplier information for the order
 - The blanket order, order type, line type, and status in the version of supply/demand inclusion rules that are used during supplier schedule generation

- Run the MPS/MRP/DRP generation so that the system can:
 - Create order messages for supplier scheduled items
 - Produce a time-series material plan so you can analyze the impact of choosing to accept or reject planning suggestions

- Review and act on any messages on the Message Detail Review form

What You Should Know About

MRP messages

Supplier scheduling uses the messages generated from the most recent MRP generation to determine schedules. Use the Detail Message Review to review these messages and change them as you see fit.

In addition, you can set the appropriate processing option to clear these messages after schedule generation. The system clears only those messages inside the releasable time fence.

After you clear the MRP messages, supplier scheduling creates a purchase order for every message that is included in the releasable time fence.

Multiple supplier scheduling

Supplier Scheduling uses the information in the Supplier Split Percentages table (F43211) to create quantity records for multiple suppliers. The system calculates these quantities by multiplying the MRP message quantity by the percentage defined in the Supplier Split Percentages table.

See Also

- *Setting Up DRP/MPS/RCCP (P00051)*
- *Generating a Single Level Master Schedule (P3482)*
- *Working with Messages (P3411)*
- *Reviewing MRP Time Series (P3413)*
- *Revising a Supplier Schedule (P34301)*
- *Setting Up DRP/MPS/RCCP*
- *Generating a Single Level Master Schedule*
- *Working with Messages*
- *Reviewing MRP Time Series*

- *Revising a Supplier Schedule*

When you run Generate Supplier Schedule, the system prints a Schedule Generation Exception report that details any possible discrepancies that might make your supplier schedule ineffective.

```
34400                                J.D. Edwards & Company                                Page    -    3
                                         ** None Selected **                                Date    -    5/31/98
The Following Report Distributions were Entered:
-----
Item          Item Description          T Branch/Plant Exception Description
-----
111          1x10x6' OAK S4S          0          M30 *Messages exist that were not
processed.                                     No Supplier Schedule Master was found.
```

Processing Options for Supplier Schedule Generation

PROCESSING:

1. Enter the beginning date for the generation. (Default is Today) _____
2. Enter the document type to look for when retrieving an item's blanket order. If left blank, 'OB' will be used. _____
3. Enter the version of Supply/Demand Inclusion rules to use for active blanket order selection. (Required) _____

SUPPLIER STATUS UPDATE:

4. Enter the status to use for updates to the Supplier Schedule. If left blank, no status update will occur. _____

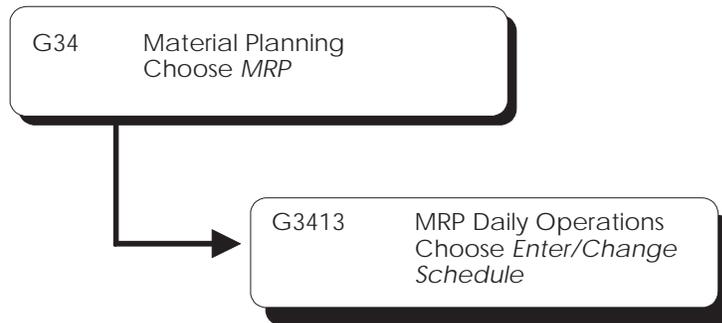
MPS/MRP/DRP MESSAGES:

5. Enter a '1' to change MPS/MRP/DRP Messages to a cleared status after processing. If left blank, all messages will remain uncleared after schedule generation. _____

INITIALIZATION & REGENERATION:

6. Enter a '1' to rerun the generation using previously cleared MPS/MRP/DRP messages. If left blank, only uncleared MPS/MRP/DRP messages will be used. _____
7. Enter a '1' to ignore frozen time fence days and allow operations inside the normal frozen time fence (All frozen days = '0'). If left blank, no quantities will be placed inside the frozen time fence date. _____

Revise a Supplier Schedule



Revising a Supplier Schedule

Use Enter/Change Schedule to review and revise the supplier schedule that you generated. You might need to override system-scheduled quantities to compensate for last-minute changes to the schedule.

After you review the schedule and make any necessary revisions, you must accept the information on Enter/Change Schedule to commit to a final schedule.

Enter/Change Schedule allows you to:

- Review planned, released, and historical quantity information
- Display the current supplier schedule
- Review cumulative quantity information
- Update planned quantities in the schedule before you release them
- Finalize the supplier schedule

► **To revise a supplier schedule for a single item**

On Enter/Change Schedule

1. To display one or more blanket orders that exist for the selected item, complete the following fields:
 - Item Number
 - Branch/Plant

The system displays Blanket Order Selection.

Order	Planned	Released	Historical
8	250260		
9	107250		

2. On Blanket Order Selection, choose the blanket order with the supplier information that you want to display.

The system closes Blanket Order Selection and populates the Enter/Change Schedule form with supplier scheduling information.

3. On Enter/Change Schedule, review the following information:
 - Status
 - Last Release Purchase Order
 - Last Receipt
 - Receipt Quantity
 - Cumulative Receipt
 - Cumulative Frozen
 - Cumulative Fabricated
 - Cumulative Raw Material
 - Past Due
4. Accept the record or complete the following field to update planned quantities in the schedule:
 - Planned

On Enter/Change Schedule

1. To display one or more blanket orders that exist for the selected item, complete the following fields:
 - Item Number
 - Branch/Plant

The system displays Blanket Order Selection.

2. On Blanket Order Selection, choose the blanket order with the supplier information that you want to display.

The system closes Blanket Order Selection and populates the Enter/Change Schedule form with supplier scheduling information.

3. On Enter/Change Schedule, review the following information:
 - Status
 - Last Release Purchase Order
 - Last Receipt
 - Receipt Quantity
 - Cumulative Receipt
 - Cumulative Frozen
 - Cumulative Fabricated
 - Cumulative Raw Material

- Past Due
4. Accept the record or complete the following field to update planned quantities in the schedule:
- Planned

Field	Explanation
Status – Supplier Schedule	The current status of the supplier schedule. This is updated as the schedule moves through the system. <i>Form-specific information</i> This field is display only.
Last Receipt Date (Julian)	The date that the last shipment of the item was received.
Last Received Quantity	The quantity received on the most recent shipment.
Cumulative Received	The quantity received to date against a blanket purchase order.
Units – Cumulative Frozen	The quantity inside the Frozen Time Fence that the customer is planning to release or has already released to the supplier.
Cumulative Fabricated	The running total of the item for which you could be exposed to fabrication costs by the supplier. This is calculated as the quantity planned for release up to the fabrication time fence.
Cumulative Raw Material	The quantity for which you could be exposed to raw material costs by the supplier. This is calculated as the quantity planned for release up to the raw material time fence.
Quantity – Planned	The quantity of units planned for each period in the time series or plan.

What You Should Know About

Changing supplier information

The Planned field is the only field that you can change on the Enter/Change Schedule form. The system recalculates the quantities in the Cumulative Frozen, Fabricate, and Raw Material fields when a change is made.

Any changes that you make to the schedule will not affect the most recent MPS, MRP, or DRP generation. After you release the supplier schedule and create purchase orders for the blanket order releases, the next MPS, MRP, or DRP generation treats the purchase orders as available supply items.

Processing Options for Supplier Schedule Revisions

DREAM WRITER VERSIONS:

Enter the version of each program:
If left blank, ZJDE0001 is used.

- | | | |
|-------------------------------|-----------|-------|
| 1. Open Order Inquiry. | (P430301) | _____ |
| 2. Supply/Demand Inquiry. | (P4021) | _____ |
| 3. Purchase Order Entry. | (P4311) | _____ |
| 4. Vendor/Blanket Information | (P4321) | _____ |
| 5. Pegging Inquiry | (P3412) | _____ |
| 6. Single Item Release | (P34410) | _____ |

SUPPLY/DEMAND INCLUSION RULES:

- | | |
|---|-------|
| 7. Enter the version of Supply/Demand Inclusion Rules to use for active blanket order selection. (Required) | _____ |
|---|-------|

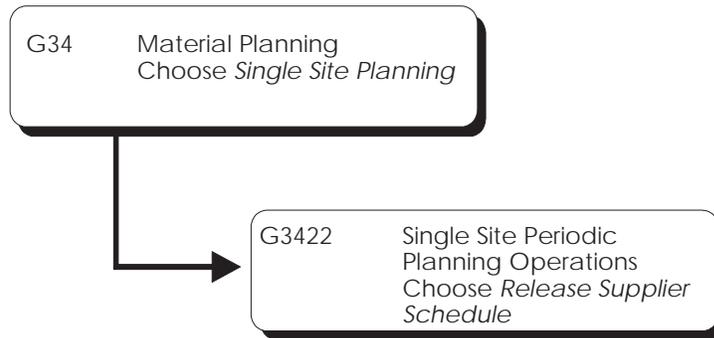
DEFAULT VALUES:

- | | |
|---|-------|
| 8. Enter the Document Type to default to the screen. If left blank, no default will be moved to screen. | _____ |
|---|-------|

SCHEDULE STATUS UPDATE:

- | | |
|--|-------|
| 9. Enter the status to use for updates to the Vendor Schedule. If left blank, schedule status unchanged. | _____ |
| 10. Enter the status beyond which changes cannot be made to the Vendor Schedule. If left blank, schedule is always open to change. | _____ |

Release a Supplier Schedule



Releasing a Supplier Schedule

After you finalize a schedule using Enter/Change Schedule, you can release the current supplier schedule. After the schedule is processed, the system updates the planned quantities inside the time fence.

Release Supplier Schedule uses the following:

- Outstanding purchase orders
- Existing blanket purchase orders
- Supplier release information that is specific to each blanket order

The program uses this information to create:

- Purchase orders for all quantities that are needed inside the time fence
- Blanket orders that are scheduled for a specific item within a branch/plant
- A shipping schedule based on when you need the items, the shipping leadtime, and other defined variables
- A single purchase order with multiple lines for each different release date and multiple lines for each item released for the supplier

Before You Begin

- Generate a current supplier schedule. See *Generating a Supplier Schedule*

What You Should Know About

Clearing MRP messages Supplier scheduling uses the messages from the most recent MRP generation to determine demand.

You can set the appropriate processing option to clear these messages after you release the supplier schedule. The system clears only those messages inside the releasable time fence.

Processing Options for Supplier Schedule Release Generation

PURCHASE ORDER OPTIONS:

- 1. Enter the Line Type to create. _____
- 2. Enter the Beginning Line Status. _____
- 3. Enter the Document Type to create. _____
(Above values are required)
- 4. Enter a '1' to default the tax area from the "Ship-To" address book number. If left blank, the tax area will be defaulted from the "Supplier" address number. _____

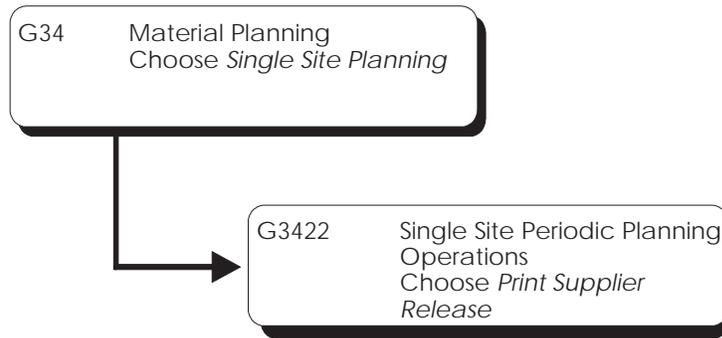
STATUS UPDATES:

- 5. Enter the status to use for updates to the Supplier Schedule. If left blank, no change will be made to the schedule's current status. _____
- 6. Enter a '1' to clear MPS/MRP/DRP messages inside the releasable time fence. If left blank, no action. _____

BLANKET/QUOTE PROCESSING:

- 7. Enter a '1' for automatic blanket order release processing. If left blank, automatic blanket release will not be performed. _____

Print a Supplier Schedule



Printing a Supplier Schedule

You can use Print Supplier Release to print the supplier schedule. This report shows the shipment schedule, releasable quantities, and all blanket orders that are scheduled for a specific item within a branch/plant.

The system uses the information that you have entered on the other forms along with the version of supply/demand inclusion rules that you select to create the report.

Before You Begin

- Run the Release Supplier Schedule DREAM Writer process. See *Releasing a Supplier Schedule*.

34450	J.D. Edwards & Company Supplier Schedule Print		Page	1
			Date	10/28/98
			Branch/Plt . . .	CHI
Item No. 111			Blanket Order	104 OB
Desc . 1x10x6' Oak 84S			Purchase Order	OP
			Release Number . .	92102701
Vendor . Mr.Raymond Allen	Buyer.	Teague and Associates	LastReceipt Date.	09/21/98
410 17th Avenue	F.O.B.	Pickup with our Truck	LastReceived Qt	11
Fairfax VA 22040	Carrier		Cum Receipt.	10
	Deliver toCHI	Cum Frozen .	2000
		Chicago Warehouse	Cum Fabricat	2000
			Cum Raw Matl	2000
			Units.	EA Each

	Past Due	09/14/98	F	09/15/98	R	09/16/98	L	09/17/98	M	09/18/98	9/21/98	09/22/98
Released	500											
Planned.												
Cum Receipt. . . .	510	510		510		510		510		510	510	510
Net Change												4600-
	09/23/98	09/24/98	09/25/98	09/28/98	09/29/98	09/30/98	10/01/98	10/02/98				
Released												
Planned.												
Cum Receipt. . . .	510	510		510		510		510		510	510	510
Net Change												

Processing Options for Supplier Schedule Print

PROCESSING:

1. Enter the document type to use when retrieving an item's blanket order. If left blank, 'OB' will be used. _____
2. Enter the version of Supply/Demand Inclusion rules to use for active blanket order selection. (Required) _____

SCHEDULE STATUS UPDATE:

3. Enter the status to use for updates to the supplier schedule. If left blank, no change will be made to the schedule's current status. _____

ASSOCIATED TEXT:

4. Enter a '1' to print associated blanket order text. If left blank, no associated text will be printed. _____



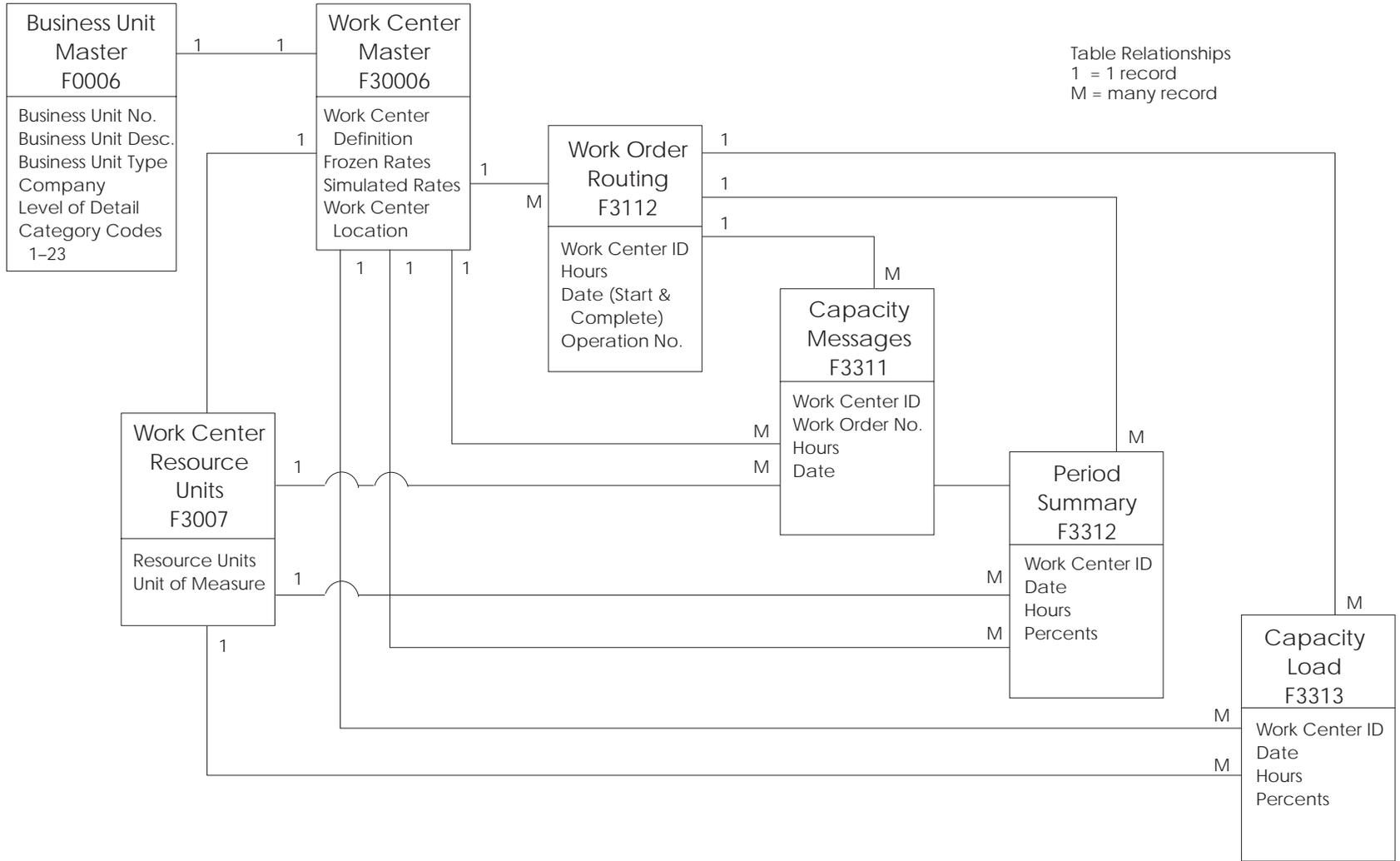
Exercises

See the exercises for this chapter.

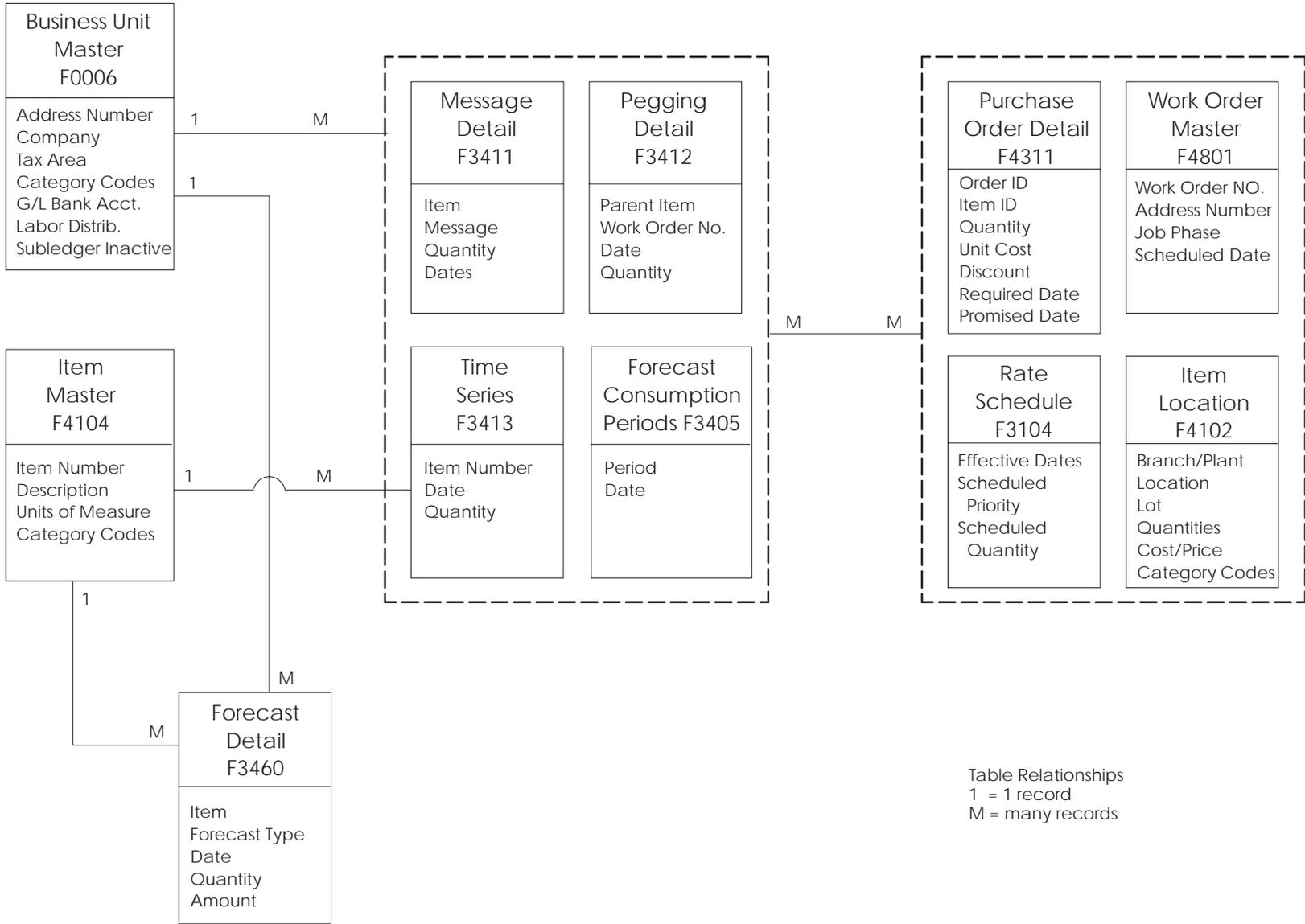
Appendices

Appendix A — Data Models

Capacity Management



Supply Side



Appendix B — Action Messages

The action messages for DRP/MPS/MRP are defined in user defined code table 34/MT. The character codes are hard-coded. Do not change the character codes in this table.

Action Messages in DRP/MPS/MRP				
Type	Description	Planner Remarks	Action Taken When Message Processed	
			Work Orders	Purchase Orders
A	Warning message	WO missing part list	Displays work order. You can copy the bill of material to create a parts list.	N/A
A	Warning message	BOM does not exist for item	Error message, record invalid.	N/A
A	Warning message	Cancel parts list	Error message, record invalid. You must clear or delete message.	N/A
A	Warning message	Defer parts list	Error message, record invalid. You must clear or delete message.	N/A
A	Warning message	Leadtime is zero	Clears message. Displays work order.	N/A
B	Order & Expedite	Blank	Clears message and creates a firm order message. Creates work order.	Clears message and creates a firm order message. Creates purchase order.
C	Cancel	Blank	Clears message. The system deletes work order parts list if there are no outstanding issues. Changes status to 99.	Clears closed message on purchase order line item. Changes status to 999.
D	Defer	Blank	Clears message and changes work order item required date. If a D message is generated, an L (Decrease Rate) message will not be generated.	Clears message and changes purchase order line item required date.
E	Expedite	Blank	Clears message and changes work order start date.	Clears message and changes purchase order line item start date.

Action Messages in DRP/MPS/MRP				
Type	Description	Planner Remarks	Action Taken When Message Processed	
			Work Orders	Purchase Orders
F	Frozen order	Frozen order	No action required. The message remains until deleted or cleared.	No action required. The message remains until deleted or cleared.
G	Increase order quantity	Manual adjustment necessary	Displays work order. You must manually change the ordered quantity. The system recalculates and changes the number of required components.	Displays purchase order. You must manually change the ordered quantity.
H	Decrease rate quantity	Blank	Displays the rate schedule. You must manually change the rate quantity for the suggested date.	N/A
I	Increase rate quantity	Blank	Displays the rate schedule. You must manually change the rate quantity for the suggested date.	N/A
L	Decrease order quantity	Manual adjustment necessary	Displays work order. You must manually change the ordered quantity. The system recalculates and changes the number of required components.	Displays purchase order. You must manually change the ordered quantity.
M	Manual reminder	User entered text	No action required. The message remains until deleted or cleared.	No action required. The message remains until deleted or cleared.
N	Create rate	Blank	Clears message and creates the rate schedule. Displays rate schedule revisions.	N/A
O	Order	Blank	Clears message and creates a firm order message. Creates work order.	Clears message and creates a firm order message. Creates purchase order.
P	Firm order	Firm order	No action required. The message remains until deleted or cleared.	No action required. The message remains until deleted or cleared.

Action Messages in DRP/MPS/MRP				
Type	Description	Planner Remarks	Action Taken When Message Processed	
			Work Orders	Purchase Orders
S	FPO adjustment suggestion	<ul style="list-style-type: none"> • Increase Parts List • Decrease Parts List • Expedite Parts List • Defer Parts List 	No action required. The message remains until deleted or cleared. Action is taken on the parent item's message.	No action required. The message remains until deleted or cleared. Action is taken on the parent item's message.
T	Past due order	Blank	No action required. The message remains until deleted or cleared.	No action required. The message remains until deleted or cleared.

Appendix C — Functional Servers

Several J.D. Edwards programs access functional servers. The purpose of functional servers is to provide a central location for standard business rules about entering documents, such as vouchers, invoices, and journal entries. These business rules establish the following:

- Data dictionary default values
- Field edits and valid values
- Error processing
- Relationships between fields or applications

The advantages of a functional server are:

- It reduces maintenance of entry programs because edit rules reside in one central location.
- You can standardize documents across all applications because you create them using the same business rules.
- Generally, the user interface (appearance and interaction) of a form is now separate from how a program works.

The steps for setting up business rules for an entry program are:

1. Create a DREAM Writer version for a specific functional server program (for example, XT0411Z1 for voucher entry).
2. Set the processing options within the version according to your company requirements.
3. Specify the version you want the entry program to use in the processing options for that entry program.

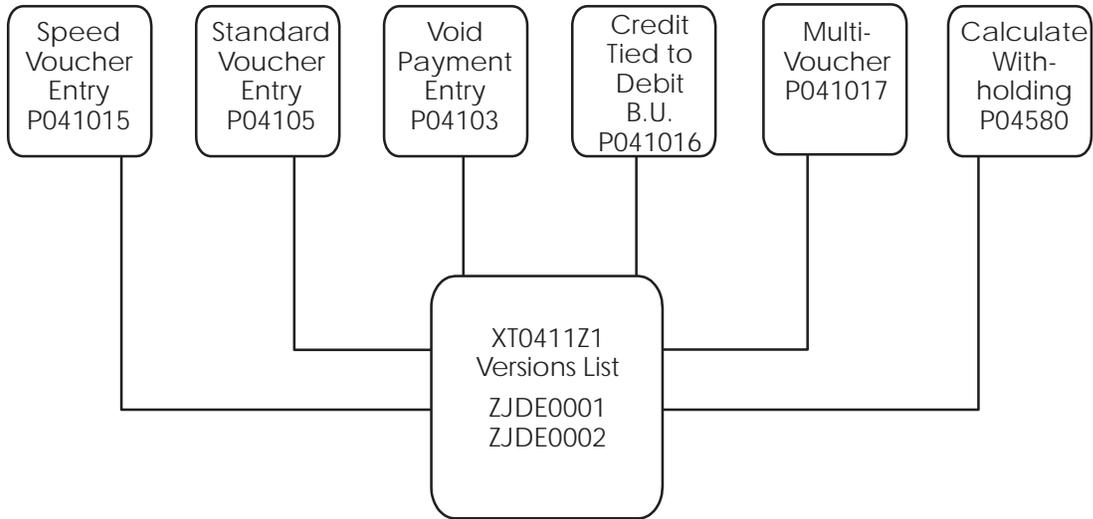
You can have all your entry programs use the same DREAM Writer version (and thus, use the same rules) or you can set up different DREAM Writer versions. J.D. Edwards provides DREAM Writer version ZJDE0001 as the default functional server version for your entry programs.



Only the person responsible for system-wide setup should make changes to the functional server version. For more information about how to set up DREAM Writer versions, see the *Technical Foundation Guide*.

Example: Voucher Processing Functional Server

The following graphic shows the programs that use the voucher processing functional server. J.D. Edwards provides two demo versions of the functional server, ZJDE0001 and ZJDE0002.



Glossary

Glossary

This glossary defines terms in the context of your use of JDE systems and the accompanying user guide.

access. To get to the information or functions provided by the system through menus, screens, and reports.

allocated material. Material on hand or on order that is assigned to specific future production or customer orders. Synonymous with *reserved material*.

alphabetic character. Represents data by using letters and other symbols from the keyboard (such as *&#). Contrast with *numeric character*.

alphanumeric character. Represents data in a combination of letters, numbers, and other symbols (such as *&#).

alternate operation. Replacement for a normal step in the manufacturing process or routing for an item.

alternate routing. A routing, usually less preferred than the primary routing, but resulting in an identical item.

assemble-to-order. A make-to-order product for which key components (bulk, semi-finished, intermediate, subassembly, fabricated, purchased, packaging, etc.) used in the assembly or finishing process are planned and stocked in anticipation of a customer order. Receipt of an order initiates assembly of the finished product. This is useful when a large number of finished products can be assembled from common components.

assembly. A group of subassemblies and/or parts that are put together and constitute a major subdivision for the final product. An assembly may be an end item or a component of a higher level assembly.

audit trail. The detailed, verifiable history of a processed transaction. The history consists of the original documents, transaction entries, and posting of records, and usually concludes with a report.

automatic accounting instruction (AAI). A code that points to an account in the chart of accounts. AAIs define rules for programs that automatically generate journal entries. This includes interfaces between Accounts Payable, Accounts Receivable, and Financial Reporting and the General Accounting system. Each system that interfaces with the General Accounting system has AAIs. For example, AAIs can direct the Post to General Ledger program to post a debit to a certain expense account and an automatic credit to a certain accounts payable account.

backflush. The deduction from inventory records of the component parts used in an assembly or subassembly by exploding the bill of material by the production count of assemblies produced.

back scheduling. A technique for calculating operation start dates and due dates. The schedule is computed starting with the due date for the order and working backward to determine the required start date and/or due dates for each operation.

backup copy. A copy of original data preserved on a magnetic tape or diskette as protection against destruction or loss.

batch. A group of like records or transactions that the computer treats as a single unit during processing. For identification purposes, the system usually assigns each batch a unique identifier, known as a "batch number."

batch bill of material. A bill of material in which the statement of quantity per is based on the standard batch quantity of the parent.

batch header. Information the computer uses as identification and control for a group of transactions or records in a batch.

batch job. A task or group of tasks you submit for processing that the system treats as a single unit during processing, for example, printing reports and purging files. The computer performs these tasks with little or no user interaction.

batch processing. A method by which the computer selects jobs from the job queue, processes them, and writes output to the outqueue. Contrast with *interactive processing*.

batch type. A code that designates which JDE system the associated transactions pertain to, thus controlling what records are selected for processing. For example, in the Post General Journal process, only unposted transaction batches with a batch type of G for General Accounting are selected for posting.

bill of material (BOM). A listing of all the subassemblies, parts, and raw materials that go into a parent assembly showing the quantity of each required to make the assembly. It is used in conjunction with the master production schedule to determine the items for which purchase requisitions and production orders must be released. There is a variety of display formats for bills of material, including: single level, multi level, indented, planning, and costed. Synonymous with *formula*, *recipe*, and *ingredients list*.

Boolean logic operand. In JDE's DREAM Writer, the parameter of the Relationship field. The Boolean logic operand tells the system to perform a comparison between certain records or parameters. Available operands are:

EQ = Equal To

LT = Less Than

LE = Less Than or Equal To

GT = Greater Than

GE = Greater Than or Equal To

NE = Not Equal To

NL = Not Less Than

NG = Not Greater Than

bubble chart. A diagram that attempts to display the interrelationships of systems, functions, or data in sequential flow. It derives its name from the circular symbols used to enclose the statements on the chart.

bucketed system. An MRP, DRP, or other time-phased system in which all time-phased data are accumulated into time periods or "buckets." If the period of accumulation is one week, then the system is said to have weekly buckets.

bucketless system. An MRP, DRP, or other time-phased system in which all time-phased data are processed, stored, and usually displayed using dated records rather than defined time periods or "buckets."

bulk issue. Parts issued from stores to work-in-process inventory, but not based on a job order. They are issued in quantities estimated to cover requirements of individual work centers and production lines. The issue may be used to cover a period of time or to fill a fixed-size container.

by-product. A material of value produced as residual of or incidental to the production process. The ratio of by-product to primary product is usually predictable. By-products may be recycled, sold as is, or used for other purposes.

CAD/CAP. Computer Assisted Design/Computer Assisted Programming. A set of automated programming tools for designing and developing systems. These tools automate system design, generate source code and documentation, enforce design standards, and help to ensure consistency throughout all JDE systems.

capacity requirements planning (CRP).

The function of establishing, measuring, and adjusting limits or levels of capacity. It is the process of determining in detail how much labor and machine resources are required to accomplish the tasks of production. Open shop orders and planned orders in the MRP system are input to CRP, which "translates" these orders into hours of work by work center and by time period.

category code. In user defined codes, a temporary title for an undefined category. For example, if you are adding a code that designates different sales regions, you could change *category code 4* to *Sales Region*, and define E (East), W (West), N (North), and S (South) as the valid codes. Category codes were formerly known as *reporting codes*.

character. Any letter, number, or other symbol that a computer can read, write, and store.

closed-loop MRP. A system built around material planning that includes the additional planning functions of sales and operations (production planning, master production scheduling, and capacity requirements planning). Once this planning phase is complete and the plans have been accepted as realistic and attainable, the execution functions come into play. These include the manufacturing control functions of input-output (capacity) measurement, detailed scheduling and dispatching, as well as anticipated delay reports from both the plant and supplier. The term "closed loop" implies that not only is each of these elements included in the overall system, but also that feedback is provided by the execution functions so that the planning can be kept valid at all times.

command. A character, word, phrase, or combination of keys you use to tell the computer to perform a defined activity.

component. Raw material, ingredient, part, or subassembly that goes into a higher level assembly, compound, or other item. This term may also include packaging materials for finished items.

component availability. The availability of component inventory for the manufacture of a specific parent order or group of orders or schedules.

constants. Parameters or codes that rarely change. The computer uses constants to standardize information processing by an associated system. Some examples of constants are allowing or disallowing out-of-balance postings and having the system perform currency conversions on all amounts. Once you set constants such as these, the system follows these rules until you change the constants.

Core. The central and foundational systems of JDE software, including General Accounting, Accounts Payable, Accounts Receivable, Address Book, Financial Reporting, Financial Modeling and Allocations, and Back Office.

costed bill of material. A form of bill of material that extends the quantity per of every component in the bill by the cost of the components.

crew size. The number of people required to perform an operation. The associated standard time should represent the total time for all crew members to perform the operation, not the net start to finish time for the crew.

cumulative leadtime. The longest planned length of time involved to accomplish the activity in question. For any item planned through MRP, it is found by reviewing the leadtime for each bill of material path below the item. Whichever path adds up to the greatest number defines cumulative leadtime. Synonymous with *aggregate leadtime*, *composite leadtime*, and *critical path leadtime*.

cumulative manufacturing leadtime.

The cumulative planned leadtime when all purchased items are assumed to be in stock.

cumulative MRP. The planning of parts and subassemblies by exploding a master schedule, as in MRP, except that the master scheduled items and therefore the exploded requirements are time phased in cumulative form. Usually these cumulative figures cover a planning year.

current cost. The current or replacement cost of labor, material, or overhead. Its computation is based on current performance or measurements, and it is used to address "today's" costs before production as a revision of annual standard costs.

cursor. The blinking underscore or rectangle on your screen that indicates where the next keystroke will appear.

cursor sensitive help. JDE's online help function, which allows you to view a description of a field, an explanation of its purpose, and, when applicable, a list of the valid codes you can enter. To access this information, move the cursor to the field and press F1.

data. Numbers, letters, or symbols that represent facts, definitions, conditions, and situations, that a computer can read, write, and store.

database. A continuously updated collection of all information a system uses and stores. Databases make it possible to create, store, index, and cross-reference information online.

data dictionary. A database file consisting of the definitions, structures, and guidelines for the usage of fields, messages, and help text. The data dictionary file does not contain the actual data itself.

default. A code, number, or parameter the system supplies when you do not enter one. For example, if an input field's default is N and the you do not enter something in that field, the system supplies an N.

demand. A need for a particular product or component. The demand could come from any number of sources, such as a customer order or forecast, or an interplant requirement or a request from a branch warehouse for a service part or for manufacturing another product.

dependent demand. Demand that is directly related to or derived from the bill of material structure for other items or end products. Such demands are calculated and need not and should not be forecast. A given inventory item may have both dependent and independent demand at any given time. For example, a part may simultaneously be the component of an assembly and also sold as a service part.

descriptive title. See *user defined code*.

detail. The individual pieces of information and data that make up a record or transaction. Contrast with *summary*.

detail file. A file which contains manufacturing, routing, or specification details. Contrast with *master file*.

direct labor. Labor that is specifically applied to the product being manufactured or utilized in the performance of the service.

direct material. Material that becomes a part of the final product in measurable quantities.

discrete manufacturing. Production of distinct items such as automobiles, appliances, or computers.

display. (1) To cause the computer to show information on a terminal's screen. (2) A specific set of fields and information that a JDE system might show on a screen. Some screens can show more than one display when you press a specified function key.

display field. A field of information on a screen that contains a system-provided code or parameter that you cannot change. Contrast with *input field*.

downstream operation. A task subsequent to the task currently being planned or executed.

DREAM Writer. Data Record Extraction And Management Writer. A flexible data manipulator and cataloging tool. You use this tool to select and sequence the data that is to appear on a programmed report.

edit. (1) To make changes to a file by adding, changing, or removing information. (2) The program function of highlighting fields into which you have entered inadequate or incorrect data.

effectivity date. The date on which a component or an operation is to be added or removed from a bill of material or an assembly process. The effective dates are used in the explosion process to create demands for the correct items. Normally, bill of material and routing systems provide for an effectivity "start date" (from) and "stop date" (thru), signifying the beginning and end of a particular relationship. Synonymous with *effective date*.

efficiency. A measure (as a percentage) of the actual output to the standard output expected. Efficiency measures how well something is performing relative to expectations; it does not measure output relative to any input. For example, if there is a standard of 100 pieces per hour and 780 units are produced in one eight-hour shift, the efficiency is 780 divided by 800, then multiplied by 100% or 97.5%.

electronic data interchange (EDI). The paperless (electronic) exchange of trading documents, such as purchase orders, shipment authorizations, advanced shipment notices, and invoices, using standardized document formats.

end item. A product sold as a completed item or repair part. Any item subject to a customer order or sales forecast. Synonymous with *end product*, *finished good*, and *finished product*.

engineering change order (ECO). A work order used to implement a change in a manufactured product. This can be a change in design, quantity or parts required, assembly or production process, and so forth.

engineer-to-order. Products whose customer specifications require unique engineering design or significant customization. Each customer order results in a unique set of part numbers, bills of material, and routings.

execute. See *run*.

exit. (1) To interrupt or leave a computer program by pressing a specific key or a sequence of keys. (2) An option or function key displayed on a screen that allows you to access another screen.

expedite. To "rush" or "chase" production or purchase orders that are needed in less than the normal leadtime. To take extraordinary action because of an increase in relative priority.

facility. A collection of computer language statements or programs that provides a specialized function throughout a system or throughout all integrated systems. Some examples DREAM Writer and FASTR.

FASTR. Financial Analysis Spreadsheet Tool and Report Writer. A report writer that allows you to design your own report specifications using the general ledger database.

feature. An accessory or attachment to an item.

field. (1) An area on a screen that represents a particular type of information, such as name, document type, or amount. Fields that you can enter data into are designated with underscores. See *input field* and *display field*. (2) A defined area within a record that contains a specific piece of information. For example, a vendor record

consists of the fields Vendor Name, Address, and Telephone Number. The Vendor Name field contains just the name of the vendor.

file. A collection of related data records organized for a specific use and electronically stored by the computer.

fixed cost. An expenditure that does not vary with the production volume, for example, rent, property tax, and salaries of certain personnel.

fixed order quantity. A lot-sizing technique in MRP or inventory management that will always cause planned or actual orders to be generated for a predetermined fixed quantity, or multiples thereof, if net requirements for the period exceed the fixed order quantity.

fixed overhead. Traditionally all manufacturing costs, other than direct labor and direct materials, that continue even if products are not produced. Although fixed overhead is necessary to produce the product, it cannot be directly traced to the final product.

fold area. An area of a screen, accessed by pressing F4, that displays additional information associated with the records or data items displayed on the screen.

forecast. An estimate of future demand. A forecast can be determined by mathematical means using historical data, created subjectively by using estimates from informal sources, or a combination of both techniques.

function. A separate feature within a facility that allows you to perform a specific task, for example, the field help function.

function key. A key you press to perform a system operation or action. For example, you press F4 to have the system display the fold area of a screen.

Gantt chart. A control chart designed to show graphically the relationship between planned performance and actual performance.

hard copy. A presentation of computer information printed on paper. Synonymous with *printout*.

header. Information at the beginning of a file. This information is used to identify or provide control information for the group of records that follows.

help instructions. Online documentation or explanations of fields that you access by pressing the Help key or by pressing F1 with your cursor in a particular field.

helps. See *help instructions*.

hidden selections. Menu selections you cannot see until you enter HS in a menu's Selection field. Although you cannot see these selections, they are available from any menu. They include such items as Display Submitted Jobs (33), Display User Job Queue (42), and Display User Print Queue (43). The Hidden Selections window displays three categories of selections: user tools, operator tools, and programmer tools.

implode. 1) Compression of detailed data in a summary-level record or report. 2) Tracing a usage and/or cost impact from the bottom to the top (end product) of a bill of material using where-used logic.

implosion. The process of determining the where-used relationship for a given component. Implosion can be single-level (showing only the parents on the next higher level) or multilevel (showing the ultimate top-level parent). Synonymous with *where used*. Contrast with *explosion*.

indented bill of material. A form of multilevel bill of material that lists the highest level parent items at the left margin and all the components going into these parents indented to the right of the margin. All subsequent levels of components are indented farther to the right. If a component is used in more than one parent within a given product structure, it will appear more than once, under every subassembly in which it is used.

indented where-used. A listing of every parent item, and the respective quantities required, as well as each of their respective parent items, continuing until the ultimate end item, or level-0 item, is listed. Each of these parent items is one that calls for a given component item in a bill of material file. The component item is shown closest to the left margin of the listing, with each parent indented to the right, and each of their respective parents indented even further to the right.

indirect costs. Costs that are not directly incurred by a particular job or operation. Certain utility costs, such as plant heating, are often indirect. An indirect cost is typically distributed to the product through the overhead rates.

indirect labor. Work required to support production in general without being related to a specific product, for example, sweeping the floor.

indirect materials. Items that become part of the final product or substances that are consumed in the manufacture of a product that have a negligible value relative to the value of the final product or the usage of which cannot be effectively determined. These components may or may not be included in the bill of material. Synonymous with *supplies*.

input. Information you enter in the input fields on a screen or that the computer enters from other programs, then edits and stores in files.

input field. An area on a screen, distinguished by underscores (_ _), where you type data, values, or characters. A field represents a specific type of information such as name, document type, or amount. Contrast with *display field*.

install system code. The code that identifies a JDE system. Examples are 01 for the Address Book system, 04 for the Accounts Payable system, and 09 for the General Accounting system.

interactive processing. A job the computer performs in response to commands you enter from a terminal. During interactive processing, you are in direct communication with the computer, and it might prompt you for additional information during the processing of your request. See *online*. Contrast with *batch processing*.

interface. A link between two or more JDE systems that allows these systems to send information to and receive information from one another.

issue. The physical movement of items from a stocking location and, often, the transaction reporting of this activity.

issue cycle. The time required to generate a requisition for material, pull the material from an inventory location, and move it to its destination.

item. Any unique manufactured or purchased part, material, intermediate, subassembly, or product.

item master record. The master record for an item. Typically, it contains identifying and descriptive data and control values (leadtimes, lot sizes, etc.) and may contain data on inventory status, requirements, planned orders, and costs. Item records are linked together by product structure records which define the bill of material for an item.

item number. A number that serves to uniquely identify an item. Synonymous with *part number*.

jargon. A JDE term for system specific help text. You base your help text on a specific reporting code you designate in the Data Dictionary Glossary. You can display this text as part of online help.

job. A single identifiable set of processing actions you tell the computer to perform. You start jobs by choosing menu selections, entering commands, or pressing designated function keys. An example of a computer job is check printing in the Accounts Payable system.

job queue. A screen that lists the batch jobs you and others have told the computer to process. When the computer completes a job, the system removes the job's identifier from the list.

justify. To shift information you enter in an input field to the right or left side of the field. Many of the facilities within JDE systems justify information. The system does this only after you press Enter.

Just-in-Time (JIT). A philosophy of manufacturing based on planned elimination of all waste and continuous improvement of productivity. The primary elements of zero inventories are to have only the required inventory when needed; to improve quality to zero defects; to reduce leadtimes by reducing setup times, queue lengths, and lot sizes; to incrementally revise the operations themselves; and to accomplish these things at minimum cost.

key field. A field common to each record in a file. The system uses the key field designated by the program to organize and retrieve information from the file.

Key General Ledger Account (Key G/L). See *automatic accounting instructions*.

labor cost. The dollar amount of added value due to labor performed during manufacturing.

leading zeros. A series of zeros that certain facilities in JDE systems place in front of a value you enter. This normally occurs when you enter a value that is smaller than the specified length of the field. For example, if you enter 4567 in a field that accommodates eight numbers, the facility places four zeros in front of the four numbers you enter. The result would look like this: 00004567.

leadtime. 1) A span of time required to perform a process (or series of operations).
2) In a logistics context, the time between

recognition of the need for an order and the receipt of goods. Individual components of leadtime can include order preparation time, queue time, move or transportation time, and receiving and inspection time.

leadtime offset. A technique used in MRP where a planned order receipt in one time period will require the release of that order in an earlier time period based on the leadtime for the item.

level. Every part or assembly in a product structure is assigned a level code signifying the relative level in which that part or assembly is used within the product structure. Normally the end items are assigned to level 0 with the components and subassemblies going into it assigned to level 1 and so forth. The MRP explosion process starts from level 0 and proceeds downward one level at a time.

level of detail. (1) The degree of difficulty of a menu in JDE software. The levels of detail for menus are as follows:

- A=Major Product Directories
- B=Product Groups
- 1=Basic Operations
- 2=Intermediate Operations
- 3=Advanced Operations
- 4=Computer Operations
- 5=Programmers
- 6=Advanced Programmers

Also known as *menu levels*.

(2) The degree to which account information in the General Accounting system is summarized. The highest level of detail is 1 (least detailed) and the lowest level of detail is 9 (most detailed).

master file. A computer file that a system uses to store data and information which is permanent and necessary to the system's operation. Master files might contain data or information such as paid tax amounts and vendor names and addresses.

load. The amount of planned work scheduled and actual work released for a facility, work center, or operation for a

specific span of time. It is usually expressed in terms of standard hours of work or, when items consume similar resources at the same rate, units of production.

lot. A quantity produced together and sharing the same production costs and resultant specifications.

lot number. A number that identifies a designated group of related items manufactured in a single run or received from a vendor in a single shipment.

lot number control. Assignment of unique numbers to each instance of receipt and carrying forth that number into subsequent manufacturing processes so that, in review of an end item, each lot consumed from raw materials through end item can be identified as having been used for the manufacture of this specific end item lot.

lot number traceability. Tracking parts by lot numbers to a group of items. This tracking can assist in the tracing of quality problems to their source.

lot traceability. The ability to identify the lot or batch numbers of consumption and/or composition for manufactured, purchased, and shipped items. This is a federal requirement in certain regulated industries.

low-level code. A number that identifies the lowest level in any bill of material at which a particular component may appear. Net requirements for a given component are not calculated until all the gross requirements have been calculated down to that level. Low-level codes are normally calculated and maintained automatically by the computer software. Synonymous with *explosion level*.

machine hours. The amount of time, in hours, that a machine is actually running. Machine hours, rather than labor hours, may be used for planning capacity and scheduling and for allocating costs.

make-to-order product. A product that is finished after receipt of a customer's order. The final product is usually a combination of standard items and items custom designed to meet the special needs of the customer. Frequently long leadtime components are planned prior to the order arriving in order to reduce the delivery time to the customer. Where options or other subassemblies are stocked prior to customer orders arriving, the term "assemble-to-order" is frequently used.

make-to-stock product. A product that is shipped from finished goods, "off-the-shelf," and therefore is finished prior to a customer order arriving. The master scheduling and final assembly scheduling are conducted at the finished goods level.

manufacturing leadtime. The total time required to manufacture an item, exclusive of lower level purchasing leadtime. It includes the time for order preparation, queue, setup, run, move, inspection, and put-away.

manufacturing resource planning (MRP II) A method for the effective planning of all resources of a manufacturing company. Ideally, it addresses operational planning in units, financial planning in dollars, and has a simulation capability to answer "what if" questions. It is made up of a variety of functions, each linked together: business planning, sales and operations (production planning), master production scheduling, material requirements planning, capacity requirements planning, and the execution support systems for capacity and material. Output from these systems is integrated with financial reports such as the business plan, purchase commitment report, shipping budget, inventory projections in dollars, etc. Manufacturing resource planning is a direct outgrowth and extension of closed-loop MRP.

master file. A computer file that a system uses to store data and information which is permanent and necessary to the system's

operation. Master files might contain data or information such as paid tax amounts and vendor names and addresses.

master planning. A classification scheme that includes the following activities: forecasting and order servicing (which together constitute demand management); production and resource planning; and master scheduling (which includes the final assembly schedule, the master schedule, and the rough cut capacity plan).

master production schedule (MPS). A detailed statement of how many items are planned to be produced and when. The MPS focuses on products to be made and, through the detailed planning system, identifies the resources (materials, work force, plant equipment and capital) needed and the timing of the need.

menu. A screen that displays numbered selections. Each of these selections represents a program. To access a selection from a menu, type the selection number and then press Enter.

menu levels. See *level of detail*.

menu masking. A security feature of JDE systems that lets you prevent individual users from accessing specified menus or menu selections. The system does not display the menus or menu selections to unauthorized users.

menu message. Text that appears on a screen after you make a menu selection. It displays a warning, caution, or information about the requested selection.

need date. The date when an item is required for its intended use. In an MRP system, this date is calculated by a bill of material explosion of a schedule and the netting of available inventory against that requirement.

next number facility. A JDE software facility you use to control the automatic numbering of such items as new G/L accounts, vouchers, and addresses. It lets you specify your desired numbering system

and provides a method to increment numbers to reduce transposition and typing errors.

nonsignificant part numbers. Part numbers that are assigned to each part but do not convey any information about the part. They are identifiers, not descriptors. Contrast with *significant part numbers*.

numeric character. Represents data using the numbers 0 through 9. Contrast with *alphabetic character* and *alphanumeric character*.

offline. Computer functions that are not under the continuous control of the system. For example, if you were to run a certain job on a personal computer and then transfer the results to a host computer, that job would be considered an offline function. Contrast with *online*.

online. Computer functions over which the system has continuous control. Each time you work with a JDE system-provided screen, you are online with the system. Contrast with *offline*. See *interactive processing*.

online information. Information the system retrieves, usually at your request, and immediately displays on the screen. This information includes items such as database information, documentation, and messages.

operand. See *Boolean logic operand*.

operation number. A sequential number, usually two, three, or four digits long, such as 010, 020, 030, and so forth, that indicates the sequence in which operations are to be performed within an item's routing.

operations sequence. The sequential steps for an item to follow in its flow through the plant. For instance, operation 1: cut bar stock; operation 2: grind bar stock; operation 3: shape; operation 4: polish; operation 5: inspect and send to stock. This information is normally maintained in the routing file.

option. A numbered selection from a JDE screen that performs a particular function or task. To select an option, you enter its number in the Option field next to the item you want the function performed on. When available, for example, option 4 allows you to return to a prior screen with a value from the current screen.

output. Information the computer transfers from internal storage to an external device, such as a printer or a computer screen.

output queue. A screen that lists the spooled files (reports) you have told the computer to write to an output device, such as a printer. After the computer writes a file, the system removes that file's identifier from the online list.

overhead. Costs incurred in the operation of a business that cannot be directly related to the individual products or services produced. These costs, such as light, heat, supervision, and maintenance, are grouped in several pools (department overhead, factory overhead, general overhead) and distributed to units of product or service by some standard allocation method.

overlap. The percentage that an operation overlaps the previous operation in the sequence. For example, a 20% overlap means that the step can begin when the previous step is 80% complete.

override. The process of entering a code or parameter other than the one provided by the system. Many JDE systems offer screens that provide default field values when they appear. By typing a new value over the default code, you can *override* the default. See *default*.

parameter. A number, code, or character string you specify in association with a command or program. The computer uses parameters as additional input or to control the actions of the command or program.

part. Generally, a material item that is used as a component and is not an assembly, subassembly blend, intermediate, and so forth.

password. A unique group of characters that you enter when you sign on to the system that the computer uses to identify you as a valid user.

pegging. In MRP, the capability to identify for a given item the sources of its gross requirements and/or allocations. Pegging can be thought of as "live where-used" information.

picking. The process of withdrawing from stock the components to make the products or the finished goods to be shipped to a customer.

pick list. A document that lists the material to be picked for manufacturing or shipping orders.

planned order. A suggested order quantity, release date, and due date created by MRP processing when it encounters net requirements. Planned orders are created by the computer, exist only within the computer, and may be changed or deleted by the computer during subsequent MRP processing if conditions change. Planned orders at one level will be exploded into gross requirements for components at the next lower level. Planned orders, along with released orders, serve as input to capacity requirements planning to show the total capacity requirements by work center in future time periods.

planning bill of material. An artificial grouping of items and/or events in bill of material format, used to facilitate master scheduling and/or material planning. Sometimes called a pseudo bill of material.

planning family. A group of end items whose similarity of design and manufacture facilitates being planned in aggregate.

planning horizon. The amount of time the master schedule extends into the future. This is normally set to cover a minimum of

cumulative leadtime plus time for lot sizing low-level components and for capacity changes of primary work centers.

primary location. The designation of a certain storage location as the standard, preferred location for an item.

printout. A presentation of computer information printed on paper. Synonymous with *hard copy*.

print queue. An online list (screen) of written files that you have told the computer to print. Once the computer prints the file, the system removes the file's identifier from the online list. See *output queue*.

priority. The relative importance of jobs. The sequence in which jobs should be worked on.

process manufacturing. Production that adds value by mixing, separating, forming, and/or performing chemical reactions. It may be done in either batch or continuous mode.

processing options. A feature of the JDE DREAM Writer that allows you to supply parameters to direct the functions of a program. For example, processing options allow you to specify defaults for certain screen displays, control the format in which information gets printed on reports, change the way a screen displays information, and enter "as of" dates.

program. A collection of computer statements that tells the computer to perform a specific task or group of tasks.

program specific help text. Glossary text that describes the function of a field within the context of the program.

prompt. (1) A reminder or request for information displayed by the system. When a prompt appears, you must respond in order to proceed. (2) A list of codes or parameters or a request for information provided by the system as a reminder of the type of information you should enter or action you should take.

PTF. Program Temporary Fix. A representation of changes to JDE software, which your organization receives on magnetic tapes or diskettes.

purchased part. An item sourced from a supplier.

purge. The process of removing records or data from a system file.

record. A collection of related, consecutive fields of data the system treats as a single unit of information. For example, a vendor record consists of information such as the vendor's name, address, and telephone number.

reporting code. See *category code*.

reverse image. Screen text that displays in the opposite color combination of characters and background from what the screen typically displays (for example, black on green instead of green on black).

quantity per. The quantity of a component to be used in the production of its parent. This value is stored in the bill of material and is used to calculate the gross requirements for components during the explosion process of MRP.

queue. 1) In computers: See job queue, output queue, and print queue.
2) In manufacturing: A waiting line. The jobs at a given work center waiting to be processed. As queues increase, so do average queue time and work-in-process inventory.

rated capacity. The demonstrated capability of a system. Traditionally, capacity is calculated from such data as planned hours, efficiency, and utilization. The rated capacity is equal to hours available x efficiency x utilization.

rate-based scheduling. A method for scheduling and producing based on a periodic rate, for example, daily, weekly or monthly. Traditionally, this method has been applied to high-volume and process industries. The concept can be applied within job shops using cellular layouts and

mixed-model level schedules where the production rate is matched to the selling rate.

raw material. Purchased items or extracted materials that are converted via the manufacturing process into components and/or products. receipt. 1) The physical acceptance of an item into a stocking location. 2) The transaction reporting of this activity.

record. A collection of related, consecutive fields of data the system treats as a single unit of information. For example, a vendor record consists of information such as the vendor's name, address, and telephone number.

release. The authorization to produce or ship material that has already been ordered.

repetitive manufacturing. A form of manufacturing where various items with similar routings are made across the same process whenever production occurs. Products may be made in separate batches or continuously. Production in a repetitive environment is not a function of speed or volume.

replacement parts. Parts that can be used as substitutes that differ from completely interchangeable service parts in that they require some physical modification, such as cutting, drilling, and so forth, before they can replace the original part.

revision level. A number or letter representing the number of times a document has been changed.

rework order. A manufacturing order to rework and salvage defective parts or products.

resource requirements planning (RRP). The process of converting the production plan and/or the master production schedule into capacity needs for key resources: work force, machinery, warehouse space,

suppliers' capabilities, and in some cases, money. Comparison of capacity required of items in the MPS to available capacity is usually done for each key resource. Synonymous with *rough cut capacity planning*.

routing. A set of information detailing the method of manufacture of a particular item. It includes the operations to be performed, their sequence, the various work centers to be involved, and the standards for setup and run. In some companies, the routing also includes information on tooling, operator skill levels, inspection operations, testing requirements, and so forth.

run. To cause the computer to perform a routine, process a batch of transactions, or carry out computer program instructions.

run size. See standard batch quantity.

safety stock. 1) In general, a quantity of stock planned to be in inventory to protect against fluctuations in demand and/or supply. 2) In the context of master production scheduling, the additional inventory and/or capacity planned as protection against forecast errors and/or short-term changes in the backlog. Overplanning can be used to create safety stock.

scrap. Unusable material that results from the production process. It is material outside of specifications and of such characteristics that rework is impractical.

scrap factor. A percentage factor in the product structure used to increase gross requirements to account for anticipated loss within the manufacture of a particular product. Synonymous with *scrap rate*.

scroll. To use the roll keys to move screen information up or down a screen at a time. When you press the Rollup key, for instance, the system replaces the currently displayed text with the next screen of text if more text is available.

selection. Found on JDE menus, selections represent functions that you can access from a given menu. To make a selection, you type its associated number in the Selection field and press Enter.

setup. 1) The work required to change a specific machine, resource, work center, or line from making the last good piece of unit A to the first good piece of unit B; 2) Teardown of the just completed production and preparation of the equipment for production of the next scheduled item.

setup cost. The costs such as scrap costs, calibration costs, downtime costs, and lost sales associated with preparing the resource for the next product.

setup leadtime. The time needed to prepare a manufacturing process to start. Setup leadtime may include run and inspection time for the first piece.

shelf life. The amount of time an item may be held in inventory before it becomes unusable.

shop calendar. See work day calendar.

shop floor control (SFC). A system for utilizing data from the shop floor to maintain and communicate status information on shop orders (manufacturing orders) and on work centers. The major subfunctions of shop floor control are: 1) assigning priority of each shop order, 2) maintaining work-in-process quantity information, 3) conveying shop order status information to the office, 4) providing actual output data for capacity control purposes, 5) providing quantity by location by shop order for work-in-process inventory and accounting purposes, and 6) providing measurement of efficiency, utilization, and productivity of the work force and machines.

shrinkage. Reductions of actual quantities of items in stock, in process, or in transit. The loss may be caused by scrap, theft, deterioration, evaporation, and so forth.

shrinkage factor. A percentage factor in the item master record that compensates for expected loss during the manufacturing cycle either by increasing the gross requirements or by reducing the expected completion quantity of planned and open orders. The shrinkage factor differs from the scrap factor in that the former affects all uses of the part and its components and the scrap factor relates to only one usage. Synonymous with *shrinkage rate*.

significant part numbers. Part numbers that are intended to convey certain information, such as the source of the part, the material in the part, the shape of the part, and so forth. These usually make part numbers longer. Contrast with *nonsignificant part numbers*.

simulation. 1) The technique of using representative or artificial data to reproduce in a model various conditions that are likely to occur in the actual performance of a system. It is frequently used to test the behavior of a system under different operating policies. 2) Within MRP II, using the operational data to perform "what if" evaluations of alternative plans to answer the question, "Can we do it?" If yes, the simulation can then be run in the financial mode to help answer the question, "Do we really want to?" Synonymous with *what-if analysis*.

single level bill of material. A display of those components that are directly used in a parent item. It shows only the relationships one level down.

single-level where-used. A list of each parent in which a specific component is directly used and in what quantity. Done by imploding the bill of material.

softcoding. A JDE term that describes an entire family of features that allows you to customize and adapt JDE software to your business environment. These features lessen

the need for you to use computer programmers when your data processing needs change.

software. The operating system and application programs that tell the computer how and what tasks to perform.

special character. Representation of data in symbols that are neither letters nor numbers. Some examples are * & # /.

spool. The function by which the system puts generated output into a storage area to await printing and processing.

spooled file. A holding file for output data waiting to be printed or input data waiting to be processed.

standard batch quantity. The quantity of a parent that is used as the basis for specifying the material requirements for production. The "quantity per" is expressed as the quantity to make the standard batch quantity, not to make only one of the parent. It is often used by manufacturers that use some components in very small quantities or by process-related manufacturers. Synonymous with *run size*.

standard costs. The target costs of an operation, process, or product including direct material, direct labor, and overhead charges.

standard cost system. A cost system that uses cost units determined before production. For management control purposes, the standards are compared to actual costs and variances are computed.

standard hours. The length of time that should be required to 1) set up a given machine or operation and 2) run one part/assembly/batch/end product through that operation. This time is used in determining machine and labor requirements. It is also frequently used as a basis for incentive pay systems and as a basis of allocating overhead in cost accounting systems.

subassembly. An assembly that is used at a higher level to make up another assembly.

subfile. An area on the screen where the system displays detailed information related to the header information at the top of the screen. Subfiles might contain more information than the screen can display in the subfile area. If so, use the roll keys to display the next screen of information. See *scroll*.

submit. See *run*.

summary. The presentation of data or information in a cumulative or totaled manner in which most of the details have been removed. Many of the JDE systems offer screens and reports that are summaries of the information stored in certain files.

superflush. A technique to relieve all components down to the lowest level using the complete bill of material, based on the count of finished units produced and/or transferred to finished good inventory.

system. A collection of computer programs that allows you to perform specific business tasks. Some examples of applications are Accounts Payable, Inventory, and Order Processing. Synonymous with *application*.

throughput. 1) The total volume of production through a facility (machine, work center, department, plant, or network of plants). 2) In theory of constraints, the rate at which the system (firm) generates money through sales.

time series. A set of data that is distributed over time, such as demand data in monthly time period occurrences.

unit cost. Total labor, material, and overhead cost for one unit of production, for example, one part, one gallon, or one pound.

unit of measure. The unit in which the quantity of an item is managed, such as by weight, each, box, package, case, and so forth.

use as is. A classification for material that has been dispositioned as unacceptable per the specification, yet can be used.

user defined code. The individual codes you create and define within a user defined code type. Code types are used by programs to edit data and allow only defined codes. These codes might consist of a single character or a set of characters that represents a word, phrase, or definition. These characters can be alphabetic, alphanumeric, or numeric. For example, in the user defined code type table ST (Search Type), a few codes are C for Customers, E for Employees, and V for Vendors.

user defined code (type). The identifier for a table of codes with a meaning you define for the system (for example, ST for the Search Type codes table in Address Book). JDE systems provide a number of these tables and allow you to create and define tables of your own. User defined codes were formerly known as *descriptive titles*.

user identification (user ID). The unique name you enter when you sign on to a JDE system to identify yourself to the system. This ID can be up to 10 characters long and can consist of alphabetic, alphanumeric, and numeric characters.

valid codes. The allowed codes, amounts, or types of data that you can enter in a specific input field. The system checks, or edits, user defined code fields for accuracy against the list of valid codes.

variable. Changing, not constant or fixed. For example, variable costs are costs that change according to varying conditions.

variable overhead. All manufacturing costs that vary directly with production volume, other than direct labor and direct materials. Variable overhead is necessary to produce the product, but cannot be directly assigned to a specific product.

variance. The difference between the expected (budgeted or planned) value and the actual value.

video. The display of information on your monitor screen. Normally referred to as the *screen*.

vocabulary overrides. A JDE facility that allows you to override field, row, or column title text on a screen-by-screen or report-by-report basis.

where used list. A listing of every parent item that calls for a given component, and the respective quantity required, from a bill of material file. Synonymous with *implosion*.

window. A software feature that allows a part of your screen to function as if it were a screen in itself. Windows serve a dedicated purpose within a facility, such as searching for a specific valid code for a field.

work center. A specific production facility, consisting of one or more people and/or machines with identical capabilities, that can be considered as one unit for purposes of capacity requirements planning and detailed scheduling. Synonymous with *load center*.

work day calendar. A calendar used in inventory and production planning functions that consecutively numbers only the working days so that the component and work order scheduling may be done based on the actual number of work days available. Synonymous with *planning calendar*, *manufacturing calendar*, and *shop calendar*.

work in process (WIP). A product or products in various stages of completion throughout the plant, including all material from raw material that has been released for initial processing up to completely processed material awaiting final inspection and acceptance as finished product. Many accounting systems also include the value

of semi-finished stock and components in this category. Synonymous with *in-process inventory*.

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