PeopleSoft®

# PeopleSoft EnterpriseOne Configurator 8.11 PeopleBook

**November 2004**

PeopleSoft EnterpriseOne Configurator 8.11 PeopleBook
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## Open Source Disclosure

# Contents

# About This PeopleBook Preface

PeopleBooks provide you with the information that you need to implement and use PeopleSoft applications.

This preface discusses:

- PeopleSoft application prerequisites.
- PeopleSoft application fundamentals.
- Documentation updates and printed documentation.
- Additional resources.
- Typographical conventions and visual cues.
- Comments and suggestions.
- Common elements in PeopleBooks.

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**Note.** PeopleBooks document only page elements, such as fields and check boxes, that require additional explanation. If a page element is not documented with the process or task in which it is used, then either it requires no additional explanation or it is documented with common elements for the section, chapter, PeopleBook, or product line. Elements that are common to all PeopleSoft applications are defined in this preface.

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## PeopleSoft Application Prerequisites

To benefit fully from the information that is covered in these books, you should have a basic understanding of how to use PeopleSoft applications.

You might also want to complete at least one PeopleSoft introductory training course, if applicable.

You should be familiar with navigating the system and adding, updating, and deleting information by using PeopleSoft menus, and pages, forms, or windows. You should also be comfortable using the World Wide Web and the Microsoft Windows or Windows NT graphical user interface.

These books do not review navigation and other basics. They present the information that you need to use the system and implement your PeopleSoft applications most effectively.

## PeopleSoft Application Fundamentals

Each application PeopleBook provides implementation and processing information for your PeopleSoft applications. For some applications, additional, essential information describing the setup and design of your system appears in a companion volume of documentation called the application fundamentals PeopleBook. Most PeopleSoft product lines have a version of the application fundamentals PeopleBook. The preface of each PeopleBook identifies the application fundamentals PeopleBooks that are associated with that PeopleBook.

The application fundamentals PeopleBook consists of important topics that apply to many or all PeopleSoft applications across one or more product lines. Whether you are implementing a single application, some combination of applications within the product line, or the entire product line, you should be familiar with the contents of the appropriate application fundamentals PeopleBooks. They provide the starting points for fundamental implementation tasks.

# Documentation Updates and Printed Documentation

This section discusses how to:

- Obtain documentation updates.
- Order printed documentation.

## Obtaining Documentation Updates

You can find updates and additional documentation for this release, as well as previous releases, on the PeopleSoft Customer Connection website. Through the Documentation section of PeopleSoft Customer Connection, you can download files to add to your PeopleBook Library. You'll find a variety of useful and timely materials, including updates to the full PeopleSoft documentation that is delivered on your PeopleBooks CD-ROM.

**Important!** Before you upgrade, you must check PeopleSoft Customer Connection for updates to the upgrade instructions. PeopleSoft continually posts updates as the upgrade process is refined.

### See Also

PeopleSoft Customer Connection, https://www.peoplesoft.com/corp/en/login.jsp

## Ordering Printed Documentation

You can order printed, bound volumes of the complete PeopleSoft documentation that is delivered on your PeopleBooks CD-ROM. PeopleSoft makes printed documentation available for each major release shortly after the software is shipped. Customers and partners can order printed PeopleSoft documentation by using any of these methods:

- Web
- Telephone
- Email

### Web

From the Documentation section of the PeopleSoft Customer Connection website, access the PeopleBooks Press website under the Ordering PeopleBooks topic. The PeopleBooks Press website is a joint venture between PeopleSoft and MMA Partners, the book print vendor. Use a credit card, money order, cashier's check, or purchase order to place your order.

### Telephone

Contact MMA Partners at 877 588 2525.

### Email

Send email to MMA Partners at peoplesoftpress@mmapartner.com.

### See Also

PeopleSoft Customer Connection, https://www.peoplesoft.com/corp/en/login.jsp

## Additional Resources

The following resources are located on the PeopleSoft Customer Connection website:

| Resource | Navigation |
|---|---|
| Application maintenance information | Updates + Fixes |
| Business process diagrams | Support, Documentation, Business Process Maps |
| Interactive Services Repository | Interactive Services Repository |
| Hardware and software requirements | Implement, Optimize + Upgrade, Implementation Guide, Implementation Documentation & Software, Hardware and Software Requirements |
| Installation guides | Implement, Optimize + Upgrade, Implementation Guide, Implementation Documentation & Software, Installation Guides and Notes |
| Integration information | Implement, Optimize + Upgrade, Implementation Guide, Implementation Documentation and Software, Pre-built Integrations for PeopleSoft Enterprise and PeopleSoft EnterpriseOne Applications |
| Minimum technical requirements (MTRs) (EnterpriseOne only) | Implement, Optimize + Upgrade, Implementation Guide, Supported Platforms |
| PeopleBook documentation updates | Support, Documentation, Documentation Updates |
| PeopleSoft support policy | Support, Support Policy |
| Prerelease notes | Support, Documentation, Documentation Updates, Category, Prerelease Notes |
| Product release roadmap | Support, Roadmaps + Schedules |
| Release notes | Support, Documentation, Documentation Updates, Category, Release Notes |
| Release value proposition | Support, Documentation, Documentation Updates, Category, Release Value Proposition |
| Statement of direction | Support, Documentation, Documentation Updates, Category, Statement of Direction |

| Resource | Navigation |
|---|---|
| Troubleshooting information | Support, Troubleshooting |
| Upgrade documentation | Support, Documentation, Upgrade Documentation and Scripts |

# Typographical Conventions and Visual Cues

This section discusses:

- Typographical conventions.
- Visual cues.
- Country, region, and industry identifiers.
- Currency codes.

## Typographical Conventions

This table contains the typographical conventions that are used in PeopleBooks:

| Typographical Convention or Visual Cue | Description |
|---|---|
| **Bold** | Indicates PeopleCode function names, business function names, event names, system function names, method names, language constructs, and PeopleCode reserved words that must be included literally in the function call. |
| *Italics* | Indicates field values, emphasis, and PeopleSoft or other book-length publication titles. In PeopleCode syntax, italic items are placeholders for arguments that your program must supply.<br>We also use italics when we refer to words as words or letters as letters, as in the following: Enter the letter *O*. |
| KEY+KEY | Indicates a key combination action. For example, a plus sign (+) between keys means that you must hold down the first key while you press the second key. For ALT+W, hold down the ALT key while you press the W key. |
| `Monospace font` | Indicates a PeopleCode program or other code example. |
| “ ” (quotation marks) | Indicate chapter titles in cross-references and words that are used differently from their intended meanings. |

| Typographical Convention or Visual Cue | Description |
|---|---|
| . . . (ellipses) | Indicate that the preceding item or series can be repeated any number of times in PeopleCode syntax. |
| { } (curly braces) | Indicate a choice between two options in PeopleCode syntax. Options are separated by a pipe ( \| ). |
| [ ] (square brackets) | Indicate optional items in PeopleCode syntax. |
| & (ampersand) | When placed before a parameter in PeopleCode syntax, an ampersand indicates that the parameter is an already instantiated object.<br>Ampersands also precede all PeopleCode variables. |

# Visual Cues

PeopleBooks contain the following visual cues.

## Notes

Notes indicate information that you should pay particular attention to as you work with the PeopleSoft system.

**Note.** Example of a note.

If the note is preceded by *Important!,* the note is crucial and includes information that concerns what you must do for the system to function properly.

**Important!** Example of an important note.

## Warnings

Warnings indicate crucial configuration considerations. Pay close attention to warning messages.

***Warning!*** Example of a warning.

## Cross-References

PeopleBooks provide cross-references either under the heading “See Also” or on a separate line preceded by the word *See.* Cross-references lead to other documentation that is pertinent to the immediately preceding documentation.

# Country, Region, and Industry Identifiers

Information that applies only to a specific country, region, or industry is preceded by a standard identifier in parentheses. This identifier typically appears at the beginning of a section heading, but it may also appear at the beginning of a note or other text.

Example of a country-specific heading: “(FRA) Hiring an Employee”

Example of a region-specific heading: "(Latin America) Setting Up Depreciation"

### Country Identifiers

Countries are identified with the International Organization for Standardization (ISO) country code.

### Region Identifiers

Regions are identified by the region name. The following region identifiers may appear in PeopleBooks:

- Asia Pacific
- Europe
- Latin America
- North America

### Industry Identifiers

Industries are identified by the industry name or by an abbreviation for that industry. The following industry identifiers may appear in PeopleBooks:

- USF (U.S. Federal)
- E&G (Education and Government)

## Currency Codes

Monetary amounts are identified by the ISO currency code.

# Comments and Suggestions

Your comments are important to us. We encourage you to tell us what you like, or what you would like to see changed about PeopleBooks and other PeopleSoft reference and training materials. Please send your suggestions to:

PeopleSoft Product Documentation Manager PeopleSoft, Inc. 4460 Hacienda Drive Pleasanton, CA 94588

Or send email comments to doc@peoplesoft.com.

While we cannot guarantee to answer every email message, we will pay careful attention to your comments and suggestions.

# Common Elements Used in PeopleBooks

**Address Book Number** Enter a unique number that identifies the master record for the entity. An address book number can be the identifier for a customer, supplier, company, employee, applicant, participant, tenant, location, and so on. Depending on the application, the field on the form might refer to the address book number as the customer number, supplier number, or company number, employee or applicant id, participant number, and so on.

**As If Currency Code** Enter the three-character code to specify the currency that you want to use to view transaction amounts. This code allows you to view the transaction amounts as if they were entered in the specified currency rather than the foreign or domestic currency that was used when the transaction was originally entered.

**Batch Number** Displays a number that identifies a group of transactions to be processed by the system. On entry forms, you can assign the batch number or the system can assign it through the Next Numbers program (P0002).

**Batch Date** Enter the date in which a batch is created. If you leave this field blank, the system supplies the system date as the batch date.

**Batch Status** Displays a code from user-defined code (UDC) table 98/IC that indicates the posting status of a batch. Values are:

*Blank:* Batch is unposted and pending approval.

*A:* The batch is approved for posting, has no errors and is in balance, but it has not yet been posted.

*D:* The batch posted successfully.

*E:* The batch is in error. You must correct the batch before it can post.

*P:* The system is in the process of posting the batch. The batch is unavailable until the posting process is complete. If errors occur during the post, the batch status changes to E.

*U:* The batch is temporarily unavailable because someone is working with it, or the batch appears to be in use because a power failure occurred while the batch was open.

**Branch/Plant** Enter a code that identifies a separate entity as a warehouse location, job, project, work center, branch, or plant in which distribution and manufacturing activities occur. In some systems, this is called a business unit.

**Business Unit** Enter the alphanumeric code that identifies a separate entity within a business for which you want to track costs. In some systems, this is called a branch/plant.

**Category Code** Enter the code that represents a specific category code. Category codes are user-defined codes that you customize to handle the tracking and reporting requirements of your organization.

**Company** Enter a code that identifies a specific organization, fund, or other reporting entity. The company code must already exist in the F0010 table and must identify a reporting entity that has a complete balance sheet.

**Currency Code** Enter the three-character code that represents the currency of the transaction. PeopleSoft EnterpriseOne provides currency codes that are recognized by the International Organization for Standardization (ISO). The system stores currency codes in the F0013 table.

**Document Company** Enter the company number associated with the document. This number, used in conjunction with the document number, document type, and general ledger date, uniquely identifies an original document.

If you assign next numbers by company and fiscal year, the system uses the document company to retrieve the correct next number for that company.

If two or more original documents have the same document number and document type, you can use the document company to display the document that you want.

**Document Number** — Displays a number that identifies the original document, which can be a voucher, invoice, journal entry, or time sheet, and so on. On entry forms, you can assign the original document number or the system can assign it through the Next Numbers program.

**Document Type** — Enter the two-character UDC, from UDC table 00/DT, that identifies the origin and purpose of the transaction, such as a voucher, invoice, journal entry, or time sheet. PeopleSoft EnterpriseOne reserves these prefixes for the document types indicated:

*P:* Accounts payable documents.

*R:* Accounts receivable documents.

*T:* Time and pay documents.

*I:* Inventory documents.

*O:* Purchase order documents.

*S:* Sales order documents.

**Effective Date** — Enter the date on which an address, item, transaction, or record becomes active. The meaning of this field differs, depending on the program. For example, the effective date can represent any of these dates:

- The date on which a change of address becomes effective.
- The date on which a lease becomes effective.
- The date on which a price becomes effective.
- The date on which the currency exchange rate becomes effective.
- The date on which a tax rate becomes effective.

**Fiscal Period** and **Fiscal Year** — Enter a number that identifies the general ledger period and year. For many programs, you can leave these fields blank to use the current fiscal period and year defined in the Company Names & Number program (P0010).

**G/L Date** (general ledger date) — Enter the date that identifies the financial period to which a transaction will be posted. The system compares the date that you enter on the transaction to the fiscal date pattern assigned to the company to retrieve the appropriate fiscal period number and year, as well as to perform date validations.

# PeopleSoft EnterpriseOne Configurator Preface

This preface discusses:

- PeopleSoft application fundamentals.
- Pages with deferred processing.
- Common elements in this PeopleBook.

## PeopleSoft Application Fundamentals

The PeopleSoft Configurator PeopleBook provides you with implementation and processing information for the PeopleSoft Configurator system. However, additional, essential information describing the setup and design of the system resides in companion documentation. The companion documentation consists of important topics that apply to many or all PeopleSoft applications across the Financials, Enterprise Service Automation, and Supply Chain Management product lines. You should be familiar with the contents of these PeopleBooks. The following companion PeopleBooks contain information that applies specifically to PeopleSoft Engineer to Order.

- PeopleSoft Inventory Management
- PeopleSoft Product Data Management
- PeopleSoft Shop Floor Management
- PeopleSoft Requirements Planning
- PeopleSoft Job Cost
- PeopleSoft Capital Asset Management
- PeopleSoft Quality Management
- PeopleSoft Sales Order Management
- PeopleSoft Procurement
- PeopleSoft Contract Billing, Service Billing

## Pages With Deferred Processing

Several pages in PeopleSoft Configurator operate in deferred processing mode. Most fields on these pages are not updated or validated until you save the page or refresh it by clicking a button, link, or tab. This delayed processing has various implications for the field values on the page—for example, if a field contains a default value, any value you enter before the system updates the page overrides the default. Another implication is that the system updates quantity balances or totals only when you save or otherwise refresh the page.

# About These PeopleBooks

A companion PeopleBook called About These PeopleBooks contains general information, including:

- Related documentation, common page elements, and typographical conventions for PeopleBooks.
- Information about using PeopleBooks and managing the PeopleBooks Library.
- A glossary of useful PeopleSoft terms that are used in PeopleBooks.

# Common Elements Used in this PeopleBook

The common elements used in this PeopleBook include:

| Element | Description |
|---|---|
| Configured item | A product that is assembled from an arrangement of features and options. Features and options might include size, capacity, power type, color, materials used, and so on. |
| Multilevel configured item | A configured subassembly within a configured item. A configured item, such as a forklift, is sometimes referred to as a *multilevel configured item* because it includes subassemblies such as the boom, engine, hydraulics, and so on. Each subassembly can also include a subassembly, such as the carburetor assembly within the engine. A multilevel configured item has a tree structure, or hierarchy such as the following:<br>1. Forklift<br>2. Engine<br>3. Carburetor<br>The Configurator system validates subassemblies in the same way that it validates end-product configured items. The segments that are included in each subassembly must be valid when the system queries the setup information which you provided.<br>See the graphic at the end of this overview for an example of a multilevel configured item. |

| Element | Description |
| --- | --- |
| Segment | The features and options that constitute a configured item. Each segment represents a characteristic of the configured item. For example, the forklift that is used in the pristine data (configured item 6000) includes the following segments:<br>10 Forklift rating<br>20 Power Type<br>30 Boom height<br>35 Interior<br>40 Paint<br>50 Propane Tank<br>60 Calculated Counter Weight<br>You can further specify the options that are available within each segment. For example, the following are available options within the forklift rating segment:<br>2000 pounds<br>4000 pounds<br>6000 pounds |
| Cross-segment editing rules | Logic statements that you use to establish the relationships between the segments of a configured item. For example:<br>If segment 10 (forklift rating): 6000 pounds, then segment 20 (power type) must: GAS.<br>By using cross-segment editing rules, you can avoid invalid configurations, and end-users are less likely to enter invalid orders. The system validates the segments on the order with the cross-segment editing rules. Error messages appear for configurations that violate the rules. |
| Assembly inclusion rules | Rules that translate requested features and options from the order into the specific values, components, routing operations, and calculated values that are necessary to build and price the configured item. For example:<br>If segment 10: 6000 and segment 30 >= 10, then use part F170 or part F175. |
| Duplicate Components | Multiple instances of a configured component item in a configured parent item. A single part number is used, and each new instance of the component can be configured uniquely or be the same. Duplicate components are set up using P assembly inclusion rules. |

| Element | Description |
| --- | --- |
| Configured Tables | A configured rules table is a collection of data that you define for a configured item. During order processing, assembly inclusion rules can refer to tables to retrieve information. Tables can be used to reduce the number of assembly inclusion rules that are required. Although time is added to the setup process, the system processing time is improved because of the reduced number of assembly inclusion rules. |
| Configuration ID | An identifier that represents a unique configuration. It is generated from an encryption algorithm. Regardless of the number of segments or levels in the configured item, the system always converts the information into a 32-character digest. The digest is always a full 32 characters in length, consists of numbers and characters, and does not contain any blanks. You cannot determine the initial value from the digest, and it has no significant meaning. |

# CHAPTER 1

# Getting Started with PeopleSoft EnterpriseOne Configurator

This chapter discusses:

- Configurator Overview
- Configurator Integrations
- Configurator Implementation

## Configurator Overview

Configurator is a tool that automates the selection and configuration of highly complex products. Highly complex products have related features and options. A relationship results when an association or correlation between the features and options or associated parts exits within its subassemblies. The Configurator allows a manufacturer to configure its existing product to the detailed and specific requests of its customers. Configurator also guides users in the creation of customized end-item product through product definition (features and options), rules, and calculations. The result is a valid, highly configured product.

## Configurator Integrations

Configurator works with other PeopleSoft EnterpriseOne applications to ensure that all information is fully integrated into Supply Chain Management (SCM). The Configurator is a business enabler for configuring manufactured and assembled end-item products. It is a front-office-to-back-office product. The Configurator features seamless integration with the Inventory Management, Sales Order Management, Procurement, Manufacturing, and Distribution systems. In its simplest form, it integrates sales with manufacturing-from entering the sales order, to generating the work order, to shipping the product to the customer.

### Inventory Management

Inventory Management stores item information; sales and purchasing costs, and quantities that are available by location. You can use Inventory Management within Configurator to set up item information for configured items and their components, and configured subassemblies. Programs in Inventory Management define your configured item information, such as how the item is identified and stocked.

### Product Data Management

Product Data Management (PDM) enables you to organize and maintain information about each item that you manufacture. Configurator further defines the relationship between items and how they can be manufactured.

### Shop Floor Management

Shop Floor Management (SFM) enables you to control the flow of materials inside the plant by managing and tracking manufacturing work orders. It provides an effective way to maintain and communicate information that the system requires to complete production requests.

Configurator integrates with SFM to manage the work orders for configured items. However, before you can process work orders for configured items, you must enter information that is specific to your business in the SFM programs within the Manufacturing system.

### Sales Order Management

Sales Order Management controls all aspects of processing sales orders. Configurator works with the Sales Order Management to customize the way that you enter and process sales orders for configured items.

### Procurement

Procurement controls all aspects of purchasing activities. Configurator works with Procurement to customize the way that you enter and process purchase orders for configured items.

### Work Order Management

Work Order Management controls the processing of work orders. Configurator works with Work Order Management to customize the way that you enter and process work orders for configured items.

### Engineer To Order

Engineer to Order (ETO) controls all aspects of project management, primarily in an engineer-to-order (ETO) environment. Configurator works with ETO to customize the way that you enter and process various order types for configured items, which are part of a project.

# Configurator Implementation

This section provides an overview of the steps that are required to implement Configurator.

In the planning phase of your implementation, take advantage of all PeopleSoft sources of information, including the installation guides and troubleshooting information. A complete list of these resources appears in the preface in *About These PeopleBooks* with information about where to find the most current version of each.

## Global Implementation Steps

This table lists the suggested implementation steps for the PeopleSoft EnterpriseOne Configurator.

| Step | Reference |
|---|---|
| 1. Set up global user defined code tables. | *PeopleSoft EnterpriseOne Product Data Management 8.11 PeopleBook*, "Setting Up Product Data Management," Defining Document Type Constants for Work Orders |
| 2. Set up fiscal date patterns, companies, and business units. | *PeopleSoft EnterpriseOne Financial Management Solutions Application Fundamentals 8.11 PeopleBook*, "Setting Up an Organization" |

| Step | Reference |
|---|---|
| 3. Set up system next numbers. | *PeopleSoft EnterpriseOne Financial Management Solutions Application Fundamentals 8.11 PeopleBook*, "Setting Up System Next Numbers" |
| 4. Set up accounts. | *PeopleSoft EnterpriseOne Financial Management Solutions Application Fundamentals 8.11 PeopleBook*, "Setting Up Accounts" |
| 5. Set up general accounting constants. | *PeopleSoft EnterpriseOne General Accounting 8.11 PeopleBook*, "Setting Up the General Accounting System," Setting Up Constants for General Accounting |
| 6. Set up multicurrency processing, including currency codes and exchange rates. | *PeopleSoft EnterpriseOne Multicurrency Processing 8.11 PeopleBook*, "Setting Up General Accounting for Multicurrency Processing" |
| 7. Set up ledger type rules. | *PeopleSoft EnterpriseOne General Accounting 8.11 PeopleBook*, "Setting Up the General Accounting System," Setting Up Ledger Types for General Accounting |
| 8. Enter address book records. | *PeopleSoft EnterpriseOne Address Book 8.11 PeopleBook*, "Entering Address Book Records" |
| 9. Set up default location and printers. | PeopleSoft EnterpriseOne Tools 8.94: Foundation PeopleBook |
| 10. Set up branch/plant constants. | *PeopleSoft EnterpriseOne Inventory Management 8.11 PeopleBook*, "Entering Item Inventory Information," Entering Branch/Plant Information |
| 11. Set up manufacturing and distribution AAIs. | *PeopleSoft EnterpriseOne Inventory Management 8.11 PeopleBook*, "Setting Up the Inventory Management System," Setting Up AAIs in Distribution Systems |
| 12. Set up document types. | *PeopleSoft EnterpriseOne Inventory Management 8.11 PeopleBook*, "Setting Up the Inventory Management System," Setting Up Document Type Information |
| 13. Set up shop floor calendars. | *PeopleSoft EnterpriseOne Shop Floor Management 8.11 PeopleBook*, "Setting Up Shop Floor Management," Setting Up a Shop Floor Calendar |
| 14. Set up manufacturing constants. | *PeopleSoft EnterpriseOne Product Data Management 8.11 PeopleBook*, "Setting Up Product Data Management," Setting Up Manufacturing Constants |

## Configurator Implementation Steps

This table lists the implementation steps for Configurator.

| Step | Reference |
|---|---|
| 1. Set up Configurator Constants | Chapter 3, "Setting Up Configurator," Setting Up Configurator Constants, page 20 |
| 2. Set up Configured Item Information | Chapter 3, "Setting Up Configurator," Defining Configured Item Information, page 24 |

| Step | Reference |
| --- | --- |
| 3. Set up Configured Item Segments | Chapter 3, “Setting Up Configurator,” Setting Up Configured Item Segments, page 22 |
| 4. Set up User Defined Segment Values | Chapter 3, “Setting Up Configurator,” Setting Up User Defined Segment Values, page 28 |
| 5. Set up Cross-Segment Editing Rules | Chapter 3, “Setting Up Configurator,” Setting Up Cross-Segment Editing Rules, page 32 |
| 6. Set Up Assembly Inclusion Rules | Chapter 3, “Setting Up Configurator,” Setting Up Assembly Inclusion Rules, page 41 |
| 7. Set up Custom Error Messages | Chapter 3, “Setting Up Configurator,” Setting Up Custom Error Messages, page 41 |
| 8. Set up Configured Tables | Chapter 3, “Setting Up Configurator,” Setting Up Configured Tables, page 65 |

# CHAPTER 2

# Understanding Configurator

This chapter discusses:

- Configured items.
- Configurator system integration.
- Supply Chain Management and Configurator.
- Configurator features.
- Configured item analysis.
- Multilevel configured item example.

## Configured Items

Many manufacturers sell configured items. A configured item is a product that is assembled from an arrangement of features and options. Features and options might include size, capacity, power rating, color, materials used, and so on. For example, a forklift is a configured item that is assembled from an arrangement of features and options that might include the power source, counterweight, and paint color, as well as the boom assembly, the engine type, the hydraulics system, and so on.

Additional examples of configured items include:

- Furniture and fixtures
- Paper products
- Building products
- Commercial printing
- Control and measurement equipment
- Transportation equipment
- Windows, doors, and other dimensional products

When customers place orders for configured items, they expect to be able to specify features and options about the items. The Configurator system allows you to respond to complex customer orders for configured items. Using the Configurator system, you can assemble a large variety of configured items from relatively few components. You can set up configurations of features and options that constitute the configured items that you want to have available for sale, based on your best business practices and the needs of your customers.

When you enter an order for a configured item, the Configurator system queries you about the features and options of the item that you requested. After you respond to the query about the configured item, the system verifies the information that you provide with the setup information that you previously defined. If the configuration is valid, the system processes the order.

The system also offers kit processing that enables feature and option processing. However, kit processing might not be appropriate for features or complex specifications, such as conditional part requirements. The Configurator system is appropriate for items that have the following characteristics:

- Complexity
- Routings that change, based on features or options
- Features that are not compatible with other features
- Multiple work orders to define an assembly

Using the Configurator system, you can do the following to facilitate your best business practices:

- Use fewer end-part numbers.
- Create dynamic work order parts lists and routings.
- Create order history and configuration audit trails.
- Improve order accuracy.
- Shorten lead times.
- Provide better margin information.
- Improve customer service.

# Supply Chain Management and Configurator

The Configurator system is one of many systems in the Supply Chain Management solution.

Use the Supply Chain Execution module to coordinate your inventory and labor resources to deliver products according to a managed schedule. It is a closed-loop manufacturing system that formalizes company and operations planning, and the implementation of those plans.

# Configurator Features

The Configurator system enables you to perform the following functions:

- Specify a variety of features and options within configured items.
- Establish relationships between segments to prevent invalid product configurations.
- Define multilevel configured items.
- Define multiple work orders resulting from and associated to each level of multilevel configured items.
- Establish default values or ranges for options and features.
- Calculate values for options with algebraic definitions.
- Create generic rules to use across branch/plants.
- Create assembly inclusion rules that control price adjustments, routings, and parts.
- Define a table of values that assembly inclusion rules reference

The Configurator system creates configured bills of material, routings, pricing, and other important business information. Customer service levels are increased by providing real-time configured product specifications and information at order entry. Seamless integration from the front office to the back office improves communication with other departments within the company. This process, in turn, improves product quality by reducing errors.

## Configured Item Analysis

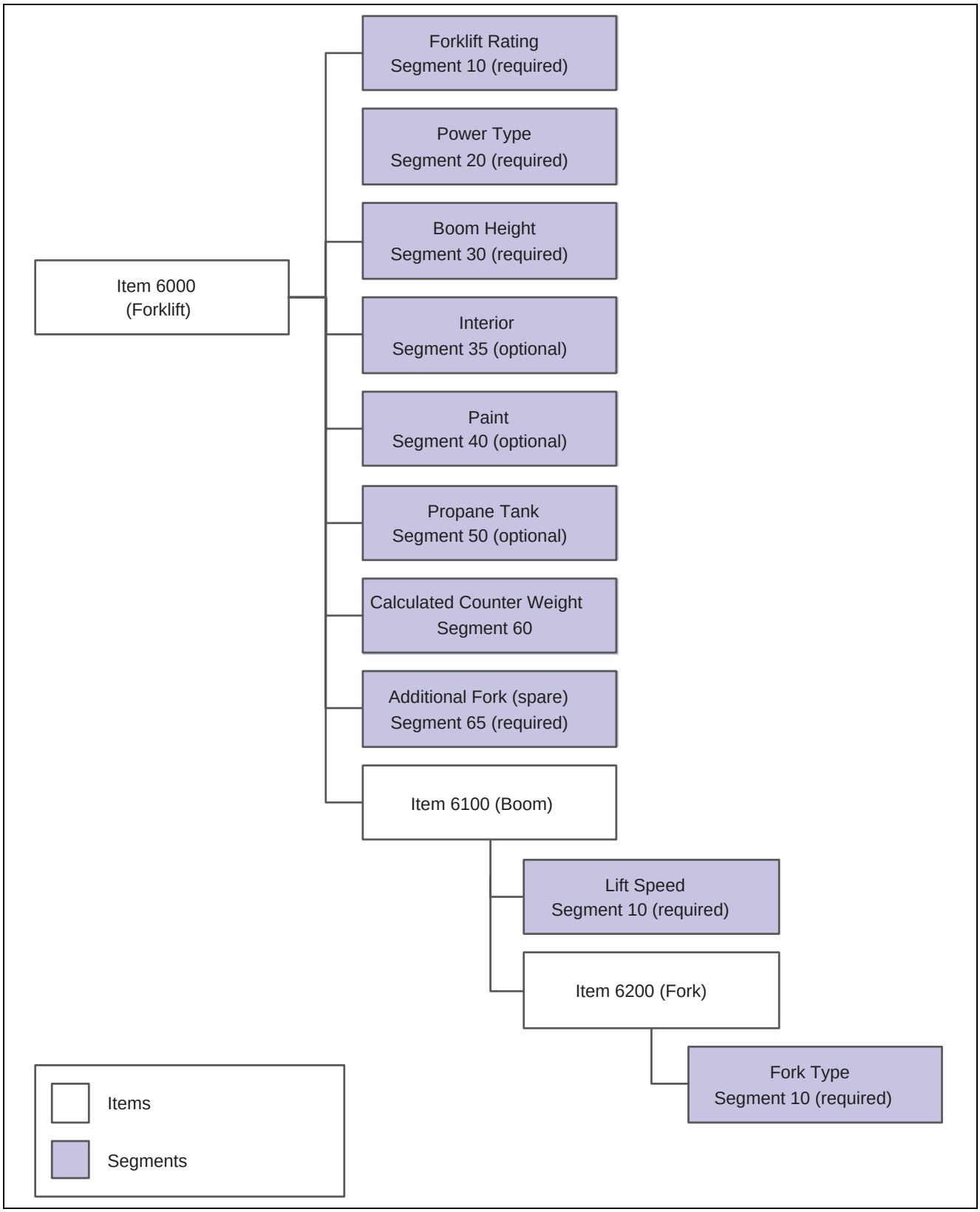
Before you work with the Configurator system, ensure that you can answer the following questions about your configured items:

- How do your customers order the configured item?
- How will you price the configured item?
- Which features and options make up the configured items?
- Which routings do the configured items require?
- Which calculations are required to support prices, features, options, components, and routing steps?

The answers to these questions (and similar questions that arise) help you determine which features and options to consider for possible inclusion in the configured items that you intend to make available to your customers. You will also have solid information from which to develop the best strategy for assembling the configured items. Determining your strategy for assembling configured items can save time during the initial system setup and facilitate subsequent adjustments.

## Example: Multilevel Configured Item

The graphic that follows this paragraph is an example of a multilevel configured item, a forklift (item 6000). Its subassemblies include the boom (item 6100) and fork (item 6200). For the forklift item and its subassemblies, segments represent features and options. Multilevel configured item




Multilevel Configured Item

# CHAPTER 3

# Setting Up Configurator

This chapter provides overviews of configurator setup, configured item pricing, and duplicate components, and discusses how to:

- Set up configurator constants.
- Set up configured item segments.
- Set up cross-segment editing rules.
- Set up assembly inclusion rules.
- Set up configured tables.
- Link assembly inclusion rules and configured tables

## Understanding Configurator Setup

You must set up the Configurator system before you can enter orders for configured items.

### Configurator Constants

Use configurator constants to control the Configurator system processing for your branch/plants. For each branch/plant, you can do the following:

- Define the configured segment (string) delimiter.
- Define whether the calculated segments appear during order entry.
- Indicate the configurator error character.
- Verify parent availability during sales order entry.
- Determine if the sales quote cost will include manufacturing labor and overhead.
- Define which stocked line type to use if the system finds a matching configuration in stock during sales order entry.
- Indicate sales quote document types.

The system stores configurator constants in the Configurator Constants table (F3209).

### Configured Item Segments

Configured item information defines the format in which configured item information appears on order paperwork and the transaction type that the configured item generates, such as sales order, direct ship order, and transfer order.

Segments are the features and options of a configured item. Segments represent product characteristics such as color, material, or size. Segments define the choices that are available within a specific feature or option by using user defined codes (UDC), ranges of values, or calculations. For clarification purposes, you assign numbers to each segment of the configured item. Information from the Display Order field determines the order in which you specify the segment value during order entry.

To begin using the Configurator system, you must define the segments of each configured item. Both cross-segment editing rules and assembly inclusion rules use segments within logic statements.

When adding new segments to a configured item, enter them at the end of the list of existing segments. This process keeps the configuration information in order, which is important if you will be using the Check Availability functionality.

You assign segments for a configured item in a numeric sequence.

Item 6000 (forklift) contains the following segments:

- 10 Forklift Rating
- 20 Power Type
- 30 Boom Height
- 35 Interior
- 40 Paint
- 50 Propane Tank
- 60 Calculated Counterweight
- 65 Additional fork (spare)

You can define the following three types of segments:

- Required - During order entry, you must provide this required information. The system performs edit checking against a user defined code table of values, a range of values, or numeric validation.
- Optional - During order entry, this information is optional. The system performs edit checking against a user defined code table of values, a range of values, or numeric validation.
- Calculated - During order entry, the system calculates the value for this segment. You define the calculation with a C (calculation) assembly inclusion rule. Calculated segments do not need a UDC or range of values defined. Calculated segments can be numeric or alphanumeric.

---

**Note.** The segment information for a configured item should be the same across branch/plants to allow transfers to other branches.

---

During order entry, you can enter a value for each segment. The system restricts this value, using one of the following:

- Numeric or alphabetic checking
- Range checking
- A user defined code table that contains all valid values

You can define multilevel configured items with no limit on the number of levels. In addition, no limits are on the number of segments per level. You use assembly inclusion rules to define item levels and associated work orders.

You use segments to define cross-segment editing rules that ensure valid configurations. During order entry, the system verifies the combination of features and options to ensure that the item can be manufactured. You also use segments to define assembly inclusion rules that determine configuration-specific prices, components, calculated values, and routing steps.

---

**Note.** The segments can be set up so that a value from a C (calculated) assembly inclusion rule populates the answer field for a non-C segment (a required or optional segment).

---

## Cross-Segment Editing Rules

You set up cross-segment editing rules with logic statements to establish the relationship between the segment values. Use these rules to prevent invalid configurations during order entry. You can define custom error messages for a cross-segment editing rule.

## Assembly Inclusion Rules

Assembly inclusion rules process requested features from order entry into the specific components and routing operations that are necessary to build the configured item. Different types of assembly inclusion rules allow you to define the following:

- Components
- Price/cost adjustments
- Routings
- Calculated values
- Hot spot values

Assembly inclusion rules also offer advanced logic, such as algebraic expressions, smart parts, and external program references.

## Configured Tables

You can also set up tables for assembly inclusion rules to reference information that is based on segment values. You can define tables for components, prices, and calculated values. Using tables reduces the number of required rules, simplifies rule maintenance, and improves processing time.

| | |
|---|---|
| **Configurator Master Table (F3201)** | Stores the history for the configured items of all the configurations ordered. Information stored includes configuration ID number, order number, order type, line number, and component ID number. |
| **Configurator Master History Table (F32019)** | Stores the history for the Configurator Master Table (F3201). |
| **Configurator Constants table (F3209)** | Stores constants that you define to control Configurator processing at the branch/plant level. |
| **Configurator Segment Detail table (F3211)** | Stores segment information such as configuration ID number, component ID number, segment number, segment value, parent item number, and configuration string ID. |
| **Configurator Segment Detail History table (F32119)** | Stores the history for the Configurator Segment Detail table (F3211). |
| **Configurator Routings File table (F3212)** | Reserved for future use. Stores configured routing information. |

| | |
|---|---|
| **Configurator Component Table (F3215)** | Stores component information such as configuration ID number, component ID number, parent component ID number, item number, branch, location, and lot number. |
| **Configurator Component History Table (F32159)** | Stores history for the Configurator Component Table (F3215). |
| **Configurator Price/Cost Table (F3216)** | Stores price and cost information such as configuration ID number, component ID number, line type, price roll-up, price, and cost. |
| **Configurator Price/Cost History table (F32169)** | Stores history for the Configurator Price/Cost Table (F3216). |
| **Rules Table Definition (F3281)** | Stores table information such as description, table type, number of segments, and return values. |
| **Configured Item/Rules Table Cross Reference (F3282)** | Defines which segment values will be used as keys to refer to tables for each configured item. |
| **Rules Table Value Definition (F32821)** | Defines calculated segments that will be populated with the returned values. |
| **Rules Table Detail (F3283)** | Stores the actual table values (parts, prices, and so on) for each combination of segment key values that you define for the table |
| **Configured Item Information table (F3290)** | Stores settings that you define to control the printing of configured item information on order paperwork. |
| **Configured Item** | Contains the segments for the configured items that are defined on the |
| **Segments table (F3291)** | Item Master and Branch/Plant. |
| **Cross Segment Editing Rules table (F3292)** | Defines the relationships between the segments of configured items. |
| **Cross Segment Editing Rules - Values table (F32921)** | Stores the *VALUES definitions for cross-segment editing rules and assembly inclusion rules. |
| **Cross Segment Editing Rules - Range table (F32922)** | Stores the *RANGE definitions for cross-segment editing rules and assembly inclusion rules. |
| **Assembly Inclusions Rules table (F3293)** | Stores the components, routings, calculations, and price adjustments for configured items. |
| **Item Master table (F4101)** | Stores basic information about each item in inventory, such as item numbers, description, category codes, and units of measure. |
| **Branch/Plant File table (F4102)** | Stores branch/plant information, such as quantities, branch-level category codes, and cost information for an item. |
| **Item Location File table (F41021)** | Stores primary and secondary locations for an item. |
| **Item Base Price File table (F4106)** | Stores base price information for an item. |

| | |
|---|---|
| **Sales Order Header File table (F4201)** | Maintains information for a customer order, such as the billing instruction, address, and delivery. |
| **Purchase Order Header table (F4301)** | Maintains information for a purchase order, such as supplier, payment terms for the order, delivery address, and date when the order is due. |
| **Purchase Order Detail File table (F4311)** | Defines the configured item and quantity of the purchase order. |
| **Work Order Master File table (F4801)** | Contains one record for each work order. This table stores information about a work order, such as the description, estimated hours, responsibility, and costing information. It also stores planned start and end dates. |

## Media Objects

You can attach media objects such as text, image, and OLE to configured items. Media object attachments provide additional information about the configured item, components, and configured item segment values. The information could be useful to order entry personnel.

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**Note.** You can define segments, rules, and configured items that are specific to a branch/plant or generic across all branch/plants. A blank Branch/Plant field identifies a generic branch/plant. If you do not use the generic branch/plants, and then segment, rule and item information should be the same across branch/plants. If you define generic branch/plant segments, you must also define generic cross-segment editing and assembly inclusion rules.

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**Note.** The information provided here is specific to setting up the Configurator system.

See the respective guides for more information about setting up these other systems.

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## Inventory Management and Configurator

The Inventory Management system stores item information, sales and purchasing costs, and quantities that are available by location. Within the Configurator system, you use Inventory Management to set up item information for configured items and their components, and configured subassemblies. Programs in the Inventory Management system define your configured item information, such as how the item is identified and stocked.

You enter Item Master (P4101) information, such item number, description, stocking type, cost, and price information, that is unique to the item across all branch/plants.

When processing Item Master Revisions, choose C for configured item in the Stocking Type field.

If you want the system to automatically generate work order headers at time of order entry, then choose the work order line type in the Line Type field. Choose the line type for stock item if you do not need work orders.

To gather accurate costs for a configured item, choose 3 in the Inventory Cost Level field, which identifies costs of the configured item at the item, branch/plant, location, and lot levels. Since configured items are specific and unique in their configuration, they must be identifies to this level of cost detail to obtain an accurate cost for configured components and the configured end-item.

The Configurator Costing Method field can also be used to indicate how the cost is calculated for a configured item on purchase orders only.

You have several options for pricing a configured item. This pricing is accomplished by choosing a value in the Kit/Configurator Pricing Method field. Choose from the following pricing methods:

- Total the list prices of components to determine the configured item price.
- Use the list price of the configured item.
- Use assembly inclusion pricing rules to determine the price.
- Total the discounted price of components.

Base prices can be established in the system for components and configured items. Advanced pricing can be used with any price method code. You can also use price adjustment, or X assembly inclusion rules, to affect the price for the configured item, regardless of the price method that you chose.

Since configured items have the same item number in the Item Master (for example, the forklift is item 6000), the system requires additional information to stock the configured item in inventory. This information allows the system to differentiate one configuration from another. Thus, configured items must be lot controlled. Configured items also need to be stocked in a specific location. Using lot and location control identifies each configured item as unique.

Lot numbers can be automatically assigned to configured items by setting a value in the Lot Process Type field. Instead of turning on lot control, the system can be set up to assign the lot and location automatically during work order completions (via the processing options), or the lot and location can be manually entered (at completions). The method that is used to assign lot and location information to a configured item is a business process that must be determined by your company.

On Item Master, take the Row exit to Additional System Info. The Leadtime Level field is on the Manufacturing Data tab. The system uses this value to calculate the start dates for work orders by using fixed leadtimes. The work order header start dates are usually back-scheduled, based on the request date of the order (such as a sales order). Since each configured item is unique and difficult to plan for in the planning system, this field is used to schedule the configured item work orders accurately.

After you enter generic item information, you can enter Item Branch (P41026) information that is unique to an item for a specific branch/plant.

You can define the stocking type, line type, lot process type, and location at the branch/plant level for the configured item, configured subassemblies, and components.

## Product Data Management and Configurator

The Product Data Management (PDM) system enables you to organize and maintain information about each item that you manufacture. The Configurator system further defines the relationship between items and how they can be manufactured.

Although you do not need to create a bill of material for a configured item, you can create a bill of material for the manufactured components for the configured item. Use assembly inclusion rules to define component relationships for configured items. The system adds configured components to sales orders and work orders, based on these rules.

During setup, consider creating modular bills of material that group common parts for a specific feature or option. For example, a car might have an interior trim package with two choices: standard or deluxe. Each choice includes specific parts and might represent two different modular bills.

Although planning bills of material are not required for the Configurator system, you can use them to help manage demand for specific features and options.

You can define all possible routings for the configured item and define assembly inclusion rules to choose which routing to attach to the work order. The routing assembly inclusion rule allows you to specify a complete routing or specific routing operations to attach to a configured item work order. You do not need to enter a routing for the configured item unless you also enter a routing inclusion rule.

## Shop Floor Management and Configurator

The Shop Floor Management (SFM) system enables you to control the flow of materials inside the plant by managing and tracking manufacturing work orders. It provides an effective way to maintain and communicate information that the system requires to complete production requests.

The Configurator system integrates with the SFM system to manage the work orders for configured items. Before you can process work orders for configured items, you must enter information that is specific to your business in the SFM programs within the Manufacturing system.

The system gives you the ability to generate work order headers at the time of sales order entry. The user must ensure that the Sales Order Management system is set up so that the interface exists with the Work Order Management and Shop Floor Management systems to support these order types.

The system also allows you to enter work orders for configured items directly through the Manufacturing Work Order Processing (P48013) process. This step gives you the ability to generate work orders for configured items that you might want to pre-build or stock in inventory to better meet the demands of your business.

Once the work orders are created, they move through the SFM system using Order Processing (R31410) and other shop floor programs as dictated by your business processes.

## Sales Order Management and Configurator

The Sales Order Management system controls all aspects of processing sales orders. The Configurator system works with the Sales Order Management system to customize the way that you enter and process sales orders for configured items.

Besides regular sales orders, the Sales Order Management system also supports sales quotes, credit, transfer, direct ship, interbranch, cross-docking, and combination orders for configured items.

Before you can enter orders for configured items, you must enter information that is specific to your business in the Sales Order Management programs within the Distribution system.

You must set up order line types and document types (order types) for your system to use. The order line type tells the system how to process each detail line that you enter for a specific order type (for instance, T is a text line). The document type identifies the origin and purpose of the transaction (for instance, SO is a sales order). The order activity rules are then set up by combination of an order type and a line type. The order activity rules define the specific steps in the order processing cycle for your business.

You set up new line types to generate work orders (in addition to sales orders) for configured items during sales order entry.

A typical sales order cycle includes sales order entry, packing, shipping, and invoicing. For a work order-generated line type and sales order document type, you can add to the cycle steps for creating the work order parts lists and completing work orders for configured items. Optionally, both of these manufacturing processes can update associated sales order activity.

A work order-generated line type and sales quote document type are typically used for entering sales quotes for configured items. However, additional system setup prohibits the creation of associated work order headers when a quote order is generated.

A credit order line type and credit order document type are used for entering credit orders for configured items. Since credit orders facilitate receiving product back from a customer, the system must be set up so that the configured item can be put back into inventory.

The appropriate line types, document types, and order activity rules should be set up to support transfer, direct ship, interbranch, and combination orders for configured items. The user must also ensure that the Procurement system is set up so that the interface exists with the Sales Order Management system to support these order types.

## Procurement and Configurator

The Procurement system controls all aspects of purchasing activities. The Configurator system works with the Procurement system to customize the way that you enter and process purchase orders for configured items.

Besides regular purchase orders, the Procurement system also supports purchase orders that are created at the time of sales order entry for transfer, direct ship, and combination orders for configured items.

Before you can enter purchase orders for configured items, you must enter information that is specific to your business in the Procurement programs within the Distribution system.

You must set up order line types and document types (order types) for your system to use. The order line type tells the system how to process each detail line that you enter for a specific order type (for instance, T is a text line). The document type identifies the origin and purpose of the transaction (for instance, OP is a purchase order). The order activity rules are then set up by combination of an order type and a line type. The order activity rules define the specific steps in the order processing cycle for your business.

You set up a line type for configured items and a document type for the purchase order.

You also set up order activity rules to define the specific steps in the purchase order processing cycle for your business. A typical purchase order cycle includes purchase order entry, printing and communicating the order, and receiving goods or services.

The appropriate line types, document types, and order activity rules should be set up to support transfer, direct ship, cross-docking, and combination orders for configured items. The user must also ensure that the Sales Order Management system is set up so that the interface exists with the Procurement system to support these order types.

## Work Order Management and Configurator

The Work Order Management system controls the processing of work orders. The Configurator system works with the Work Order Management system to customize the way that you enter and process work orders for configured items.

Before you can enter work orders for configured items, you must enter information that is specific to your business in the Work Order Management programs within the Manufacturing system.

The Work Order Management system is specifically designed to handle small, short-term tasks that are part of a major project. It is also designed for quick setup, simple cost accounting, and basic scheduling for projects that can be completed quickly.

Generating a work order is the activity that starts the process of completing a task. The work order identifies the work that needs to be done, and the information collected captures the history of the work that is performed.

The system allows you to enter work orders for configured items directly through the work order entry process. This process gives you the ability to generate work orders for configured items that you might want to pre-build or stock in inventory to better meet the demands of your business.

To input work orders for configured items, the Manufacturing Work Order Processing (P48013) program and processing options must be set appropriately.

Once the work orders are created they move through the Shop Floor Management system by using Order Processing (R31410) and other shop floor programs as dictated by your business processes. Thus, the user must ensure that the Shop Floor Management system is set up.

The system also gives you the ability to generate work order headers at the time of sales order entry. The user must ensure that the Sales Order Management system is set up so that the interface can support the order types in the Work Order Management and Shop Floor Management systems.

### Engineer to Order and Configurator

The Engineer to Order (ETO) system controls all aspects of project management, primarily in an engineer-to-order (ETO) environment. The Configurator system works with the ETO system to customize the way that you enter and process various order types for configured items which are part of a project.

The ETO system supports sales orders, purchase orders, and work orders for configured items.

You must ensure that the appropriate systems (such as Sales Order Management, Procurement, and Work Order Management) are set up for integration with ETO and Configurator.

## Prerequisites

The Configurator system works with other systems. Before you set up the Configurator system, you should be familiar with the following systems:

- Inventory Management
- Product Data Management
- Shop Floor Management
- Sales Order Management
- Procurement
- Work Order Management
- Engineer to Order

### See Also

*Entering Item Master Information in the Inventory Management Guide*

*Entering Branch/Plant Information in the Inventory Management Guide*

*Bills of Material in the Product Data Management Guide*

*Working with Routing Instructions in the Product Data Management Guide*

*Multilevel Master Schedules in the Requirements Planning Guide*

*Work Orders and Rate Schedules in the Shop Floor Management Guide*

*Setting Up Document Type Information in the Inventory Management Guide*

*Schedules and Adjustments in the Advanced Pricing Guide*

*Setting Up Order Line Types in the Sales Order Management Guide:*

*Setting Up Order Activity Rules in the Sales Order Management Guide:*

*Setting Up a Base Pricing Structure in the Sales Order Management Guide:*

*Setting Up Customer Price Groups in the Sales Order Management Guide:*

*Setting Up Base Prices in the Sales Order Management Guide:*

*Working with Standard Price Adjustments in the Sales Order Management Guide:*

*Supplier Master Information in the Accounts Payable Guide*

*Setting Up Supplier Master and Item Information in the Procurement Guide*

# Understanding Configured Item Pricing

The first step in pricing configured items is to set the Kit/Configurator Pricing Method field on Item Master Revisions. The kit/configurator pricing method is used to specify how the system determines the sales price of a kit or configured item. The price method code determines whether to price components or parent items.

The types of method codes used include:

| Method | Description |
|---|---|
| Kit/Configurator Pricing Method 1 | The system totals the list prices of components to determine the price of the configured item. All of the component prices from the Item Base Price File table (F4106) are added to calculate the configured item price. The price of the configured item can then be discounted. The system also checks for any X assembly inclusion rules. Any existing X rules are added to the price of the configured item. The X rules could be used for price add-ons, such as shipping or freight charges. |

| Method | Description |
|---|---|
| Kit/Configurator Pricing Method 2 | The system retrieves the price of the configured item from table F4106. This price is the price of the configured item on the sales order and cannot be discounted. The system also checks for any X assembly inclusion rules. Any existing X rules are added to the price of the configured item. The X rules could be used for price add-ons, such as shipping or freight charges. |
| Kit/Configurator Pricing Method 3 | The X assembly inclusion rules are the only source of pricing for the configured item. The base price can be pulled into the configuration by using the Derived Calculation field in the assembly inclusion rule. The Derived Calculation field should be populated with & BPUPRC to pull in the base price from table F4106. Any other X rules are added to the price of the configured item. These X rules could be used for price add-ons, such as shipping or freight charges. |
| Kit/Configurator Pricing Method 4 | The system uses the sum of the components' discounted prices for the price of the configured item. The parent has no discount. Thus, the configured item gets no further discounts. The system also checks for any X assembly inclusion rules. Any existing X rules are added to the price of the configured item. The X rules could be used for price add-ons, such as shipping or freight charges. |

**Note.** If the Item Base Price File table (F4106) is used for pricing the configured item and the X assembly inclusion rule contains & BPUPRC in the Derived Calculation field to pull the base price, the price is doubled on the order. If table F4106 is used to pull the base price, the X assembly inclusion rules should be used only for other price adjustments, such as shipping or freight charges.

After you define the Kit/Configurator Pricing Method on Item Master Revisions, you must define base prices for the components and the configured item in table F4106. The system uses the base price to price the item. If you define special pricing or discounts for the item, the system bases the calculation of the discounted price on the base price.

Use base pricing to define prices for the following:

- An item or group of items
- A specific time period
- Different units of measure
- Different currencies

Use pricing groups to group items or customers with similar characteristics. This method streamlines the processes of entering and maintaining base prices.

Advanced pricing can also be used with any price method code. Advanced pricing supports placing a new line item on the sales order, such as a line item for free goods.

You can use price adjustment, or X assembly inclusion rules, to affect the price for the configured item, regardless of the price method that you selected. X rules work with Base and Advanced Pricing as well.

# Understanding Duplicate Components

You can add multiple instances of a configured component item to a configured parent item. Each new instance of the component can be configured uniquely or be an exact copy of an instance of the component that you previously configured. You can use a single part number to represent the various configurations of a component item, thus reducing the number of part numbers that you must manage.

To include multiple instances of a configured component item in a parent item, you add the appropriate P-type assembly inclusion rules to the parent item. You can include multiple instances of the configured component item to the configured parent item with unconditional or conditional rules, depending on your business needs.

Whether multiple instances of the configured component item are included as part of the default configuration (using unconditional rules) or as part of a subsequent configuration (using conditional rules), each instance can be configured differently, but have the same part number. Using a single part number allows you to set up all of the associated segments, assembly inclusion rules, and cross-segment editing rules for a single item; and then customize various configurations for that item.

The system uses a Sequence ID to help identify duplicate components in a configuration. The Sequence ID is a next number type sequence id. The id's are assigned sequentially. This Sequence ID facilitates multiple instances of a configured component item in a configured parent item, each having a unique segment value.

Currently, you can refer to an upper level configured item in cross-segment editing rules, assembly inclusion rules, and derived calculations. The configurator correctly processes the rules, based on the upper level configured item segment selection. With the introduction of duplicate components, referring to an upper level duplicate configured item adds complexity because no ability to identify the Sequence ID of the referred duplicate component currently exists. Thus, when processing rules where the duplicate configured items have different segment values, the system encounters difficulty identifying which duplicate component segment value to use. Therefore, the system must make an assumption to resolve this issue. When the referred upper level configured item is a duplicate component, the system processes rules that are based on the first duplicate item value which is stored in cache. Cache is evaluated from the top down so the first component that it finds will be used.

### Example: Duplicate Components

The following cabinet can be configured with two or three drawers, depending on the height of the cabinet:

- * body (unconditionally add a configurable cabinet body to the configuration)
- * drawer (unconditionally add a configurable drawer to the configuration)
- * drawer (unconditionally add a configurable drawer to the configuration)
- I height = 36 * drawer (if the height of the cabinet is 36 inches, add a third configurable drawer to the configuration)

Each instance of the drawer in this example can be configured differently but have the same part number.

# Setting Up Configurator Constants

Set up configurator constants to control the Configurator system processing for your branch and plants.

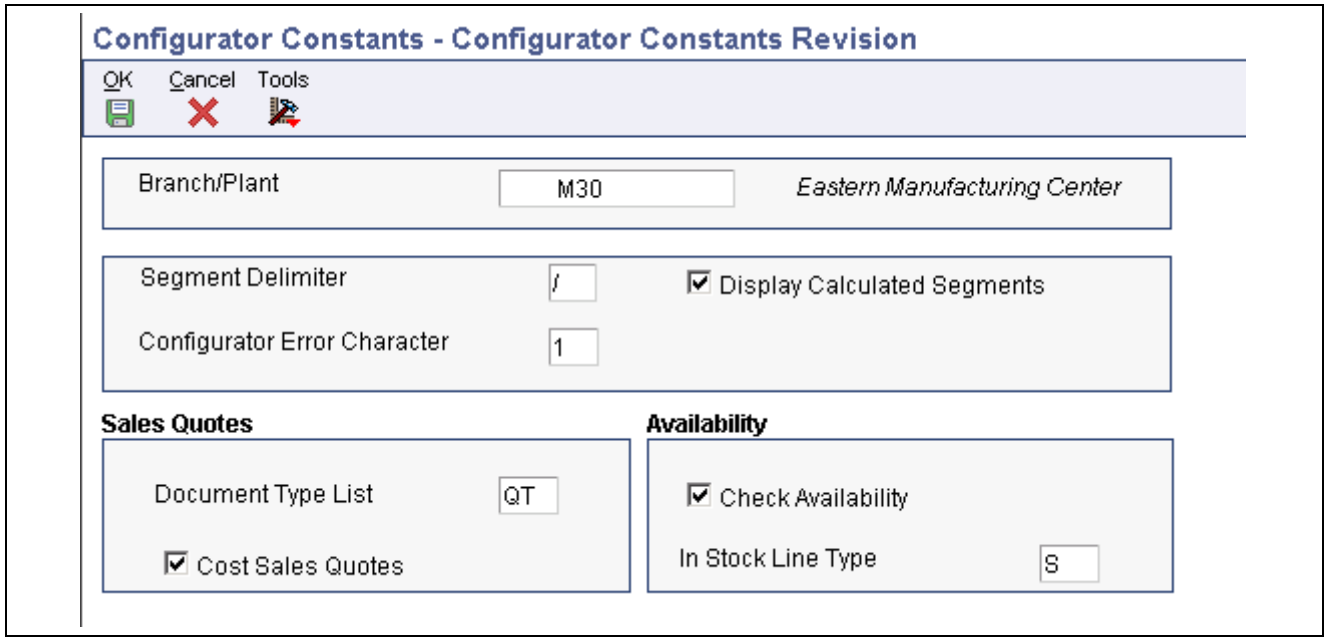
This section discusses how to define Configurator constants.

# Form Used to Set Up Configurator Constants

| Form Name | Form ID | Navigation | Usage |
|---|---|---|---|
| Configurator Constants Revision | W3209B | Configurator Setup (G3241), Configurator Constants<br>On Work With Configurator Constants, click Add. | Control the Configurator system processing for your branch and plants. |

# Defining Configurator Constants

Access the Configurator Constants Revision form.




Configurator Constants Revision form

**Segment Delimiter**

A character separator that you use with configured items during order entry. This character must be the same for each branch/plant. The default character is a /.

Although you can specify a different character, PeopleSoft recommends that you do not use an * and that you do not change the value after you specify it.

For the segment delimiter, use a character that could never appear within an answer to a segment question.

**Configurator Error Character**

A code that indicates an error in the calculation. This code is a single character value. For example, the error character can be set to error: !.

The default value is 1.

**Display Calculated Segments**

A setting that indicates whether the system displays calculated segments during order entry. Values are:

*0:* The system does not displays calculated segments when you enter an order; however, it stores the value of the segment in history. When you enter a multilevel configured item, the system does not displays levels that have only calculated segments. The default value is 0.

*1:* The system displays calculated segments when you enter an order.

**Document Type List** The Sales Quote Document Type List is a user defined code table (32/QL) that is used to define valid document types for sales quotes in your company. For example, you could define sales quote document types by branch/plant or by type of quote, such as corporate or seasonal quotes.

**Cost Sales Quotes** A setting that specifies which costs accumulate when the order type matches one of the sales quote document types. Values are:

Order Processing (R31410) calculates the cost of the configured item based on the P, Q, R, and X (cost) assembly inclusion rules. However, for sales quotes, you can use this function to cost your sales quote accordingly.

**Check Availability** A code that specifies whether the system verifies that a configured parent item is in stock during sales order entry. The default value is 1.

The system searches inventory for a configuration that matches the parent item during sales order update. If the system locates more than one item, a form displays all matching locations, lots, and their available quantities. From

the form, you can choose an item to hard-commit during the update. If the system locates only one item, the item is hard-committed to inventory during the update.

The check availability feature might negatively affect system performance.

Checking the availability of the configured parent item only works for sales order entry.

**In Stock Line Type** A code that controls how the system processes lines on a transaction. It controls the systems with which the transaction interfaces, such as General Ledger, Job Cost, Accounts Payable, Accounts Receivable, and Inventory Management. It also specifies the conditions under which a line prints on reports, and it is included in calculations. Codes include the following:

*S:* Stock item

*J:* Job cost

*N:* Nonstock item

*F:* Freight

*T:* Text information

*M:* Miscellaneous charges and credits

*W:* Work order

# Setting Up Configured Item Segments

This section provides an overview of common attributes and discusses how to:

- Define configured item information.
- Define configured item segments.
- Set up user defined segment values.

- Copy configured items.

## Understanding Common Attributes

A common attribute in the Configurator system is a trait or characteristic that is shared by several segments in a configured item. You can set up and define a common attribute in UDC table 32/CA. You then attach the common attribute to a particular segment via the Common Attribute field in Configured Item Segments (P3291).

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**Note.** If using common attribute functionality, set the Common Attribute Display and Common Attribute Display Scope processing options on the Processing Tab in Configured Item Specifications (P32942).

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The value for the common attribute is input at order entry. When the value is input in the Attribute Value field on the Configurator Common Attributes form, the value automatically fills the answer field for all of the segments that are associated with that common attribute. This process makes order entry input easier; reduces order entry time; and also reduces potential, costly order entry errors.

### Example: A Common Attribute

The furniture industry often uses common attributes. In a configuration for a sofa, a common attribute might be Color. The Color common attribute is associated with the segments for the sofa frame, bottom sofa cushions, sofa arm covers, and decorative pillows. After the customer picks a color, that value can be input in the attribute field on the common attribute form. The color is then applied as the answer to all segments that are associated with that particular common attribute.

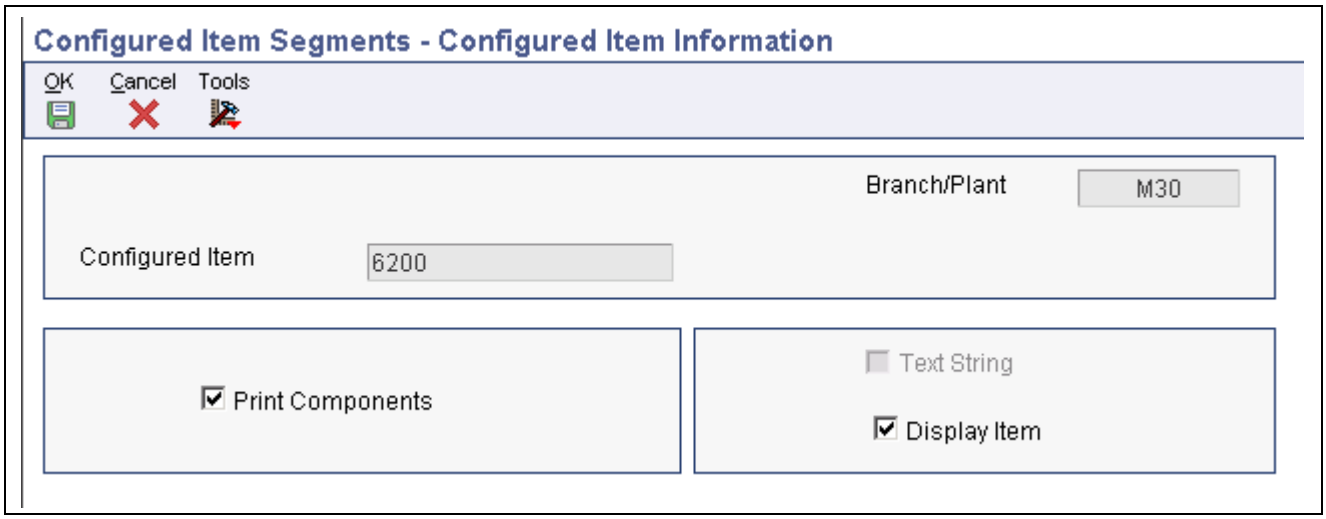
## Forms Used to Set Up Configured Item Segments

| Form Name | Form ID | Navigation | Usage |
|---|---|---|---|
| Work with Configured Items | W3291K | Configurator Setup (G3241), Configured Item Segments | Review existing configured items by branch/plant. |
| Configured Item Information | W3291B | On Work with Configured Items, enter a branch/plant. Select a configured item and from the Row menu, select Config Item Info. | Define the format in which configured item information appears on order paperwork. |
| Configured Item Segments Revision | W3291L | On Work with Configured Items, enter a branch/plant, choose a configured item, and click Select. | Revise the segment. |
| User Defined Codes | W0004AA | On Configured Item Segments Revision, select a row and then select User Defined Codes from the Row menu.<br>On Work With User Defined Codes, enter product and user defined codes and click Add. | Create a user defined code (UDC) table of segment values for a noncalculated segment. The user defined code table that the segment references presents the choices that are available within that particular feature or option. This task is optional. |

| Page Name | Object Name | Navigation | Usage |
|---|---|---|---|
| Copy Configured Item | W3299C | On Work with Configured Items, select a configured item and click Copy. | After you set up a configured item, you can copy its segments, cross-segment editing rules, and assembly inclusion rules to a new or existing configured item. Consider copying configured items to simplify your setup. |
| Segment UDC Where Used | W32910A | Configurator Setup (G3241), Segment UDC Where Used<br>On Segment UDC Where Used, enter a branch/plant, locate a user defined code table. | For a UDC, review the segments associated with a specific configured item and the effect that table changes have on configured items. |
| Work with Batch Versions | W98305WA | On Configured Item Segments Revision, select Print Segments from the Form menu.<br>On Work with Batch Versions, leave the XJDE0001 version that comes with your software and copy that version to create your own version of the program to modify. | Print a hard copy of the configured item segments. Use the hard copy to verify the accuracy of the configured item segment setup. |

## Defining Configured Item Information

Access the Configured Item Information form.




Configured Item Information

**Print Components** A code that specifies whether the system prints configured item information on the order paperwork. On a sales order, the system prints the pick slip and the invoice. On a work order, the system prints the parts list. Values are:

*0:* Do not print configured item information.

*1:* Print configured item information.

**Text String** A code that indicates whether the configured text string format or a user defined format appears on the sales order (pick slip and invoice print) and work order (print parts list). You define the user defined format for each segment. You can choose to print the segment number, description, value, or value description in the user defined format. Values are:

*1:* Configured text string

*0:* User defined format

**Display Item** A code that indicates whether the system prints the configured item number before the segment value information in the text string format or the user defined format. Values are:

*1:* Print the configured item number

*0:* Do not print the configured item number

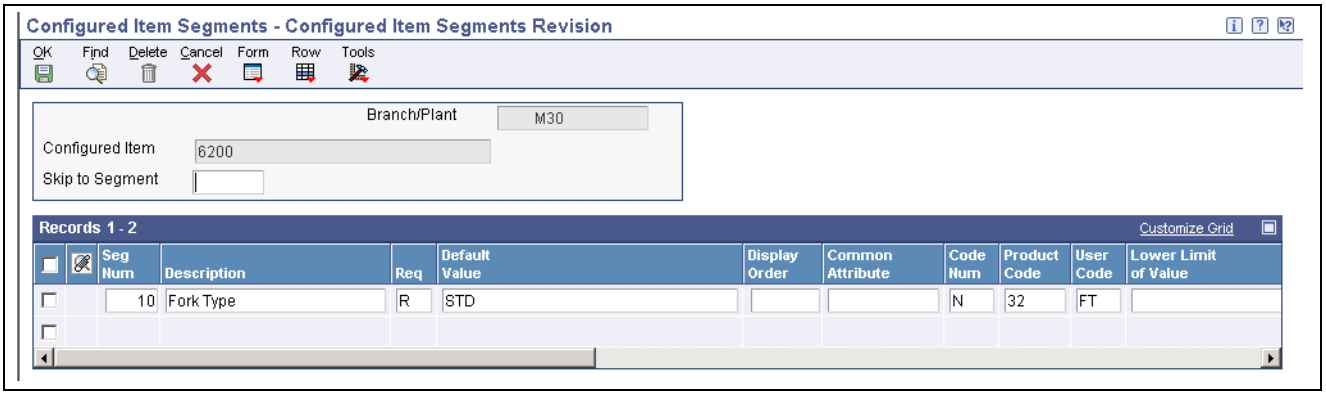
---

**Note.** Try the various options of system defined and user defined printing formats to determine which settings work best for your business.

---

# Defining a Configured Item Segment

Access the Configured Item Segments Revision form.




Configured Item Segments Revision form

---

**Note.** You cannot delete a configured item segment if cross-segment editing or assembly inclusion rules exist for that configured item.

---

**Seg Num** A number that establishes the sequence in which the segments were defined in the system. Segment numbers are user defined.

Cross-segment editing rules reference the segment numbers to ensure that the set of values defines a valid configuration.

Assembly inclusion rules reference segment numbers and their associated values to define prices, component parts, routing, and calculated values for configured items.

**Req** (required)

A code that specifies whether a segment is required or optional in a configuration, or whether the system must calculate it to specification when you enter an order. Valid codes are:

*R:* Segment answer is required during order entry.

*O:* Segment answer is optional during order entry.

*C:* Segment is calculated during order entry. You define the calculation with assembly inclusion rules.

**Default Value**

Used as the initial value on the data entry screen for the associated data item. Usually, the default values that are set up produce a valid configuration in order entry.

The value entered must be the exact same length as the data item size.

Place single quotes around the value if it contains any embedded blanks. The keywords *BLANKS and *ZEROS can be used as the default value. When entering a numeric data item with default values, the redisplay of the data item suppresses all leading zeros.

***Warning!*** If a blank entry is allowed, default values should not be used.

**Display Order**

The field size of the data item.

**Note.** All amount fields should be entered as 15 bytes, 0 decimals, and the data item type should be P (packed).

For configurator, a number that establishes the sequence in which the configurator system asks questions about features and options during order entry.

Since new segments should always be entered at the end of the list of existing segments to maintain the integrity of the configuration information, this field is used to reorder the segments that appear on the Configured Item Specifications form at order entry.

**Code Num** (code number)

A value that indicates whether the system edits a segment answer as numeric or alphanumeric during order entry. Values are:

*Y:* Indicates that the answer is numeric and should be right-justified.

*N:* Indicates that the answer is alphanumeric and should be left-justified.

**Save Seg** (save segment)

A user defined code (32/YN) that specifies whether the segment value is significant enough to make the configuration unique. Values are:

*0:* The segment value is not significant.

*1:* The segment value is significant.

If the configuration is unique, you must store the item in a separate location in inventory.

**User Code**

A code that identifies the table that contains user defined codes. The table is also referred to as a UDC type.

If you define a calculated segment, you do not need to enter a user defined code.

**Lower Limit of Value** To specify a range of acceptable values, enter the lower allowed value of this specific segment. If you enter a value here, then you must also enter an upper allowed value.

**Upper Limit of Value** To specify a range of acceptable values, enter the upper allowed value of this specific segment. If you enter a value here, then you must also enter an lower allowed value.

If you define a calculated segment, you do not need to define range checking.

---

**Note.** When using a range of values, the entire range of values from the lower limit to the upper limit is acceptable. You cannot limit the answer to, for instance, even numbers, 2 decimal places, ?", and so on. Any value within the range of values is a valid answer.

---

To control the printing of configured item information on sales orders, purchase orders, and work orders, complete the fields in the following table.

**SpB Nbr** The number of spaces that should print before the segment information in the user defined format.

**SpA Nbr** The number of spaces that should print after the segment information in the user defined format.

**Return and Start New Line** A user defined code (32/YN) that indicates whether the system starts a new line after it prints the segment information. Values are:

*1:* Start a new line after the segment information.

*0:* Continue printing on the same line.

If the system does not start a new line, it prints the configurator segment delimiter from the configurator constants.

**Print Segment Number** A user defined code (32/YN) that specifies whether the system prints the segment number on the order paperwork. Values are:

*0:* Do not print the segment number on the order paperwork.

*1:* Print the segment number on the order paperwork.

For a sales order, the system prints the segment number on the pick slip and invoice print. For a work order,

the system prints the segment number on the parts list print.

**Print Segment Description** A user defined code (32/YN) that specifies whether the system prints the segment description on the order paperwork. Values are:

*0:* Do not print the segment description on the order paperwork.

*1:* Print the segment description on the order paperwork.

For a sales order, the system prints the segment description on the pick slip and invoice print. For a work order, the system prints the segment description on the parts list print.

**Print Segment Value** A user defined code (32/YN) that specifies whether the system prints the segment value on the order paperwork. Values are:

*0:* Do not print the segment value on the order paperwork.

*1:* Print the segment value on the order paperwork.

For a sales order, the system prints the segment value on the pick slip and invoice print. For a work order, the system prints the segment value on the parts list print.

**Print Segment Value Description**

A user defined code (32/YN) that specifies whether the system prints the segment value description on the order paperwork. Values are:

*0:* Do not print the segment value description on the order paperwork.

*1:* Print the segment value description on the order paperwork.

For a sales order, the system prints the segment value description on the pick slip and invoice print. For a work order, the system prints the segment value description on the parts list print.

You can choose the format for displaying configured item text. You can display the system-generated configuration information or use the detail area to create custom text that prints on sales orders, work orders, pick lists, and invoices.

**Common Attribute**

A code that identifies and defines a unit of information. It is an alphanumeric code up to 8 characters long that does not allow blanks or special characters such as %, &, or +. You create new data items using system codes 55-59. You cannot change the alias.

For configurator, a code that specifies a common attribute. A common attribute is a trait or characteristic that is shared by several segments in a configured item. When you enter an attribute value for a common attribute during order entry, the system updates the answer field for all segments that are associated with that common attribute.

**D C**

This field will be used to indicate how many positions to the right of the decimal a derived calculation should be rounded. For example:

- If the result of a derived calculation is 2190.123456789, enter 0 to round to the whole number 2190.
- Enter 4 to round up to 2190.1235.
- Leave the Derived Calculation Round field blank to avoid rounding.

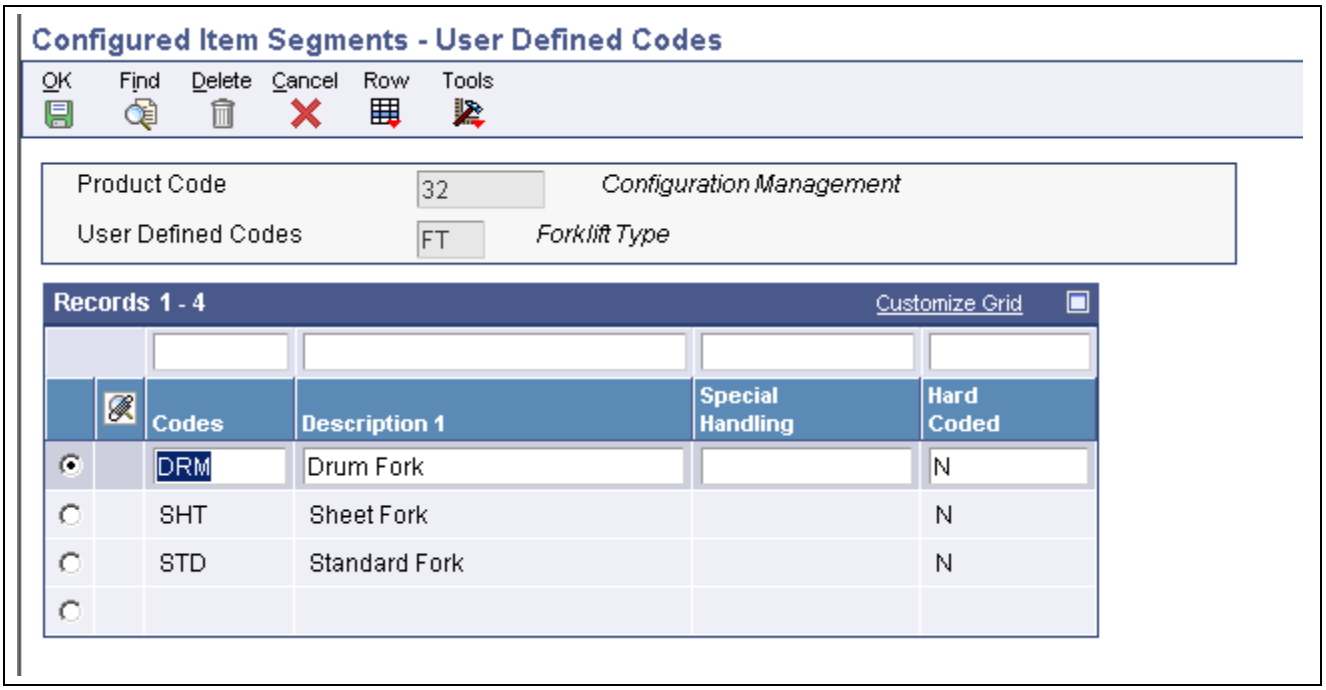
The system rounds up by one any digit followed by 5 through 9. The system does not round any digit followed by 0 through 4.

**Updt CC**

Specify which work order category code will be populated with the segment value during order entry.

## Setting Up User Defined Segment Values

Access the User Defined Codes form.




User Defined Codes form

**Note.** If you associate a required segment with a user defined code table, you must select a value from the table. If you associate an optional segment with a user defined code table, do no enter a value or enter a value from the user defined code table.

**Codes** A list of valid codes for a specific user defined code list.

You can use codes 55 through 59 for the user defined code (UDC) types. When you set up custom UDC tables for use with the Configurator system, PeopleSoft strongly recommends using these system codes so that the custom UDCs are not overwritten during a software upgrade.

**Special Handling** A code that indicates special processing requirements for certain user defined code values. The value that you enter in this field is unique for each user defined code type.

The system uses the special handling code in many ways. For example, special handling codes defined for Language Preference specify whether the language is double-byte or does not have uppercase characters. Programming is required to activate this field.

**Hard Coded** A code that indicates whether a user defined code is hard-coded. Values are:

*Y:* The user defined code is hard-coded

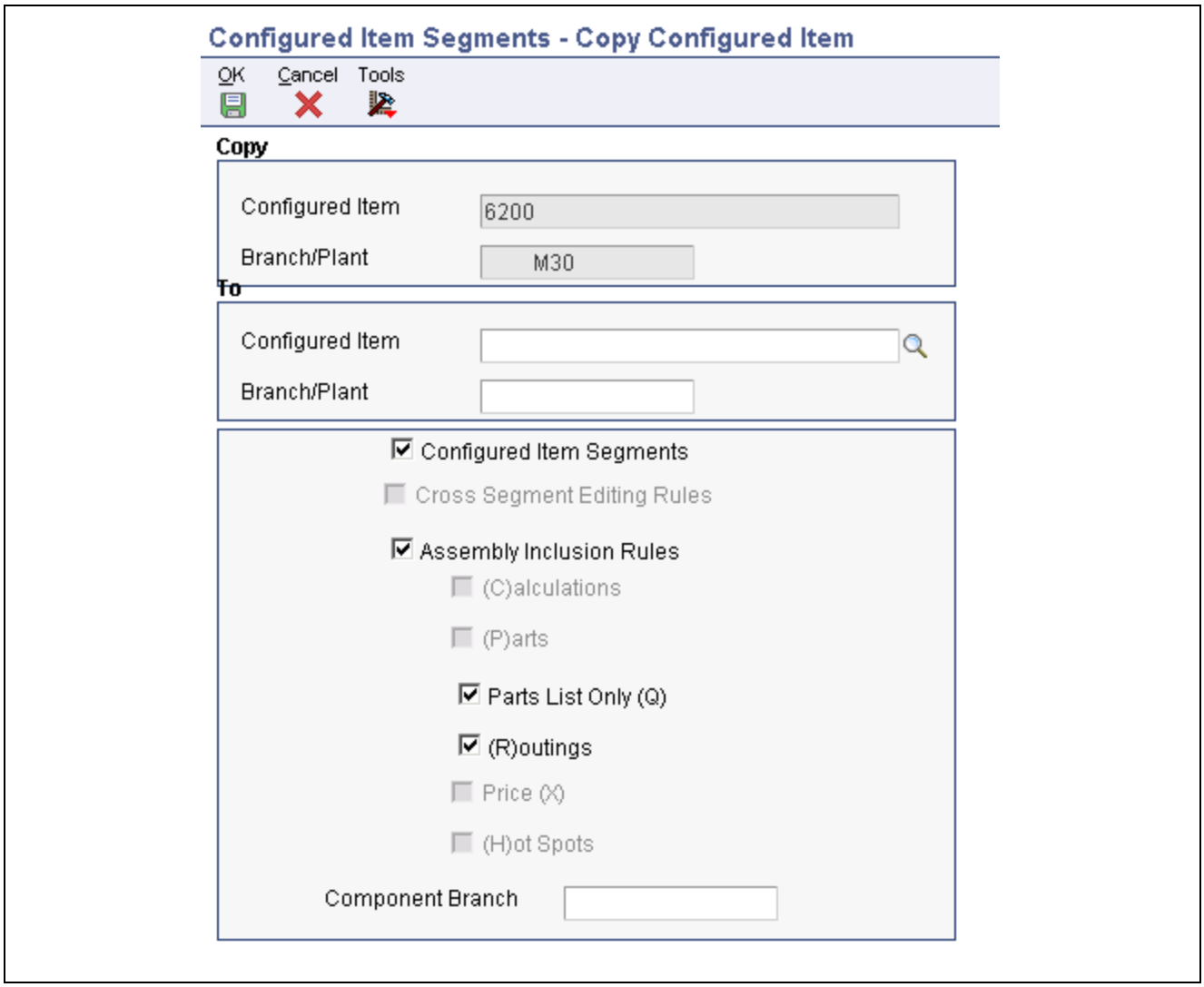
*N:* The user defined code is not hard-coded

A checkmark indicates that the user defined code is hard-coded.

## Copying a Configured Item

When you copy a configured item, you can copy any attribute from the original item. However, you cannot copy from one rule type to another. For example, if your original item was set up with a P assembly inclusion rule, you cannot copy it to a Q assembly inclusion rule.

Access the Copy Configured Item form.




Copy Configured Item form

**Configured Item** A number that identifies the item number. It can be in any of the three formats (short, long or 3rd item number).

**Branch/Plant** A number that identifies a branch, plant, work center, or business unit.

**Configured Item Segments** A user defined code (32/YN) that specifies whether the segment value is significant enough to make the configuration unique. Values are:

*0:* The segment value is not significant.

*1:* The segment value is significant.

If the configuration is unique, you must store the item in a separate location in inventory.

**Cross Segment Editing Rules** A user defined code (32/YN) that specifies whether the segment value is significant enough to make the configuration unique. Values are:

*0:* The segment value is not significant.

*1:* The segment value is significant.

If the configuration is unique, you must store the item in a separate location in inventory.

**Assembly Inclusion Rules** A user defined code (32/YN) that specifies whether the segment value is significant enough to make the configuration unique. Values are:

*0:* The segment value is not significant.

*1:* The segment value is significant.

If the configuration is unique, you must store the item in a separate location in inventory.

**(C)alculations** A user defined code (32/YN) that specifies whether the segment value is significant enough to make the configuration unique. Values are:

*0:* The segment value is not significant.

*1:* The segment value is significant.

If the configuration is unique, you must store the item in a separate location in inventory.

**(P)arts** A user defined code (32/YN) that specifies whether the segment value is significant enough to make the configuration unique. Values are:

*0:* The segment value is not significant.

*1:* The segment value is significant.

If the configuration is unique, you must store the item in a separate location in inventory.

**Parts List Only (Q)** A user defined code (32/YN) that specifies whether the segment value is significant enough to make the configuration unique. Values are:

*0:* The segment value is not significant.

*1:* The segment value is significant.

If the configuration is unique, you must store the item in a separate location in inventory.

**(R)outings** A user defined code (32/YN) that specifies whether the segment value is significant enough to make the configuration unique. Values are:

*0:* The segment value is not significant.

*1:* The segment value is significant.

If the configuration is unique, you must store the item in a separate location in inventory.

**Price (X)** A user defined code (32/YN) that specifies whether the segment value is significant enough to make the configuration unique. Values are:

*0:* The segment value is not significant.

*1:* The segment value is significant.

If the configuration is unique, you must store the item in a separate location in inventory.

**(H)ot Spots** A user defined code (32/YN) that specifies whether the segment value is significant enough to make the configuration unique. Values are:

*0:* The segment value is not significant.

*1:* The segment value is significant.

If the configuration is unique, you must store the item in a separate location in inventory.

**Component Branch** A secondary or lower-level business unit. The system uses the value that you enter to indicate that a branch or plant contains several subordinate departments or jobs. For example, assume that the component branch is named MMCU.

The structure of MMCU might be as follows:

- Branch/Plant - (MMCU)
- Dept A - (MCU)
- Dept B - (MCU)
- Job 123 - (MCU)

You can use the Component Branch field during the Copy Configured Item process to populate the assembly inclusion rules with the specific branch/plant that is noted in the Component Branch field. No impact is made to segments and cross-segment editing rules since no branch/plant field appears on these forms.

The specified component branch will be reflected in all lines, except those that contain a branch other than the branch for which the rule is written. The component branch will not be changed for components that are sourced from alternate branches. Any changes to components that are expected to come from alternate branches need to be done manually. If a copy is made from one branch/plant to another (for instance, M30 to M10) without specifying a value in the Component Branch field, the system populates the assembly inclusion rule records with the Copy From branch/plant values.

Remember that branch/plant master records are required for an order to be created.

If you create a branch/plant that is different from the demand branch/plant, nothing populates after running the Master Planning Schedule - Multiple Plant program (R3483). You must create the appropriate Branch Relationships Revisions (P3403T) for each item that will be provided from another branch/plant. Simply adding the designator to the Component Branch field does not drive the planning system.

A configured item itself cannot be planned across branches, but the components and configured components to complete the configured item can be planned as supply from various branches.

# Setting Up Cross-Segment Editing Rules

This section provides overviews of cross-segment editing rules, error messages, and Boolean logic and discusses how to:

- Define cross-segment logic.
- Define values for cross-segment logic statements.
- Define ranges for cross-segment logic statements.
- Set up custom error messages.

# Understanding Cross-Segment Editing Rules

The Configurator system uses cross-segment editing rules to ensure feature and option compatibility during order entry. These rules establish the relationships among the configured item segments with Boolean logic statements. During order entry, the cross-segment editing rules validate that the feature and option values which you choose create a valid product configuration. This validation enables you to avoid invalid combinations of segments and prevent invalid orders. Error messages about invalid configurations appear, based on segment information from the order and cross-segment editing rules.

## Cross-Segment Logic

For each cross-segment editing rule, you can define an if/then/else logic statement for many conditions. For example, a forklift might require a different value for segment 30 (boom height), depending on the value of segment 10 (lift rating). The following cross-segment editing rule illustrates this situation:

If segment 10 equals 6000, then segment 30 must equal 12, or else segment 30 must be less than or equal to 10.

Each phrase of the conditional logic statement is a separate record (written on a separate line).

The system automatically separates rules by highlighting them with different colors.

The system automatically assigns a rule number that is based on the order in which each rule is entered into the system. The rule number is the order in which the rules will be processed by the calculation function at order entry. The rule number can be changed when setting up cross-segment editing rules by using the Insert Before and Insert After buttons on the Row menu exit on the Work with Cross Segment Editing Rules form.

The system automatically assigns a sequence number to each line within a rule, based on the order in which each line of each rule is entered into the system. The sequence number is the order in which each line within a rule will be processed during calculation functionality. The sequence number can be changed by using the Insert Before and Insert After buttons on the Row menu exit on the Cross Segment Edit Group Revision form.

---

**Note.** No limit exists on the nesting of cross-segment editing rules. However, nesting does have an impact on system performance. The deeper the rules are nested, the slower the processing time.

---

# Understanding Error Messages

As you enter an order, error messages appear for invalid combinations that are defined by cross-segment editing rules.

The following error messages might appear:

- Hard error message: For an invalid combination with a required condition, a hard error message appears. To proceed, you must correct the problem by changing segment values.
- Soft error message: For an invalid combination with an optional condition, a soft error message appears. You can either correct the segment value, or override the error message and continue configuring the item.

Two other types of error messages are:

- A system-generated message.

When an error occurs, the system automatically generates an error message. System-generated error messages contain the cross-segment editing rule (Boolean logic) that has been violated. The system displays calculated segment values in cross-segment editing rule error messages.

For example:

IF Power Type {Seg 020} is not equal to PROPANE, THEN Propane Tank {Seg 050} should be equal to *BLANK. Power Type {Seg 020} is BATTERY. Propane Tank {Seg 050} is 50(Lb)TK.

- A custom or user-defined message

  Error messages can be created for cross-segment editing rules that contain specific or custom information. Custom error messages could include more detail or simplify the content to make the error message easier to understand. For example, a 6000 LB capacity forklift requires a gas or propane engine.

You have three options for controlling which error messages appear during order entry. You can choose to display only the system message (cross-segment editing rule), only the custom message, or both the cross-segment editing rule and the custom message. You must select a value from user defined code 32/CM in the Custom Message field on the Cross Segment Edit Group Revision form.

---

**Note.** You must add the custom message to the first sequence of the cross-segment editing rule. If a message is attached to any other sequence of the rule, it does not appear when the error occurs.

---

# Understanding Boolean Logic

Boolean logic is based on the binary number system, so it uses the bit system of 1 or 0 (true or false). Boolean logic uses statements written in an algebraic format to derive deductions using algebraic operations. The statements define the relationships between sets of ideas or objects. Boolean statements produce precision and control. The logic uses English words to make the statements more intuitive. However, it is not always simple or easy.

Boolean logic uses words that are called *operators* to determine if the value of a statement is either true or false. Boolean operators are conjunctions that are used with terms and phrases to create precise conditional statements. Although the most common operators are AND and OR, different systems use varying symbols for the Boolean logic operators.

## Nesting

Nesting is the method of combining Boolean operators in a logical order when more than one Boolean operator is used in a statement. Parentheses are used to effectively sequence the operators and group variables. The parentheses offer substantial control in limiting and ordering the relationship between the variables.

---

**Note.** Complex nesting requires additional processing time.

---

When writing a nested Boolean logic statement using the operator OR, you must enclose the terms in parentheses. For example:

(Gas or Propane) and (08 or 10)

## Conditional Logic

In its simplest form, a conditional statement is an IF-THEN statement and consists of two parts:

- Hypothesis : The hypothesis is preceded by an IF.
- Conclusion : The conclusion can be preceded by a THEN.

The IF-THEN statement is typically formatted as follows:

IF *condition,* THEN *statement.*

IF is the beginning of the IF-THEN statement, and THEN identifies what actions should be taken if the condition in the IF statement is met. For example:

If the power type is not propane, then no propane tank (should be selected).

### Several Variables

Using nesting, the condition and/or statement portions of the IF-THEN statement can be compound (several variables). For example:

If the forklift rating is 6000 pounds and the power type is propane, then the propane tank must be 50 pounds.

### Conditional Statement with Else

The IF-THEN-ELSE statement is also used. The ELSE portion of the statement identifies what actions should be taken if the condition in the IF statement is not met.

The IF-THEN-ELSE statement is typically formatted as follows:

IF *condition,* THEN *statement* (ELSE *statement*).

For example:

If the paint color is standard, then select part number S-200 or else select part number C-100.

## Forms Used to Set Up Cross-Segment Editing Rules

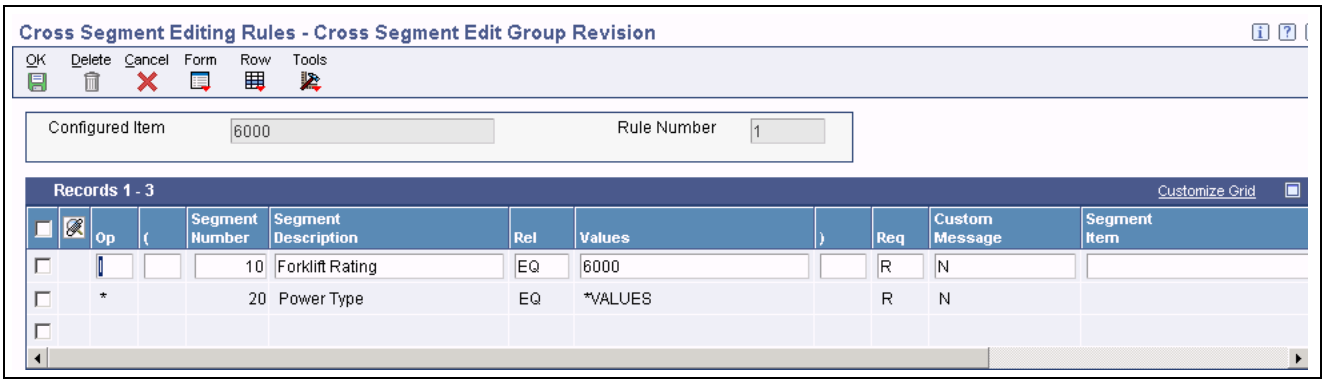
| Form Name | Form ID | Navigation | Usage |
|---|---|---|---|
| Work with Cross Segment Editing Rules | W3292B | Configurator Setup (G3241), Cross Segment Editing Rules<br><br>On Work with Cross Segment Editing Rules, enter a branch/plant and configured item to locate a configured item. | Locate and review a configured item by branch/plant.<br><br>You can review the * RANGE by selecting IF Range or THEN Range from the Row menu.<br><br>You can review the * VALUES for a rule by selecting IF Values or THEN Values from the Row menu. |
| Cross Segment Edit Group Revision | W3292A | On Work with Cross Segment Editing Rules, do one of the following:<br><br>To add the first rule, select a record and choose Revisions from the Form menu.<br><br>To add additional rules, select a record and from the Row menu, select Edit Group and then select Insert Before or Insert After. | Define logic statements. Use one grid row for each phrase of the conditional logic statement. |

| Page Name | Object Name | Navigation | Usage |
|---|---|---|---|
| Value Revision | W32921B | On Work with Cross Segment Editing Rules, do one of the following:<br>To add the first rule, select a record and choose Revisions from the Form menu.<br>To add additional rules, select a record and from the Row menu, select Edit Group and then select Insert Before or Insert After. | Review existing values and define values for a cross-segment logic statement. |
| Range Revision | W32921E | On Work with Cross Segment Editing Rules, do one of the following:<br>To add the first rule, select a record and choose Revisions from the Form menu.<br>To add additional rules, select a record and from the Row menu, select Edit Group and then select Insert Before or Insert After. | Review existing values and define ranges for a cross-segment logic statement. |
| Rules Copy Window - Cross Segment Editing Rules | W3297A | On Cross Segment Edit Group Revision, select a blank line and then select Copy from the Row menu.<br>On Rules Copy Window - Cross Segment Editing Rules, select one or more records and click Select.<br>On Cross Segment Edit Group Revision, modify as records as required . | To save time during setup, copy a cross-segment editing rule from one configured item to another.<br>See Copying a Configured Item in the Configurator Guide for information about copying the entire configured item, including cross-segment editing rules |
| Cross Segment Where Used Inquiry | W32920A | On Cross Segment Edit Group Revision, select a blank line and then select Copy from the Row menu.<br>On Rules Copy Window - Cross Segment Editing Rules, select one or more records and click Select.<br>On Cross Segment Edit Group Revision, modify as records as required . | Review and maintain cross-segment editing information for rules. For the item number and segment that you specify, you can review rule logic and segment values. |

| Page Name | Object Name | Navigation | Usage |
|---|---|---|---|
| On Work With Batch Versions - Available Versions | W98305WA | On Work with Cross Segment Editing Rules, select Print Rules from the Form menu. | Provide a hard copy of cross-segment editing rules. Use the hard copy to verify the accuracy of cross-segment editing rule setup. |

# Defining Cross-Segment Logic

Access the Cross Segment Edit Group Revision form.




Cross Segment Edit Group Revision form

**Note.** You can reference upper-level items in a cross-segment editing rule by using the Segment Item and Segment Branch fields. When writing the rule, you must first input information in the Segment Item field before inputting the segment number in the Segment Number field. This process tells the system from which configured item to pull segment information for the cross-segment editing rule.

**Op**

A code that determines whether compound data selection logic is based on an A: AND condition or an O = OR condition.

--- FORM SPECIFIC ---

For configuration management, additional values include:

*I:* If

*E:* Else

**:* Then

**(**

A collection of open and closed brackets to group conditional configurator rules.

For example, to define the condition (Seg 1 = A OR Seg 2 = B) AND Seg 3 = C, use the following brackets:

```
(Seg 1 = A O Seg 2 = B) A Seg 3 = C
```

**Segment Number**

A number that establishes the sequence in which the segments were defined in the system. Segment numbers are user defined.

Cross-segment editing rules reference the segment numbers to ensure that the set of values defines a valid configuration.

Assembly inclusion rules reference segment numbers and their associated values to define prices, component parts, routing, and calculated values for configured items.

**Segment Description** The name of the feature or option that is associated with the segment number. This field automatically populates, based on information from the Configured Item, Branch/Plant, Segment Number, and Segment Item fields.

You can enter specific values for the segments that are included in a configured item. Segment values are separated by a special character, called the segment delimiter.

For configurator, the name of the feature or option that is associated with the segment number.

**Rel** A code that identifies the operands in Boolean logic. You can specify any of the following codes:

*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

**Values** An answer that is valid for the segment and rule relationship. You can enter a specific UDC value or one of the following values:

**VALUES:* The system provides multiple values lists for you to use in the logic rule. You can enter up to 45 values.

**BLANK:* The system uses a blank value in the logic rule.

**ZERO:* The system searches for amounts equal to zero as part of the logic rule.

**RANGE:* The system uses a range of values (for example, 1 to 50) in the logic rule. You enter the range of values. The first value in the range must be less than the second value.

**ALL:* The system uses all values in the logic rule.

**)** A collection of open and closed brackets to group conditional configurator rules.

For example, to define the condition (Seg 1 = A OR Seg 2 = B) AND Seg 3 = C, use the following brackets:

```
(Seg 1 = A O Seg 2 = B) A Seg 3 = C
```

**Req** A code that specifies whether a segment is required or optional in a configuration, or whether the system must calculate it to specification when you enter an order. Valid codes are:

*R:* Segment answer is required during order entry.

*O:* Segment answer is optional during order entry.

*C:* Segment is calculated during order entry. You define the calculation with assembly inclusion rules.

A user defined code (32/AQ) that specifies the type of error that the system displays when it validates a cross-segment editing rule. Values are:

*O:* Optional (issues warning)

*R:* Required (issues error)

**Custom Message** A user defined code (32/CM) that specifies the cross-segment error message that appears. Values are:

*0:* Only the standard cross-segment error message appears

*1:* Only the custom error message appears

*2:* Both the cross-segment and custom error messages appear

**Segment Item** A number that the system assigns to an item. It can be in short, long, or third item number format. Use this field to reference a previously chosen segment from a different configuration level.

The item number of the parent configured item for the segment. Use this number to reference previously-selected segments from different levels in the configuration.

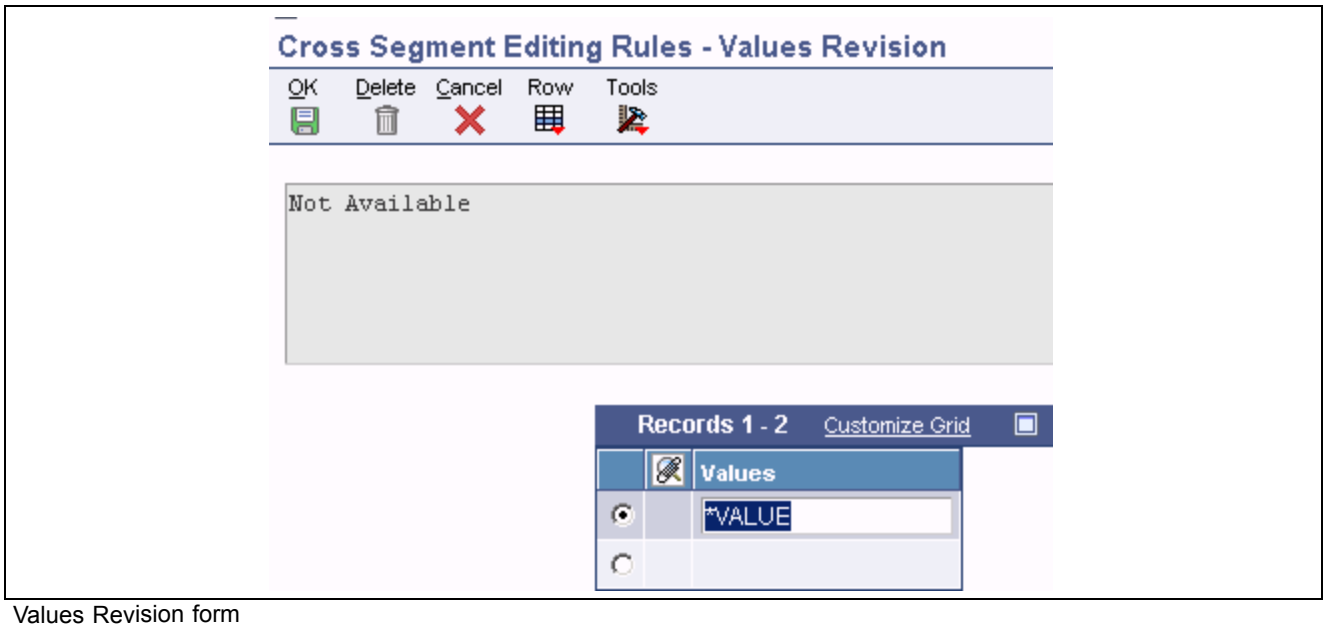
**Segment Branch** This branch represents the branch of the segment's configured item number. Use this value to reference a previously selected segment from a different configuration level, and to reference the branch/plant of the item in the Segment Item field.

**Effective From** A date that indicates when a rule takes effect in the configurator system. The date determines whether the system processes the rule during the configuration validation (the calc feature) of order entry. This date applies to cross-segment editing and assembly inclusion rules.

**Effective Thru** A date that indicates when a rule is no longer active in the configurator system. The date determines whether the system processing the rule during the configuration validation (the calc feature) of order entry. This date applies to cross-segment editing and assembly inclusion rules.

## Defining Values for Cross-Segment Logic Statements

Access the Values Revision form.



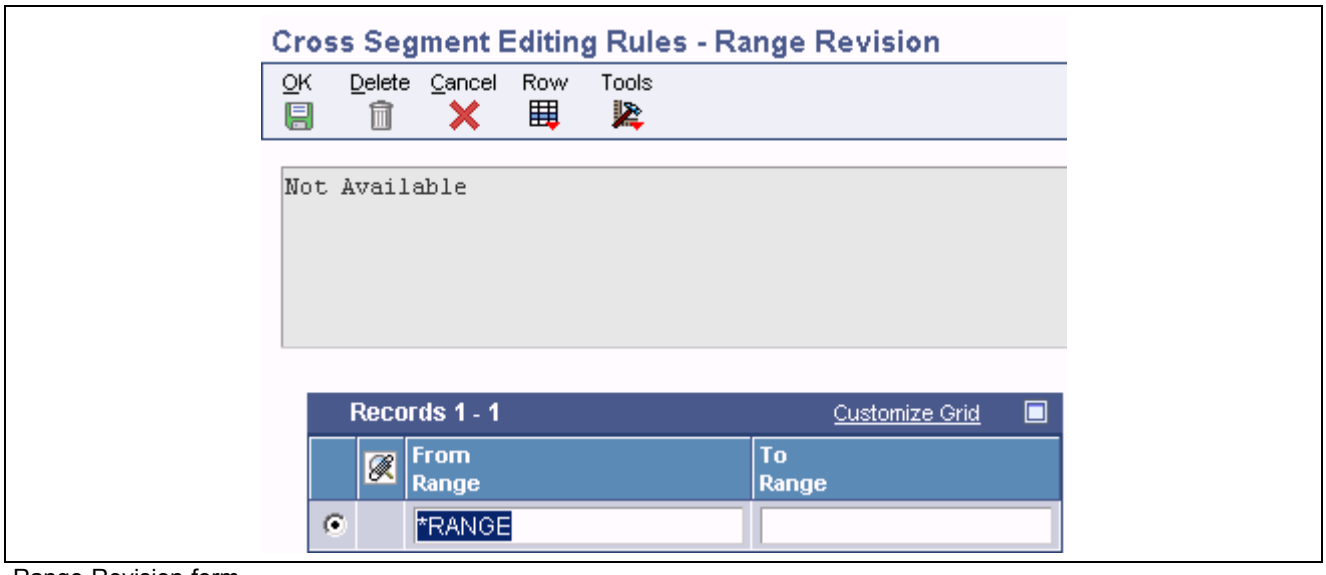

Values Revision form

**Values** An answer to the configurator feature and option questions that appear during order entry.

When you define cross-segment editing rules, you compare the segment answers to values to determine invalid configurations. When you define assembly inclusion rules, you create unique configurations by comparing the segment answers to values to assign parts, prices, calculated values, or routing steps.

## Defining Ranges for Cross-Segment Logic Statements

Access the Range Revision form.




Range Revision form

**From Range** The starting value of a range of numbers. In configurator, the *Range variable is used in the Values field associated with the cross-segment editing

rules and assembly inclusion rules. Entering *Range in this field accesses the Range Revision (From Range and To Range) form. The *Range values represent answers to the segment referenced by the rule. You can use a UDC table to act as a filter to narrow the possible valid values that the logic statement will return.

When using a range of values, the entire range of values from the lower limit to the upper limit is acceptable. The answer cannot be limited to, for instance, even numbers, 2 decimal places, ?", and so on. Any value within the range of values is a valid answer.

**To Range**

The ending value of a range of numbers. In configurator, the *Range variable is used in the Values field associated with the cross-segment editing rules and assembly inclusion rules. Entering *Range in this field accesses the Range Revision (From Range and To Range) form. The *Range values represent answers to the segment referenced by the rule. You can use a UDC table to act as a filter to narrow the possible valid values that the logic statement will return.

When using a range of values, the entire range of values from the lower limit to the upper limit is acceptable. The answer cannot be limited to, for instance, even numbers, 2 decimal places, ?", and so on. Any value within the range of values is a valid answer.

## Setting Up Custom Error Messages

You can set up error messages that appear for invalid combinations that are defined by cross-segment editing rules.

Access the Cross Segment Edit Group Revision form.

To set up custom error messages:

1. On Cross Segment Edit Group Revision, enter a value in the Custom Message field.

   You must add the custom message to the first sequence of the cross-segment editing rule. If a message is attached to any other sequence of the rule, it does not appear when the error occurs.
2. Choose Custom Message from the Row menu.
3. On Media Objects, choose New, and then choose Text from the File menu.
4. Enter the text for the error message.
5. From the File menu, choose Save & Exit.

# Setting Up Assembly Inclusion Rules

This section provides an overview of assembly inclusion rules, Hot Spot assembly inclusion rules, assembly inclusion rule logic, advanced assembly inclusion rules, derived calculations, external program references, configured tables, and smart parts, and discusses how to:

- Define codes for hot spots.
- Set processing options for assembly inclusion rules (P3293).
- Define assembly inclusion rule logic.

- Define advanced assembly inclusion rule functions.
- Copy assembly inclusion rules.
- Run the Assembly Inclusion Rule Tester.

## Understanding Assembly Inclusion Rules

Assembly inclusion rules translate the requested values from order entry into the specific components, operations, user display information, and calculated values that you need to build and price a configured item. An assembly inclusion rule includes logic statements and optional advanced information.

The six types of assembly inclusion rules include:

| Rule | Description |
|---|---|
| Component Part (P) Rules | Define the component parts to include on the sales order and work order parts list. You also define multilevel configured items with these rules.<br><br>For example, if segment 10 equals 6000 and segment 30 is greater than or equal to 10, then use part F170 or else use part F175.<br><br>**Note.** You must have at least one P assembly inclusion rule for the configurator system to function. |
| Work Order Component Part (Q) Rules | Define the components to include on the work order parts list. The Order Processing program (R31410) attaches the parts list.<br><br>For example, if segment 10 equals standard, then include part R100 and part R105. |
| Calculation (C) Rules | Define the mathematical calculation for the calculated segments for a configured item. You must first define the segment as calculated on Configured Item Segments. You can use a calculated segment value in derived calculations for other rules. |
| Hot Spot (H) Rules | Define information and messages about a configured item that are processed for display purposes only. This information appears on the order entry form in a Hot Spot field. H rules are calculated similar to C rules. However, the results do not affect the configuration identifier. |

| Rule | Description |
|---|---|
| Pricing (X) Rules | Define the price and cost adjustments. The system processes X rules independently, based on the kit/configurator pricing method that you selected. Typically, you should not set up cost adjustments when you use work order-generated line types. X rule cost adjustments affect only the sales order. Order Processing (R31410) recalculates the cost without the X rule.<br><br>For example, if segment 40 equals CUS, then adjust the price by 650.00 USD.<br><br>The Line Type for X rules should be one that has the Inventory Interface set to N. You must also be certain that the Edit Item Master for the Non-Stock Item option does not have a checkmark on the Line Type Constants Revisions. This situation prevents the Item Number Invalid error at order entry.<br><br>Based on whether the rule roll-up option is turned on, adjustments are either reflected in the price of the parent item or entered in a new extended sales order detail line. |
| Routing (R) Rules | Define the work order routing and routing operations. The Order Processing program (R31410) attaches work order routings. You must first define the routings on Work With Routing Master (P3003) before you define routing rules.<br><br>For example, if segment 40 equals STD, then use the routing for standard paint or else use the routing for custom paint. |

You review assembly inclusion rule information to help you maintain these rules. Rules and tables can be very complex. Using inquiry programs can help you pinpoint segments and components within the many rules and tables that you might set up. You can determine the effect of component changes, such as shortages and substitutions, and determine the effect of changes on valid segment values. For example, if a vendor discontinues a paint color, you can determine how many configurations are affected.

### Business Case: Assembly Inclusion Rules

When sales orders are created, all of the detail information shows up on the sales order. In most cases, the customer does not need all of the information, and it crowds the sales order. Also, some detailed information is not appropriate for the customer to see. Only pertinent lines should be printed on the customer sales order.

Use the Assembly Inclusion Rule application in the Configurator system to customize the sales order. Use P assembly inclusion rules to add parts to the sales order and work order parts list, and use Q assembly inclusion rules to add parts to the work order parts list only. These assembly inclusion rules allow you to customize your sales order and work order parts list to communicate the appropriate information.

## Understanding Hot Spot Assembly Inclusion Rules

Hot spots are used to provide visual information during order entry. Allowing certain kinds of information to display during the order entry process can improve the overall effectiveness for the user. Hot spot information allows the user to view either pre-defined (hard-coded) values or user-defined calculated values. Hot spots are for display purposes only.

The hot spot information is available after the successful (no errors) calculation process has been run. The initial hot spot selection values are displayed, based on the Configured Item Specification (P32942) processing option settings. The user is then able to dynamically change the hot spot display. The user clicks on a hot spot icon and selects a different hot spot to display from the user defined code (UDC 32/HS) table.

The UDC contains a list of all valid hot spot entries. It also contains a numeric reference to the hot spot, a description, and an indication if the hot spot is hard-coded. Hard-coded entries are not changeable and are numbered descending from 999. Examples of hard-coded hot spot entries include price (as defined by the order entry mode), cost (as defined by the order entry mode), and weight.

## Hard-Coded Hot Spots

Hard-coded hot spots are defined by PeopleSoft and are not changeable. These hot spots are numbered descending from 999.

**999** Weight is calculated by adding up the weight of all the components that are included in the configuration. The weight of the component is calculated by converting the quantity or unit of measure to the weight unit of measure of the parent item. Any components that are included for a sales quote (Q rule results) are not included in the weight rollup.

**998** Cost (Foreign) is calculated by adding up the foreign cost of all the non-configured components in the configuration, which includes component for a sales quote (Q rule results). Any cost that is included by X rules and User-Added cost with Price Roll Up: Y is also accumulated.

**997** Cost (Domestic) is accumulated in the same way that Foreign 998 is done, except that the domestic amount is accumulated. Both amounts are accumulated separately and are not converted one from the other.

**996** Cost (Order Currency) displays Foreign 998 or Domestic 997, based on the mode that the user entered in the sales order. This process allows the user to enter both modes of sales order and not have to change the hot spot selection.

**995** Price (Foreign) is calculated based on Kit Pricing Method on the Item Master record. This method determines which items have their prices accumulated.

**994** Price (Domestic) is accumulated in the same way Foreign 995 is done, except that the domestic amount is accumulated. Both amounts are accumulated separately and not converted one from the other.

**993** Price (Order Currency) displays Foreign 995 or Domestic 994, based on the mode that the user entered in the sales order. This process allows the user to enter both modes of sales order and not have to change the hot spot selection.

**992** Price Not Rolled (Foreign) is accumulating the foreign price that is being extended as independent sales order lines. This process includes all of the prices that are included by X rules and User-Added prices with Price Roll Up: N.

**991** Price Not Rolled (Domestic) is accumulated in the same way as Foreign 992, except that the domestic amount is accumulated. Both amounts are accumulated separately and not converted one from the other.

**990** Price Not Rolled (Order Currency) displays Foreign 992 or Domestic 991, based on the mode that the user entered in the sales order. This process

| | |
|---|---|
| | allows the user to enter both modes of sales order and not have to change the hot spot selection. |
| **989** | Volume is calculated by adding up the volume of all the components that are included in the configuration if the items set up in the Configurator include a volume. |

**Note.** Prices do not include blanket discounting from advanced pricing.

### Hot Spot Assembly Inclusion Rule Definitions

Before you can define H (Hot Spot), assembly inclusion rules, you must define the hot spot user defined code value in user defined code table 32/HS.

User-defined hot spots are determined by using the H assembly inclusion rule. The hot spot rules function similarly to a calculation (C) assembly inclusion rule. This process means that the power of the derived calculation, external program interfaces, and more can be leveraged. Configured tables are also supported for the H rule type.

Hot spots (H rules) are processed in the same way as calculated values (C rules). This situation means that if the validation fails, the displayed value is the customer-defined error character as defined in the Configurator Constants. The H rule differs from a C rule in that processing is done last for the parent item. In addition, anything from any level can be referenced.

The values from UDC 32/HS are used by F3293 Evaluate AIR (B3200460) to process the hot spot (H Rule) as numeric or non-numeric. If the result of the rule matches the Numeric Y/N definition, then it is rounded, based on the UDC definition. The second description for UDC 32/HS allows the entry of an edit code that will be used to scrub the result before it appears on the form. The edit codes are standard programming edit codes.

**Note.** If a hot spot is defined in UDC 32/HS but a corresponding H assembly inclusion rule has not been defined, the hot spot displays a value of zero on the Configured Item Specifications (P32942) form at order entry.

## Understanding Assembly Inclusion Rule Logic

For each assembly inclusion rule, you can define a logic statement for many conditions. This statement can determine which parts to include or how to price an item. The logic is similar to that used in cross-segment editing rules. The main difference is that assembly inclusion rules logic statements can be either conditional or unconditional.

An unconditional statement is identified by an asterisk (a *then* condition) in the And/Or Selection field. Use unconditional rules when you want to apply the same rule, regardless of the segment answers. You must define unconditional rules before you define conditional rules. All unconditional rules must be grouped together in the first rule (rule number one). Unconditional rules are used, for example, when a part is always included as a component or when a price adjustment is always performed.

Conditional rules use Boolean logic to control or condition an action, based on segment answers. You can also use and/or operators to create conditional rules that are compound statements of logic. The following P assembly inclusion rule is an example of a compound logic statement: If Segment 10 equals 6000, and segment 30 is greater than 10, then include part F170, else include part F175.

Each phrase of the conditional logic statement is a separate record (written on a separate line).

The system automatically separates rules by highlighting them with different colors.

The system automatically assigns a rule number, based on the order that each rule is entered into the system. The rule number is the order that the rules will be processed by the calculation function at order entry. The rule number can be changed when setting up cross-segment editing rules by using the Insert Before and Insert After buttons on the Row menu exit on the Work with Cross Segment Editing Rules form.

The system automatically assigns a sequence number to each line within a rule, based on the order that h each line of each rule is entered into the system. The sequence number is the order in which each line within a rule will be processed during the calculation function. The sequence number can be changed by using the Insert Before and Insert After buttons on the Row menu exit on the Cross Segment Edit Group Revision form.

---

**Note.** No limit exists on the nesting of assembly inclusion rules. However, nesting does have an impact on system performance. The deeper the rules are nested, the slower the processing time.

---

### Calculation Processing

During order entry, the calculation feature verifies Configurator processes level-by-level in the following order:

- Segment agreement

  System processing includes user defined code validation, range checking, alpha versus numeric checking, length checking, and required versus optional checking.

- C assembly inclusion rules

  The system processes C rules first because the calculated segment answer might be required to validate the configuration. The calculated segment answer might also be needed to perform additional calculations for the configured item.

- Cross-segment editing rules

  The system validates the configuration before processing the remaining rules.

- P assembly inclusion rules
- Q assembly inclusion rules, as needed

  The system processes Q assembly inclusion rules during Sales Quotes (P4210) (to establish cost) and Order Processing (R31410) (to create the parts list and establish cost), depending upon system setup.

- R assembly inclusion rules, as needed

  The system processes R assembly inclusion rules during Sales Quotes (P4210) (to establish cost) and Order Processing (R31410) (to create the routing and establish cost), depending upon system setup.

- X assembly inclusion rules
- H assembly inclusion rules

## Understanding Advanced Assembly Inclusion Rules

In addition to the logic statements, you can set up optional advanced assembly inclusion rule function. You set up advanced assembly inclusion rules on either the Assembly Inclusion Edit Group Revisions form or the Advanced Rule Functions form.

Advanced assembly inclusion rule features vary, according to the type of assembly inclusion rule that you set up, as illustrated in the following table:

| Description | P Rules | Q Rules | C Rules | H Rules | X Rules | R Rules |
|---|---|---|---|---|---|---|
| Derived Calculations | X | X | X | X | X | X |
| External Program References | X | X | X | X | X | X |
| Configured Tables | X | X | X | X | X | |
| Smart Parts | X | X | | | | |

# Understanding Derived Calculations

For each rule type, you can define calculations that refer to the values of one or more segments. You can define a derived calculation on either the Assembly Inclusion Edit Group Revisions form or the Advanced Rule Functions form.

## Segment References

You can reference any segment within a formula. To reference a segment within the same configured item, enter S and the segment number.

For example,`S3` indicates segment three.

To reference a segment from a different configured item, enter S, the segment number, and the configured item name. Enclose the item name within equal signs.

For example,`S3=Piston=` indicates segment three of item Piston.

## Algebraic Formulas

Use algebraic formulas to combine different mathematical operations with the following operators: `+` , `-` , `*` , and`/`. You can embed calculations by enclosing them in parentheses. You might want to embed segment numbers in the formula to include segment values as part of the calculation.

For example, the following formula calculates the counterweight that is necessary to keep the forklift from tipping over when its boom is fully extended with a full load:

```
Derived Calculation: S10/(4*COS(2*S30*3.1416/360*2*3.1416))
```

## Trigonometric and Logarithmic Functions

You can use trigonometric or logarithmic functions independently or as part of a complex formula.

The following trigonometric functions are available (values expressed in radians):

| Function | Description |
|---|---|
| SIN(1.5) | Indicates the sine of 1.5 |
| COS(S3) | Indicates the cosine of segment three |

| Function | Description |
|---|---|
| TAN(S3) | Indicates the tangent of segment three |
| ARC(S3) | Indicates the arctangent of segment three |

The following logarithmic functions are available:

| Function | Description |
|---|---|
| LOG | Indicates log to base 10. |
| LN | Indicates natural log. |
| ** | Indicates an exponent. 2**5 represents 2 to the fifth power. |

The following function is available:

| Function | Description |
|---|---|
| SQR | Indicates square root |

## Substrings

You can use the SUBSTR (substring) function to include a portion of a larger string of characters in a formula.

To calculate a substring, you must provide the following references:

- The segment from which you want to take the substring
- The starting position within the string where you want to begin referencing values
- The length of the string that you want to reference.

For example, if segment 10 is 400012, then the following is true:

| Function | Description |
|---|---|
| SUBSTR(S10,1,4) | Indicates that the substring from segment 10 starts at the first position of the string and includes the next 4 positions. The substring value is 4000. |
| SUBSTR(S10,5,2) | Indicates that the substring from segment 10 starts at the fifth position of the string and includes the next 2 positions. The substring value is 12. |

## Concatenations

You can use the CONCAT (concatenate) function to combine the values of two different segments. For example:

| Function | Description |
|---|---|
| CONCAT(S3,S4) | Combines the values of segments 3 and 4. If the segment value of segment 3 is 1001 and the value of segment 4 is WH (white), the concatenated value is 1001WH. |

## External Field References

You can reference fields that are external to the configurator system to use in derived calculations.

Using the External Files Reference program, you select a field from the following tables:

| Table | Description |
|---|---|
| F0101 | Address Book Master |
| F03012 | Customer Master by Line of Business |
| F41002 | Item Units of Measure Conversion Factors |
| F4101 | Item Master |
| F4102 | Item Branch File |
| F41021 | Item Location File |
| F4105 | Item Cost File |
| F4106 | Item Base Price File |
| F41092 | Item Supplemental Data Base User Defined Codes |

After you reference a field value, the information appears in the Derived Calculation field, preceded by an ampersand (&). The ampersand is then followed by the table identifier and then the field alias. You can use the field independently or within a complex expression.

You can also include field values through External Files Reference. For example, a pricing assembly inclusion rule for item 6000 (forklift) uses a field reference to retrieve a base price from table F4106. The formula & BPUPRC appears in the Derived Calculation field, where BP is the table identifier for table F4106 and UPRC is the alias for price.

The system uses the component item number and branch from the rule to retrieve the appropriate tables. It also uses the Address Book number to retrieve data from the address book or billing instructions tables.

To reference a supplemental database field, you must also specify the data type. Enter the data type after the field, as follows:

| Data Type | Description |
|---|---|
| &T2AMTU(WD) | Indicates an amount field on the Item Supplemental Database table and the WD data type. |

When you reference the Unit of Measure in table F41002, you must specify the unit of measure in the same manner.

## Understanding External Program References

You can use a program that is external to the software to define a calculation. You refer to an external custom business function for special calculations that are particularly complex or involved.

For R, P, and Q rules, the external business function refers to the component number, component branch, and sold-to number. For H, C, or X rules, the external business function refers to the configured item number, branch/plant, and sold-to number

Several setups must be completed before an external business function can be called. A business function object must be created for the external program. This business function object must then be added to the Object Librarian.

The Function Use processing option value on Assembly Inclusion Rules (P3293) must be equal to the Object Use value on the Object Librarian for the function being called.

On Assembly Inclusion Edit Group Revisions (P3293), you must enter EXTVAR in the Derived Calculation field. Enter the name of the external business function to be called in the External Program field.

After the system runs the external function, it places the results in EXTVAR, a 30-character variable in the inclusion rule.

The external business function can also access and use the values of previously entered segments that are sorted in cache. The system passes the B3200000 data structure to the external business function.

## Understanding Configured Tables

You can set up configured tables to simplify assembly inclusion rules. Although they take time to set up, tables reduce the number of rules and reduce processing time. Each table uses an assembly inclusion rule to reference return calculated segment values, prices, parts, and display information to the sales or work order.

## Understanding Smart Parts

Depending on your item numbering scheme and your need for reducing assembly inclusion rules, you can set up smart parts, or customized item numbers, to derive defined variable segments. Using smart parts is a simplified version of using assembly inclusion rules.

For example, a manufacturer might have 100 different paint options for a configured item. Rather than set up 100 different assembly inclusion rules to allow for variations in paint color, the manufacturer might want to set up customized item numbers, or smart parts, to keep track of the different paint values. These smart parts combine the segment item and the paint color into one item number, as defined in the smart part field on the Advanced Rule Functions form.

Smart parts work with P and Q rules. You can build smart part numbers by using the segment values from order entry. The system calculates smart parts in a similar manner to derived calculations. However, the resulting smart part is an alphanumeric string. You must define item numbers that are the result of smart part calculations in the Item Master (F4101) and Item Branch File (F4102) tables.

Smart part formulas can define short, second, or third item numbers. Smart parts use the part numbering symbol conventions that are defined in Branch/Plant Constants. For example, if the smart part formula uses the symbol to identify the third part number, the system places the third part number on the sales order and work order detail line.

You can build a smart part number by using the following functions:

| Function | Description |
|---|---|
| Segment referencing | To reference segments that have already been entered on a different level, specify the item number of that level with the segment number. For example, the notation for Segment 4 of Piston is: Derived Calculation S4=Piston= |
| Substring | To remove a particular string within a larger string, use the substring function. It removes a string when you define the segment, beginning position, and length. For example, if Segment 4 equals 1234, the last three positions (234) can be used with the notation SUBSTR(S4,2,3), where 2 is the beginning position and 3 is the length of the substring. |
| Concatenation | To combine two fields, use the concatenation function. For example, CONCAT(S3,S1) combines the values of Segment 3 and 1 into one field. |
| Literal text | To combine a literal (constant) with a segment value (variable). When using literal text in a smart part calculation, the literal must be placed in single quotes. In this example, the smart part consists of the literal P and the value of segment 4. Thus, the formula would be ?P'S4. If the value of Segment 4 is 2000, then the smart part is P2000. |

### Business Case: Advanced Assembly Inclusion Rules

A business has special calculations to run when a new order is created.

Use the Advanced Assembly Inclusion Rule features in the Configurator system to enable the order entry to take advantage of segment referencing, algebraic formulas, trigonometric and logarithmic functions, substrings, concatenations, external field references, external business function references, configured tables, and smart parts. This feature allows you to perform calculations when you validate product configuration. Thus, calculated values are available to order entry personnel and the customer.

## Forms Used to Set Up Assembly Inclusion Rules

| Form Name | Form ID | Navigation | Usage |
|---|---|---|---|
| Work with User Defined Codes | W0004AA | Configurator Setup (G3241), Hot Spot Description | Review and set up user defined codes (HS/32) for hot spots. |
| Work with Assembly Inclusion Rules | W3293N | Configurator Setup (G3241), Assembly Inclusion Rules | Locate and review a configured item by branch/plant.<br>To review the values or ranges for a rule, select a record and select Values or Range from the Row menu. |

| Page Name | Object Name | Navigation | Usage |
|---|---|---|---|
| Assembly Inclusion Edit Group Revisions | W3293A | On Work With Assembly Inclusion Rules, do one of the following:<br>To add the first rule, select Revisions from the Form menu.<br>To revise an existing rule, select the rule and click Select. | Define and revise unconditional and conditional rules using Boolean Logic. Use one grid row for each phrase of the conditional logic statement. |
| Assembly Inclusion Edit Group Revisions | W3293A | On Work With Assembly Inclusion Rules, select the rule and from the Row menu, select Edit Insert Before or Insert After. | Insert an assembly inclusion rule or copy a rule from one configured item to another. |
| Work With Batch Versions - Available Versions | W98305WA | On Work with Assembly Inclusion Rules, select Print Rules from the Form menu. | Print a hard copy of assembly inclusion rules to verify the assembly inclusion rule setup. |
| Values Revision | W32921B | On Assembly Inclusion Edit Group Revisions, enter a value in the Value field and tab to the next field to access the Values Revisions form. | Review existing values and define new values.<br>See Defining Values for Cross-Segment Logic Statements for information about the Values Revision form. |
| Range Revision | W32921E | On Assembly Inclusion Edit Group Revisions, enter a value in the Range field and tab to the next field to access the Range Revisions form. | Review existing ranges and define new ranges.<br>See Defining Ranges for Cross-Segment Logic Statements for information about the Range Revision form. |
| Advanced Rule Functions | W3293B | On Assembly Inclusion Edit Group Revisions, select a record and select Advanced Rules from the Row menu. | Define advanced rule information.<br>You can also define advanced rule information on the Assembly Inclusion Edit Group Revisions form. |
| Derived Calculations | W329303B | On Assembly Inclusion Edit Group Revisions, select a record and select Derived Calc from the Row menu. | Test the derived calculations for accuracy without having to run sales quotes to verify the calculated values.<br>The tester performs the derived calculation based on segment values you enter. |
| Work With Component Where Used | W32930A | Configurator Setup (G3241), Component Where Used | Locate and review assembly inclusion rule information for a component item. |

| Page Name | Object Name | Navigation | Usage |
|---|---|---|---|
| Work With AIR Segment Where Used Inquiry | W329301A | Configurator Setup (G3241), AIR Segment Where Used Inquiry | Locate and review assembly inclusion rule information. |
| Work With AIR Used for Tables | W329302A | Configurator Setup (G3241), Tables in AIRs Where Used Inquiry | Locate and review assembly inclusion rule information. |

## Defining Codes for Hot Spots

You must define user defined codes for hot spots in UDC table 32/HS. After you define the hot spot, you can define an assembly inclusion rule with a corresponding calculation.

Access the Work with User Defined Code form.

**Codes** The number of the hot spot being defined.

**Description 02** This column is used to define if a given code (hot spot) is to be processed as a numeric or non-numeric statement.

The default value for hot spots is non-numeric. If the Description 02 column is blank or the value is N, then the hot spot formula is treated as a string (it displays the formula rather than a calculated value).

(Blank) is the equivalent of a default value from data dictionary item CNUM, usually defined as N (non-numeric).

If the expected answer is numeric and the hot spot is not hard-coded, then the Description 02 column should contain YX, where Y shows that the result is numeric and X is the number of decimal places to be rounded to.

Hard-coded hat spots are predefined as numeric; therefore, the first digit is not significant for them. The user need only input the second digit for rounding purposes.

For example, imagine a user-defined hot spot with a calculated value of 1.2345.

**Special Handling** This field can be sued for language preferences, but it has no impact on hot spot calculations.

**Hard Coded** This column indicates if a particular hot spot is defined as hard or soft coded. System defined hot spots are hard coded and this field is Y. If you set up a code for hot spots, this field should be N.

## Setting Processing Options for Assembly Inclusion Rules (P3293)

Processing options enable you to specify the default processing for programs and reports.

For programs, you can specify options such as the default values for specific transactions, whether fields appear on a form, and the version of the program that you want to run.

For reports, processing options enable you to specify the information that appears on reports. For example, you set a processing option to include the fiscal year or the number of aging days on a report.

Do not modify EnterpriseOne demo versions, which are identified by ZJDE or XJDE prefixes. Copy these versions or create new versions to change any values, including the version number, version title, prompting options, security, and processing options.

## Defaults

**1. Enter the default Rule Type.**

Rule Type

A value that identifies whether the resulting value of the assembly inclusion rule is a part number, price, routing operation, or calculated value. The valid values are:

*P:* Part List

*Q:* Work Order Component

*C:* Calculation

*H:* Hot Spot

*X:* Price/Cost Adjustment

*R:* Route Sheet

Line Type (LNTY)

A code that controls how the system processes lines on a transaction. It controls the systems with which the transaction interfaces, such as General Ledger, Job Cost, Accounts Payable, Accounts Receivable, and Inventory Management. It also specifies the conditions under which a line prints on reports, and it is included in calculations. Codes include the following:

*S:* Stock item

*J:* Job cost

*N:* Nonstock item

*F:* Freight

*T:* Text information

*M:* Miscellaneous charges and credits

*W:* Work order

## Edits

**1. Enter the Function Use for validating external programs. If left blank, no validations against the Function Use code will be done for Business Function and UBE objects selected as external programs.**

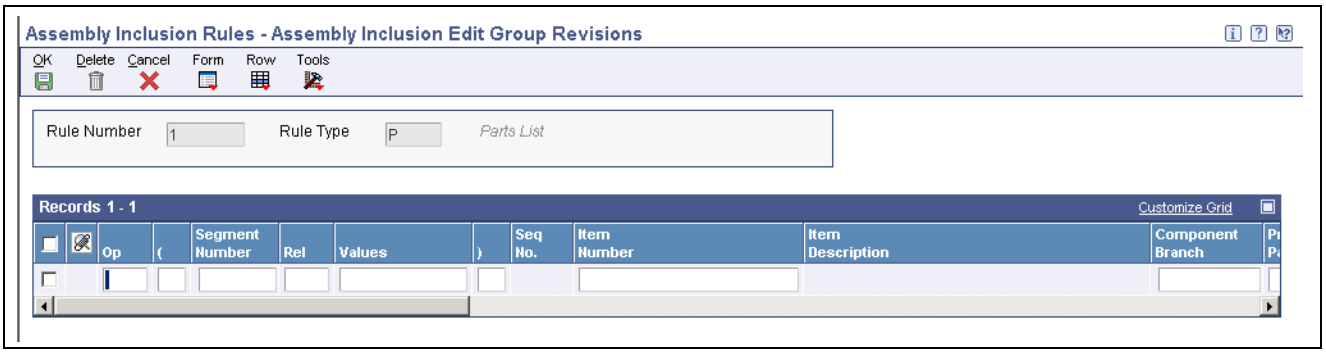
Function Us

Designates the use of the object. For example, the object may be used to create a program, a master file, or a transaction journal. See UDC 98/FU.

# Defining Assembly Inclusion Rule Logic

For each assembly inclusion rule, you define unconditional and conditional rules. Before you define conditional rules, define unconditional rules to include parts, price adjustments, calculated values, display values, or routing steps-regardless of the segment values.

Access the Assembly Inclusion Edit Group Revisions form.




Assembly Inclusion Edit Group Revisions form

**Note.** All unconditional rules must be grouped together in the first rule (rule number one).

## Common Fields

Complete the following fields for any rule type:

- Effective From
- Effective Thru
- Description
- Derived Calculation
- Rule Table
- External Program

## P Rule

Complete the following additional fields for a P rule:

- Item Number
- Component Branch
- Print Part
- Quantity
- U/M
- Operation Seq No.
- Issue Type
- Line Type
- Write Attached Detail Line
- Trans Type
- Smart Part

The following combination of settings is recommended:

| Write Attached Detail Line | Transaction Type |
|---|---|
| 0 | 0 |
| 1 | 1 |
| 1 | 3 |

### Q Rule

Complete the following additional fields for a Q rule:

- Item Number
- Component Branch
- Quantity
- U/M
- Operation Seq No.
- Issue Type
- Line Type
- Smart Part

### R Rule

Complete the following additional fields for an R rule:

- Item Number
- Component Branch
- Operation Seq No.

### X Rule

Complete the following additional fields for an X rule:

- Unit Price
- Unit Cost
- Price Rollup
- Line Type

### C Rule

Complete the following additional fields for a C rule:

- Segment Number
- Rel

### H Rule

Complete the following additional fields for an H rule:

- Segment Number (this is the HotSpot Number field).
- Rel

**Rule Type** A value that identifies whether the resulting value of the assembly inclusion rule is a part number, price, routing operation, or calculated value. Values are:

*P:* Part List

*Q:* Work Order Component

*C:* Calculation

*H:* Hot Spot

*X:* Price/Cost Adjustment

*R:* Route Sheet

**Op** A code that determines whether compound data selection logic is based on an A: AND condition or an O: OR condition.

--- FORM SPECIFIC ---

For configuration management, you can include parts, prices, costs, or routings with the configured item. Additional values include:

*I:* If

*E:* Else

**:* Then

For example:

*I:* Seg 1: A

**:* Part B

*E:* Part C

*E:* Part D If Seg 1 is A, include part B.

If Seg 1 is not A, include part C and part D.

**Segment Item** Use this field to reference a previously selected segment from a different configuration level.

**Segment Branch/Plant** Use this field to reference the branch/plant of the item in the Segment Item field. For this functionality to work, you must:

**Segment Number** A number that establishes the sequence in which the segments were defined in the system. Segment numbers are user defined.

Cross-segment editing rules reference the segment numbers to ensure that the set of values defines a valid configuration.

Assembly inclusion rules reference segment numbers and their associated values to define prices, component parts, routing, and calculated values for configured items.

**Rel** A code that identifies the operands in Boolean logic. You can specify any of the following codes:

*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

**Item Number** A number that the system assigns to an item. It can be in short, long, or third item number format.

**Item Description** A remark about an item.

**Component Branch** A secondary or lower-level business unit. The system uses the value that you enter to indicate that a branch or plant contains several subordinate departments or jobs. For example, assume that the component branch is named MMCU.

The structure of MMCU might be as follows:

- Branch/Plant - (MMCU)
- Dept A - (MCU)
- Dept B - (MCU)
- Job 123 - (MCU)

**Print Part** A user defined code (32/PF) that indicates whether the system prints the configurator part on the

sales order and work order. The system uses the value that you enter in this field to affect programs such as Print Pick Slips (R42520), Print Invoices (R42565), Bill of Lading (R42530), and parts list on Work Order Print (R31415). Values are:

*0:* Do not print the configurator part on the sales order or the work order.

*1:* Print the configurator part on both the sales order and the work order.

*2:* Print the configurator part on the sales order only.

*3:* Print the configurator part on the work order only.

**Quantity** The number of units that the system applies to the transaction.

**U/M** A user defined code (00/UM) that identifies the unit of measurement for an amount or quantity. For example, it can represent a barrel, box, cubic meter, liter, hour, and so on.

**Operation Seq No.** A number used to indicate an order of succession.

In routing instructions, a number that sequences the fabrication or assembly steps in the manufacture of an item. You can track costs and charge time by operation.

In bills of material, a number that designates the routing step in the fabrication or assembly process that requires a specified component part. You define the operation sequence after you create the routing instructions

for the item. The Shop Floor Management system uses this number in the backflush/preflush by operation process.

In engineering change orders, a number that sequences the assembly steps for the engineering change.

For repetitive manufacturing, a number that identifies the sequence in which an item is scheduled to be produced.

Skip To fields allow you to enter an operation sequence that you want to begin the display of information.

You can use decimals to add steps between existing steps. For example, use 12.5 to add a step between steps 12 and 13.

**Issue Type** A code that indicates how the system issues each component in the bill of material from stock. In Shop Floor Management, it indicates how the system issues a part to a work order. Values are:

*I:* Manual issue

*F:* Floor stock (there is no issue)

*B:* Backflush (when the part is reported as complete)

*P:* Preflush (when the parts list is generated)

*U:* Super backflush (at the pay-point operation)

*S:* Sub-contract item (send to supplier)

*Blank:* Shippable end item

You can issue a component in more than one way within a specific branch/plant by using different codes on the bill of material and the work order parts list. The bill of material code overrides the branch/plant value.

**Line Type** A code that controls how the system processes lines on a transaction. It controls the systems with which the transaction interfaces, such as General Ledger, Job Cost, Accounts Payable, Accounts Receivable, and Inventory Management. It also specifies the conditions under which a line prints on reports, and it is included in calculations. Codes include the following:

*S:* Stock item

*J:* Job cost

*N:* Nonstock item

*F:* Freight

*T:* Text information

*M:* Miscellaneous charges and credits

*W:* Work order

**Write Attached Detail Line** A user defined code (32/WA) that indicates whether the component line generates a detail line that indicates whether the component is going to be shipped. Values are:

*0:* Do not create a detail line.

*1:* Create a detail line.

This field works only with a P type rule. If set appropriately, details are written to the sales order and cost is also rolled up to the sales order. This field does not work with purchase orders.

Turn the detail lines off whenever possible so that the lines are not processed.

**Trans Type**

A user defined code (32/DE) that specifies the type of transaction that the component of a configured item should generate. If the conditions for the transaction, processing options, and branch/plant are not correct for the transaction type, then the system does not generate the transaction. You use the Transaction Type field in combination with the Write Attached Detail Line on Assembly Inclusion Rules field. Values are:

*0:* Sales Order

*1:* Direct Ship

*2:* Transfer

*3:* Inter Branch/Company

This field works only with a P type rule. It specifies the type of transaction that the component of a configured item should generate. This field works with sales orders only.

**Effective From**

A date that indicates when a rule takes effect in the configurator system. The date determines whether the system processes the rule during the configuration validation (the calc feature) of order entry. This date applies to cross-segment editing and assembly inclusion rules.

**Effective Thru**

A date that indicates when a rule is no longer active in the configurator system. The date determines whether the system processing the rule during the configuration validation (the calc feature) of order entry. This date applies to cross-segment editing and assembly inclusion rules.

**Derived Calculation**

An algebraic formula that specifies the quantity, price, hours, or a value associated with a rule.

The following examples illustrate the syntax for possible derived calculations:

Segment References

- S3 indicates segment 3.
- S3=Piston= indicates segment 3 in item Piston.

Trigonometric and Logarithmic Functions

- SIN(20) indicates the sine of 20.
- COS(S3) indicates the cosine of segment 3.
- TAN(S4) indicates the tangent of segment 4.
- ARC(S3) indicates the arctangent of segment 3.
- LOG indicates log to base 10.
- LN indicates natural log.
- 2**5 indicates an exponent, 2 to the fifth power.

Substring

SUBSTR(S10,1,4) indicates that the substring from segment 10 starts at the first position of the string and includes the first 4 positions.

Concatenations

CONCAT(S3,S4) combines the values of segments 3 and 4.

External Fields

Specifies the fields from non-configurator tables that you want the system to access as part of a calculation. Use the ampersand character followed by the field name. For example, &T2AMTU(WD) indicates an amount field in the Item Supplemental Database table, and the WD data type.

External Programs

Specifies that a program external to the system is to be used for the calculation. Enter the name of the external program and EXTVAR in the Derived Calculations field.

Smart Parts

PS4 indicates a smart part number P2000 when the value of segment 4 is 2000.

**Smart Part**

Defines a formula that calculates the part number associated with a rule. A smart part formula consists of a literal value (constant) and a segment answer (variable). The literal value must be in single quotes.

For example,

- The part number consists of the literal 'P' and the value of segment 4. If the smart part calculation and the value of Segment 4 is 2000, then the smart part would be P2000.
- To reference segments that have already been entered on a different level, specify the item number of that level with the segment number. For example, the notation for Segment 4 of Piston is:

  ```
  Derived Calculation S4=Piston=
  ```

- To remove a particular string within a larger string use the substring function. It removes a string when you define the segment, beginning position, and length. For example, if Segment 4 equals 1234, the last three positions (234) can be used with the notation:

  SUBSTR(S4,2,3) where 2 is the beginning position and 3 is the length of the substring.

- To combine two fields, use the concatenation function. For example, CONCAT(S3,S1) which will combine the values of Segment 3 and 1 into one field.

**Rule Table**

The name of a collection of data that you set up to minimize the number of assembly inclusion rules that you need for a configured item. You must define rule table names in user defined code table 32/TN. A rule table can be accessed by 1 to 20 keys and can return up to 99 values. When you reference a rule table in an assembly inclusion rule, the system uses the rule keys to retrieve the values that are associated with the rule table. For example, if you defined segment 10 to be the color of an item, you could set the table to retrieve item Red Component when the customer enters Red for segment 10. In this example, the table would be:

*Item Color:* Value

*Red:* Red Component

The table would include the following: If the color segment value: red, then use item number Red Component on the configured item sales order and work order parts list.

You can create a configured table for any rule type except R (routing) rules.

**External Program** The name of the external program written by your MIS department, that will be providing values for external variables.

**Unit Price** The price charged for the unit of measure in the adjoining field. Use these fields, for example, if your primary unit of measure is EA (each), but you typically use a list price per box.

**Unit Cost** A user-defined cost the system uses based on information that you supply, which includes the name of the costing method and the method of calculation.

**Price Rollup** A user defined code (32/PP) that indicates whether the price or cost of an add-on is included in the price or cost of the parent configured item. Values are:

*0:* Separate the price or cost of the add-on.

*1:* Include the price or cost of the add-on in the price or cost of the parent item. When you choose this value, the extended price or cost is zero.

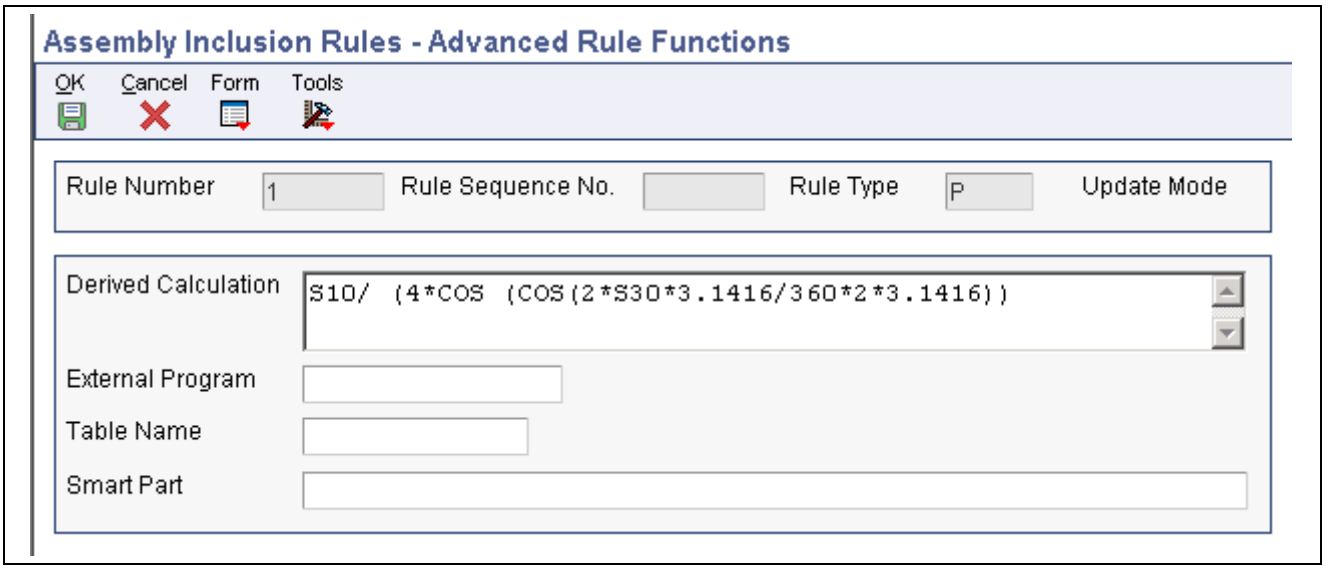
**Rule Number** The number that indicates the order in which rules were input in the system for a particular configured item. It also indicates the order in which rules are processed by the system.

**Seq No.** The sequence number is the rule number within an edit group of cross-segment editing rules or assembly inclusion rules. It is assigned to lines within a rule based on the order in which that line of the rule was input for a configured item. You can insert a line within a rule to assign a new sequence number.

The sequence number also indicates the order in which each line within a rule will be processed.

## Defining Advanced Assembly Inclusion Rule Functions

Access the Advanced Rule Functions form.




Advanced Rule Functions form

**Derived Calculation** An algebraic formula that specifies the quantity, price, hours, or a value associated with a rule.

The following examples illustrate the syntax for possible derived calculations:

Segment References

- S3 indicates segment 3.
- S3=Piston= indicates segment 3 in item Piston.

Trigonometric and Logarithmic Functions

- SIN(20) indicates the sine of 20.
- COS(S3) indicates the cosine of segment 3.
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- LOG indicates log to base 10.
- LN indicates natural log.
- 2**5 indicates an exponent, 2 to the fifth power.

Substring

SUBSTR(S10,1,4) indicates that the substring from segment 10 starts at the first position of the string and includes the first 4 positions.

Concatenations

CONCAT(S3,S4) combines the values of segments 3 and 4.

External Fields

Specifies the fields from non-configurator tables that you want the system to access as part of a calculation. Use the ampersand character followed by the field name. For example, &T2AMTU(WD) indicates an amount field in the Item Supplemental Database table, and the WD data type.

External Programs

Specifies that a program external to the system is to be used for the calculation. Enter the name of the external program and EXTVAR in the Derived Calculations field.

Smart Parts

PS4 indicates a smart part number P2000 when the value of segment 4 is 2000.

**Smart Part**

Defines a formula that calculates the part number associated with a rule. A smart part formula consists of a literal value (constant) and a segment answer (variable). The literal value must be in single quotes.

For example,

- The part number consists of the literal 'P' and the value of segment 4. If the smart part calculation and the value of Segment 4 is 2000, then the smart part would be P2000.
- To reference segments that have already been entered on a different level, specify the item number of that level with the segment number. For example, the notation for Segment 4 of Piston is:

  ```
  Derived Calculation S4=Piston=
  ```

- To remove a particular string within a larger string use the substring function. It removes a string when you define the the segment, beginning position, and length. For example, if Segment 4 equals 1234, the last three positions (234) can be used with the notation:

  SUBSTR(S4,2,3) where 2 is the beginning position and 3 is the length of the substring.

- To combine two fields, use the concatenation function. For example, CONCAT(S3,S1) which will combine the values of Segment 3 and 1 into one field.

**External Program**

The name of the external program written by your MIS department, that will be providing values for external variables.

## Copying Assembly Inclusion Rules

Access the Assembly Inclusion Edit Group Revisions form.

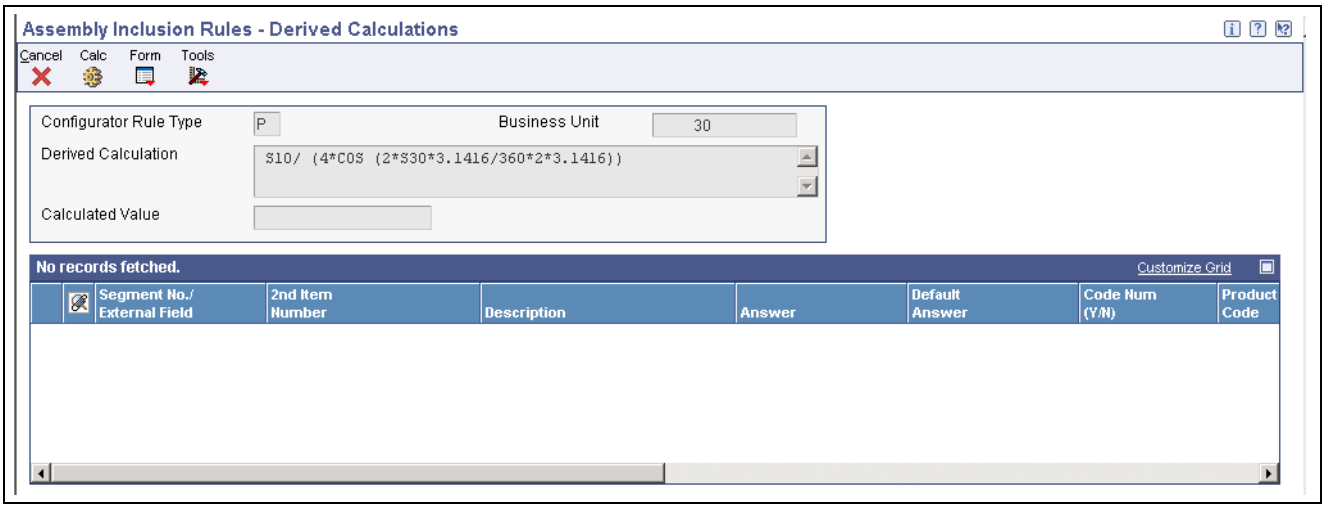
To copy an assembly inclusion rule:

1. On Assembly Inclusion Edit Group Revisions, choose a blank line.
2. Choose Copy from the Row menu.
3. On Rules Copy Window - Assembly Inclusion Rules, locate the configured item from which you want to copy a rule.
4. Choose one or more lines, and click Select.
5. On Assembly Inclusion Edit Group Revisions, modify as required.

## Running the Assembly Inclusion Rule Tester

The Assembly Inclusion Rule Tester tests the derived calculation for any of the six assembly inclusion rules.

Access the Derived Calculations form.




Derived Calculations form

**Note.** The derived calculation to be tested appears at the top of the form. The segments that relate to the derived calculation appear in the middle of the form.

| Field | Description |
|---|---|
| Answer | Enter a value in the Answer field for each segment that appears and click Calc. |
| Calculated Value | Review the value that appears in the Calculated Value field for accuracy. |

# Setting Up Configured Tables

This section provides an overview of configured table setup, and discuss how to:

- Define table names for configured tables.
- Set processing options for Configured Table Definition. (P3281)
- Define table definitions with dimensions for configured tables.
- Set processing options for Table/Item Cross Reference. (P3282)
- Define the configured table/configured item cross reference.
- Set processing options for Configured Table Values (P3283)
- Define values for configured tables.
- Copy a configured table.
- Review a configured table.
- Set up media objects for configured items.

# Understanding Configured Table Setup

A configured rules table is a collection of data that you define for a configured item. During order processing, assembly inclusion rules can refer to tables to retrieve component parts, calculated segment values, price adjustments, or display information.

You can use tables to reduce the number of assembly inclusion rules that are required when segment answers vary greatly. The table type should be the same as the assembly inclusion rule type that refers to it.

Setting up tables adds time to the setup process. However, tables can dramatically reduce the number of assembly inclusion rules and their complexity, thus improving processing time and simplifying setup.

When you enter an order for a configured item, you select answers for the segments that are defined for the item. For example, for a forklift, you might select a value of 4000 for segment 10 (Lift Rating) and a value of PROPANE for segment 20 (Power type).

Depending on the values that you define for each segment, you can specify the information that returns to the order. You must define the values for each segment as a key to the table.

You can define the following tables, which correspond to the matching assembly inclusion rule types:

| Table | Description |
|---|---|
| P Table (Quantity/Parts) | Defines part tables that can return multiple part numbers. To produce the configured item, P tables return part numbers to the sales order and, eventually, to the work order parts list. |
| Q Table (Quantity/Parts) | Defines part tables that can return multiple part numbers. Conceptually similar to P tables, Q tables return part numbers only to the work order parts list. They do not return values to the sales order. |
| C Table (Calculated values) | Defines a calculated segment table that can return multiple numeric or alphanumeric values as defined on Configured Item Segments. C tables return calculated values to segments. Other rule types can then use these values to control or affect actions. |
| H Table (Hot Spots) | Defines numeric information about a configured item to be returned to the Hot Spot field on the order entry form for display purposes only. H tables are limited to one return value. H tables are conceptually similar to C tables. Examples of hot spot information include price, foreign price, domestic price, cost, foreign cost, domestic cost, and weight. |
| X Table (Pricing) | Defines a price table that returns one numeric value. X tables return prices to the sales order, based on one or more segment answers. Unless otherwise specified, the Line Type defaults as an M. Whatever the Line Type is in the assembly inclusion rules, the rules for the Price Rollup Flag prevail - that is, either break out separately or roll into the parent. |

No table corresponds to the assembly inclusion rule for routing.

Because only one value can be returned for H and X tables, the system limits setup options when you specify the return dimensions for these table types.

Because a table might contain many segments (keys) and values, you must decide how the table information appears before you can review table information.

As you work with table information, you can speed data entry by setting a processing option for copying rows of data.

---

**Note.** The tables used for rules processing within the Configurator system are not user defined codes.

---

### Table Definitions with Dimensions for Configured Tables

To create a configured table, you must define the table type and dimensions. The dimensions refer to the number of segments that are used as keys to the table and the number of values that the table returns to the configured item. The maximum number of keys to the table is 20. The maximum number of return values is 99,999.

Tables can have the following dimensions:

- One segment and one return
- One segment and multiple returns
- Multiple segments and one return
- Multiple segments and multiple returns

You should have an idea of what you want your table to do prior to defining its dimensions. A one segment, one return table is particularly helpful when you want to define price, cost, hot spot values, or other specific information.

You might choose to create a one-segment, multiple return table when one segment can return multiple information consistently. Many component item numbers might be related to a specific segment answer. For example, a paper manufacturer might configure a certain size of letterhead to return a correspondingly sized envelope and response card.

You might choose to create a multiple-segment, multiple return table when using P or Q tables. P and Q tables are based on P and Q assembly inclusion rules, which return parts to the sales or work order.

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**Note.** When working with tables with multiple segments and multiple returns, remember that the form displays segment information in columns and values in rows.

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You also have the ability to define effectivity dates for the table.

## Forms Used to Set Up Configured Tables

| Form Name | Form ID | Navigation | Usage |
|---|---|---|---|
| On Work with Configured Table Definitions | W3281B | Configurator Setup (G3241), Configured Table Definition | Locate and review configured table definitions. |
| Rule Table Definition Revisions | W3281A | On Work with Configured Table Definitions, click Add. | Define configured table definitions. |
| Work with Configured Item Cross-Reference | W3282A | Configurator Setup (G3241), Table/Item Cross Reference | Locate and review table types and names, configured items, and branch/plants. |

| Page Name | Object Name | Navigation | Usage |
|---|---|---|---|
| Configured Item Cross Reference Revision | W3282B | On Work with Configured Item Cross-Reference, enter a branch blank, table name, and configured item and click Add. | After you define a table, you must specify the configured item that references the table and define the specific segments that access it.<br>To create a cross-reference, the number of segments that you specify must equal the number of segments that you defined for the table. You can also specify a segment that accesses a different configuration level. |
| Work with Configured Table Values | W3283A | Configurator Setup (G3241), Configured Table Values | Locate and review configured table values. |
| Configured Table Value Revision | W3283C | On Work with Configured Table Values, and click Add. | After you define dimensions and create your table/item cross reference, define values for your configured tables.<br>For each segment, define the specific value that is a key to the table. Then specify the part number, calculated value, price adjustment, or display information that is returned to the order when a particular value is chosen for the segment. |
| Configured Item/Rules Table Return Segment Values | W3282C | On Work with Configured Item Cross-Reference, select Return Segments from the Row menu. | Define a destination segment number for C tables that return multiple values.<br>The Configured Item/Rules Table Return Segment Values form automatically appears when you define a C table. |
| Copy Table | W3289B | On Work with Configured Table Definitions, select a configured table and click Copy. | After you set up a configured item table, you can copy its definition, cross reference, and values to a new or existing table. Copying existing tables reduces setup time.<br>Copying a configured item table |

| Page Name | Object Name | Navigation | Usage |
|---|---|---|---|
| Work with Rules Table Detail | W32830B | Configurator Setup (G3241), Component/Value Table Where Used Inquiry<br>On Work with Rules Table Detail, click the Value or Component Option to define your search: | Review returned values or specific components that are used within configured tables.<br>The system identifies where the values and components exist within your configured tables. |
| Work With Batch Versions - Available Versions | W98305WA | Configurator Setup (G3241), Configured Rules Table Values | Print a hard copy of configured table information to verify the accuracy of the configured table keys and return values. Review the table segments and values for the table name and table type that you specify. |

# Defining Table Names for Configured Tables

Prior to setting up a table, you must first define the table name. Table names are user defined values and are stored in user defined code table 32/TN. This table is not accessible from a menu.

# Setting Processing Options for Configured Table Definition (P3281)

Processing options enable you to specify the default processing for programs and reports.

For programs, you can specify options such as the default values for specific transactions, whether fields appear on a form, and the version of the program that you want to run.

For reports, processing options enable you to specify the information that appears on reports. For example, you set a processing option to include the fiscal year or the number of aging days on a report.

Do not modify EnterpriseOne demo versions, which are identified by ZJDE or XJDE prefixes. Copy these versions or create new versions to change any values, including the version number, version title, prompting options, security, and processing options.

## Data Defaults

**1. Rule Table Type (Optional)**

Rule Table Type

A value that identifies the type of rule table. Valid values are:

*P:* Part list (on sales order and work order)

*Q:* Work order component (on work order only)

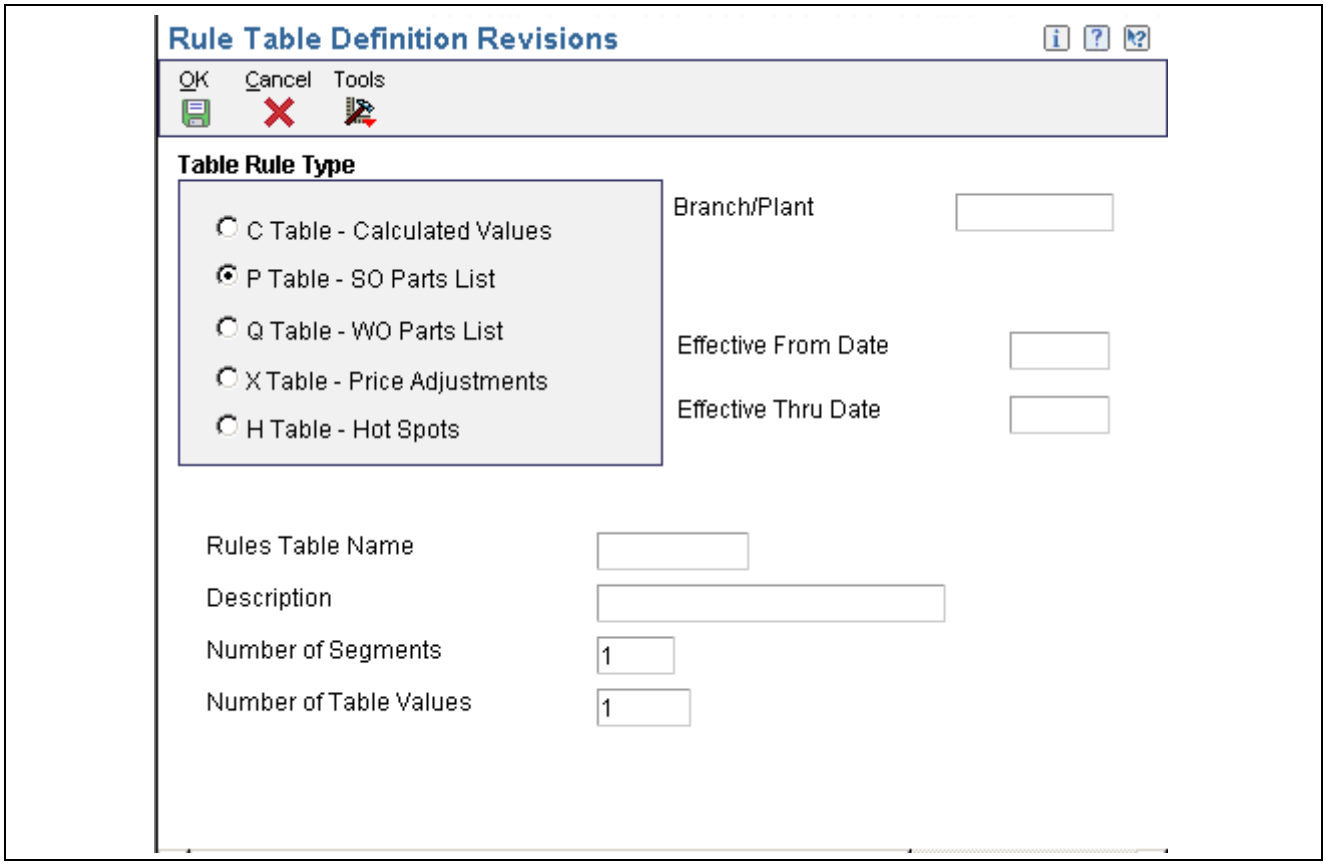
*C:* Calculated values

*H:* Hot Spot

*X:* Price/Cost adjustment

# Defining Table Definitions with Dimensions for Configured Tables

Access the Rule Table Definition Revisions form.




Rule Table Definition form

**Branch/Plant** A number that identifies a branch, plant, work center, or business unit.

You can define tables that are specific to a branch/plant or generic across all branch/plants. A blank Branch/Plant field identifies a generic branch/plant. If you do not use the generic branch/plants, then segment, rule, table, and item information should be the same across branch/plants. If you define generic branch/plant segments, you must also define generic tables.

**Rules Table Name** The name of a collection of data that you set up to minimize the number of assembly inclusion rules that you need for a configured item. You must define rule table names in user defined code table 32/TN. A rule table can be accessed by 1 to 20 keys and can return up to 99 values. When you reference a rule table in an assembly inclusion rule, the system uses the rule keys to retrieve the values that are associated with the rule table. For example, if you defined segment 10 to be the color of an item, you could set the table to retrieve item Red Component when the customer enters Red for segment 10. In this example, the table would be:

*Item Color:* Value

*Red:* Red Component

The table would include the following: If the color segment value is red, then use item number Red Component on the configured item sales order and work order parts list.

**C Table - Calculated Values** A value that identifies the type of rule table. Values are:

*P:* Part list (on sales order and work order)

*Q:* Work order component (on work order only)

*C:* Calculated values

*H:* Hot Spot

*X:* Price/Cost adjustment

**P Table - SO Parts List** A value that identifies the type of rule table. Values are:

*P:* Part list (on sales order and work order)

*Q:* Work order component (on work order only)

*C:* Calculated values

*H:* Hot Spot

*X:* Price/Cost adjustment

**Q Table - WO Parts List** A value that identifies the type of rule table. Values are:

*P:* Part list (on sales order and work order)

*Q:* Work order component (on work order only)

*C:* Calculated values

*H:* Hot Spot

*X:* Price/Cost adjustment

**X Table - Price Adjustments** A value that identifies the type of rule table. Values are:

*P:* Part list (on sales order and work order)

*Q:* Work order component (on work order only)

*C:* Calculated values

*H:* Hot Spot

*X:* Price/Cost adjustment

**H Table - Hot Spots** A value that identifies the type of rule table. Values are:

*P:* Part list (on sales order and work order)

*Q:* Work order component (on work order only)

*C:* Calculated values

*H:* Hot Spot

*X:* Price/Cost adjustment

**Number of Segments** Indicates how many keys (segments) are used to access the table. Key values must be on the current level or a previous level of the configured item.

The maximum is 20 keys.

**Number of Table Values** Specifies how many values the system returns from the rules table when a match is found on the table keys. If you enter more than one return value for a C (calculated) rule, you must indicate the segment numbers to return the values to.

With H and X tables, the Number of Table Values field is automatically populated with 1.

**Effective From Date** A date that indicates when a rule takes effect in the configurator system. The date determines whether the system processes the rule during the configuration validation (the calc feature) of order entry. This date applies to cross-segment editing and assembly inclusion rules.

**Effective Thru Date** A date that indicates when a rule is no longer active in the configurator system. The date determines whether the system processing the rule during the configuration validation (the calc feature) of order entry. This date applies to cross-segment editing and assembly inclusion rules.

# Setting Processing Options for Table/Item Cross Reference (P3282)

Processing options enable you to specify the default processing for programs and reports.

For programs, you can specify options such as the default values for specific transactions, whether fields appear on a form, and the version of the program that you want to run.

For reports, processing options enable you to specify the information that appears on reports. For example, you set a processing option to include the fiscal year or the number of aging days on a report.

Do not modify EnterpriseOne demo versions, which are identified by ZJDE or XJDE prefixes. Copy these versions or create new versions to change any values, including the version number, version title, prompting options, security, and processing options.

## Defaults

**Defaults for the Work With Cross Reference form.** Default Rule Table Type.

A value that identifies the type of rule table. Valid values are:

*P:* Part list (on sales order and work order)

*Q:* Work order component (on work order only)

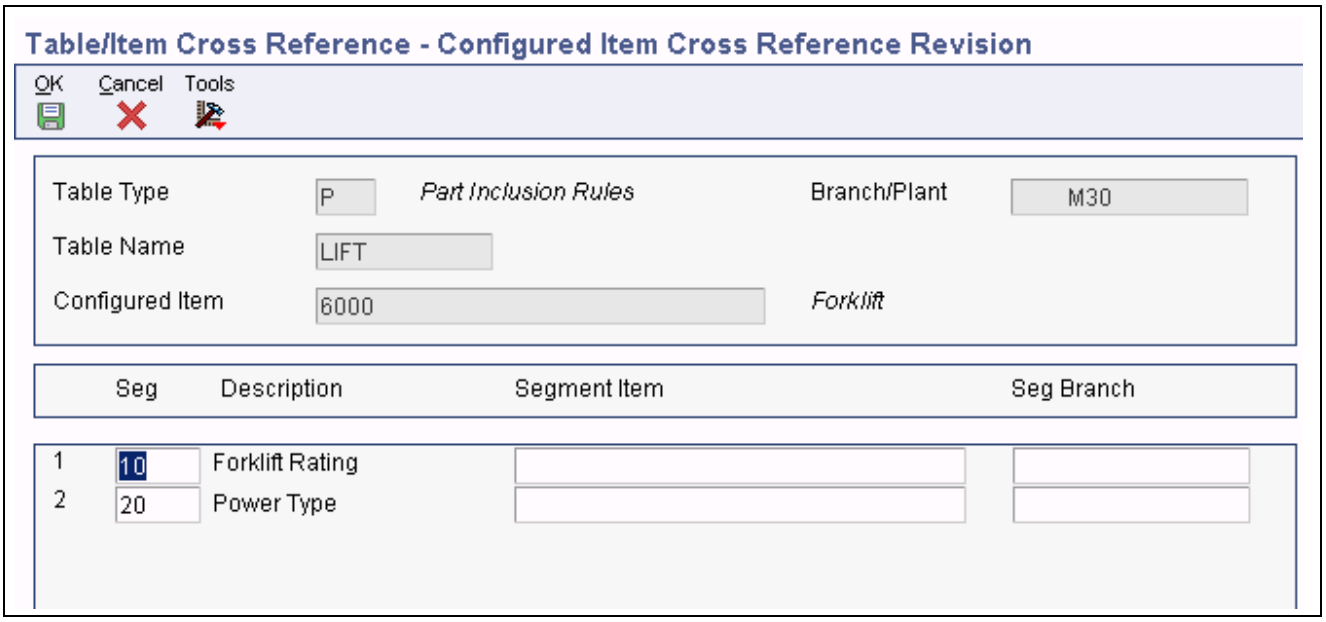
*C:* Calculated values

*H:* Hot Spot

*X:* Price/Cost adjustment

# Defining the Configured Table/Configured Item Cross Reference

Access the Configured Item Cross-Reference Revision form.




Configured Item Cross Reference form

**Note.** Multiple configured items can refer to a single table, and a single configured item can refer to multiple tables.

You can enter an item *ALL to define a generic cross-reference for all configured items. If you use *ALL, you must use the same segment numbers for all configured items.

**Seg** — A remark about an item. The segment number is used as a key to retrieve information from the table. The number of segments is the same as you defined on Configured Table Definition (P3281).

**Segment Item** — The configured item that contains the segment. This field provides the capability to reference segments from a higher-level configured item.

**Segment Branch** — If a higher-level configured item is referenced, it can also be in another branch/plant.

# Setting Processing Options for Configured Table Values (P3283)

Processing options enable you to specify the default processing for programs and reports.

For programs, you can specify options such as the default values for specific transactions, whether fields appear on a form, and the version of the program that you want to run.

For reports, processing options enable you to specify the information that appears on reports. For example, you set a processing option to include the fiscal year or the number of aging days on a report.

Do not modify EnterpriseOne demo versions, which are identified by ZJDE or XJDE prefixes. Copy these versions or create new versions to change any values, including the version number, version title, prompting options, security, and processing options.

## Defaults

**1. Rule Table Type (Optional)** — A value that identifies the type of rule table. Valid values are:

*P:* Part list (on sales order and work order)

*Q:* Work order component (on work order only)

*C:* Calculated values

*H:* Hot Spot

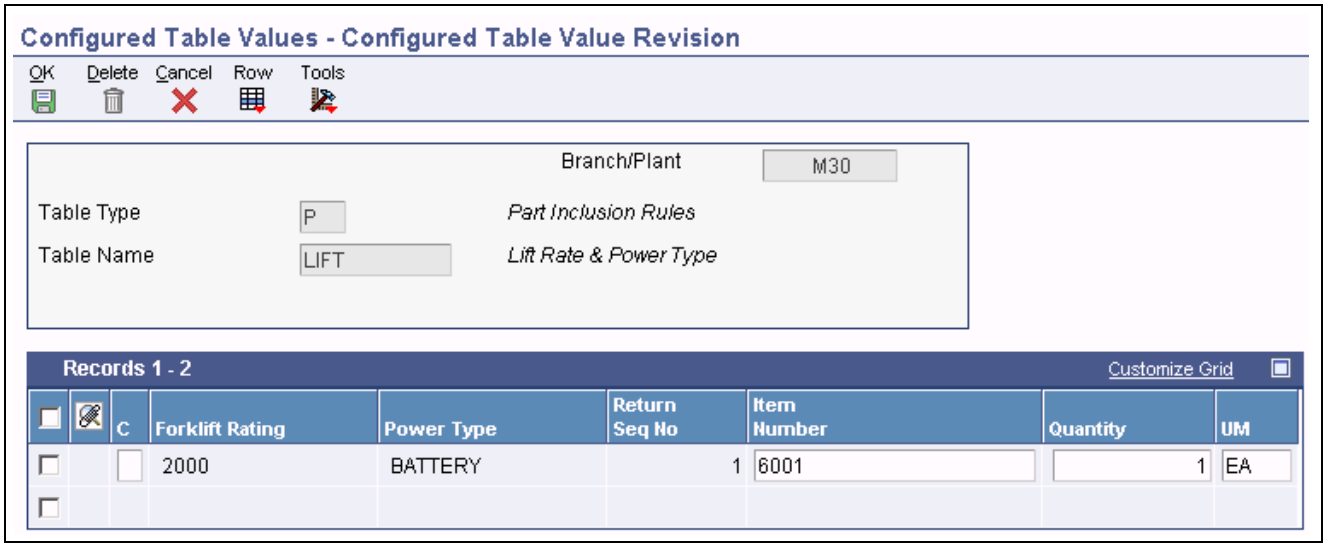
*X:* Price/Cost adjustment

### Processing

**1. Enter '1' to enable Row Copying** An option that specifies the type of processing for an event.

## Defining Values for Configured Tables

Access the Configured Table Value Revision form.




Configured Table Value Revision form

**Segment Value 1 and Segment Value 2** You complete as many segment value fields as you defined on the Rule Table Definition Revisions form when you defined dimensions for your table. The names of your segment value fields are defined when you create your table/item cross reference.

Each time that you enter a value for a segment and the associated item number, a new blank row appears.

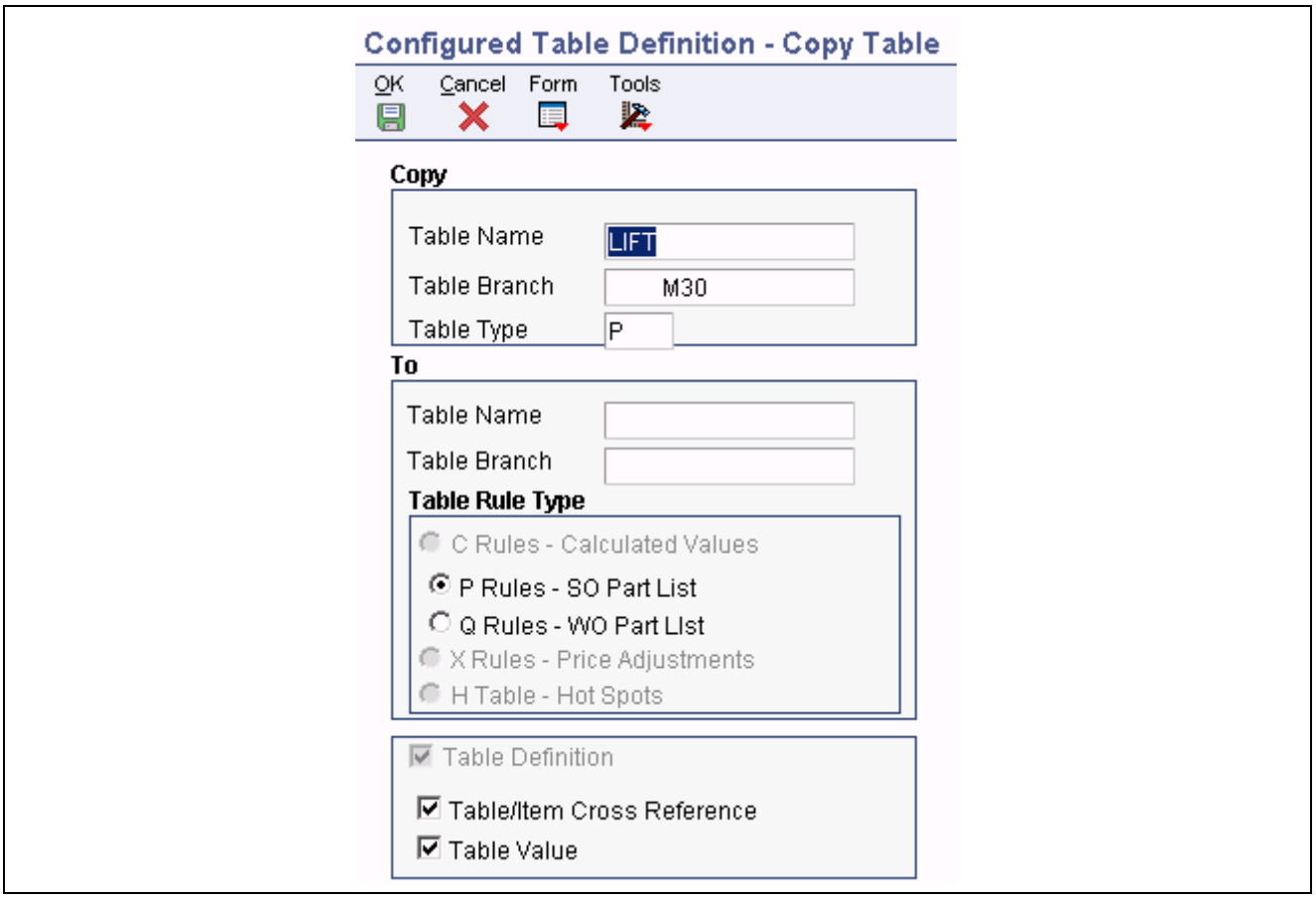
---

**Note.** As you work with table information, you can speed data entry by setting a processing option for copying rows of data. You can use one of two methods to copy rows. The first method is to select a row, and then choose Copy row from the Row menu. You can then change the row data as necessary for your table. The second method is to enter 1 in the C field of the row that you want to copy. After you complete the fields in a row and press the Enter key, that row is copied into the next row. When you no longer want to automatically copy a row or if you need to make changes, clear the C field.

---

## Copying a Configured Table

Access the Copy Table form.




Copy Table form

## Reviewing a Configured Table

Access the Work with Rules Detail form.

**Table Value** A value that is assigned to a component and is stored in, and returned from, a rules table.

**Table Name** The name of a collection of data that you set up to minimize the number of assembly inclusion rules that you need for a configured item. You must define rule table names in user defined code table 32/TN. A rule table can be accessed by 1 to 20 keys and can return up to 99 values. When you reference a rule table in an assembly inclusion rule, the system uses the rule keys to retrieve the values that are associated with the rule table. For example, if you defined segment 10 to be the color of an item, you could set the table to retrieve item Red Component when the customer enters Red for segment 10. In this example, the table would be:

*Item Color:* Value

*Red:* Red Component

The table would include the following: If the color segment value: red, then use item number Red Component on the configured item sales order and work order parts list.

**T T** A value that identifies the type of rule table. Values are:

*P:* Part list (on sales order and work order)

*Q:* Work order component (on work order only)

*C:* Calculated values

*H:* Hot Spot

*X:* Price/Cost adjustment

## Setting Up Media Objects for Configured Items

The software gives you the ability to attach media objects to item master records, segments, and user defined codes to use within the Configurator system. This feature of the system allows you to include a visual cue of configured items, configured item segments, and user defined code values, which can be used for segment answers within order entry. Media objects can be photos, graphics, files, or text documents, including information that might initially exist on a paper document.

---

**Note.** The media object is attached to the Item Master through the Internal Attachment Row menu, not to the Item Branch/Plant.

---

The media objects that you define appear on the Configured Item Specifications form at order entry. As you select a configured item from the Attribute Filter drop down box, the media object displays the image from the item master for the related configured item number. The segment or segment-answer user defined code displays the media object when a row is selected.

The display of media objects at order entry is controlled by the Configured Item Specifications processing options. The Media Object Display processing option controls whether or not an attached media object displays on the form during order entry. The Media Object Display Order processing option specifies the order in which media objects appear on the form if more than one media object type is attached to a configured item, configured segment, or user defined code segment value.

# Linking Assembly Inclusion Rules and Configured Tables

This section provides an overview of linking configured tables and assembly inclusion rules and describes how to link a configured table to an assembly inclusion rule.

## Understanding How to Link Assembly Inclusion Rules and Configured Tables

After you define table values, you must provide access to the table so that the part number, calculated value, price adjustment, or display information is retrieved to the order. The table is linked to the corresponding assembly inclusion rule. The table can be accessed through either unconditional or conditional rules. During order processing, the assembly inclusion rule causes the table to be read and the values are brought back to the order.

## Linking a Configured Table to an Assembly Inclusion Rule

Access the Assembly Inclusion Rules form.

To link a configured table to an assembly inclusion rule :

1. From the Configurator Setup menu (G3241), choose Assembly Inclusion Rules.
2. On Work With Assembly Inclusion Rules, complete the following fields and click Find to locate the assembly inclusion rule for your configured item:
   - Branch/Plant
   - Configured Item
   - Rule Type
3. Select a row, and choose Insert Before or Insert After from the Row menu.
4. On Assembly Inclusion Edit Group Revisions, as you begin writing the assembly inclusion rule, select a row and then choose Advanced Rules from the Row menu.
5. On Advanced Rule Functions, enter a value in the Table Name field and click OK:
6. On Assembly Inclusion Edit Group Revisions, click OK.

# CHAPTER 4

# Working with Configured Item Revisions

This chapter provides an overview of Configured Item Revisions and calculation processing, and discusses how to:

- Enter orders for configured items.
- Assign common attributes to configured items.
- Enter nonstandard components and price adjustments.
- Work with error messages for configured items.
- Review configured text.

## Understanding Configured Item Revisions

After you have set up the segments, cross-segment editing rules, assembly inclusion rules, configured tables, and media object attachments for a configured item, you can enter orders for the configured item.

The Configured Item Revisions (P3210) form is used to designate the features and options of a configured item on an order. You use Sales Order Entry (P4210), Purchase Orders (P4310), and Manufacturing Work Order Processing (P48013) to enter an order for a configured item. As with any order, you input information in the order header and order detail areas. Once you input the item number and tab off that order line, the system automatically calls and displays Configured Item Revisions. This process occurs because the item number of the configured item is coded as a C stocking type in the Item Master. Thus, the system is programmed to automatically call Configured Item Revisions so that the configured item can be defined for the order.

The processing options for Configured Item Revisions control the display of information on the Configured Item Revisions form.

The three sections to the form are:

- Segment
- Hot Spots
- Configured Item History

The Attribute Filter Field gives you access to the configured items and associated segments at various levels in the parent-configured item when you click on the item number that is shown in the attribute filter field.

The Segments that represent the features and options of the configured item highlighted appear. Several fields are displayed to further define the segments. The user inputs a value for each segment in the Select Answer field. The Select Answer field gives the user access to any user defined codes that might be defined for the segment. The system edits each segment value by using user defined code tables, ranges, and numeric specifications.

The Configured Item History locates previously ordered configurations at any level of a configured item. The history includes information about customers, orders, order types, and branch/plant.

Many configured order line items can share a common attribute. A common attribute that is used in a configured item can be set at the start of an order. The chosen value can be applied as the default to each subsequent line item is entered. This feature is useful in a high attribute selection and high line item order environment. The feature can save time and labor during the order entry process. It also prevents unnecessary errors during order entry. The common attribute can then be revised in the middle of order entry to accommodate changes in customer specifications.

Processing options control the prompting for common attributes. The common attribute can be set to automatically appear at the beginning of order entry (between the order form and the Configured Item Revisions form). It can also be manually selected from a Form exit within Configured Item Revisions.

For example, the furniture industry can use common attributes to configure a sofa. In a configuration for a sofa, a common attribute might be Color. The Color common attribute is associated with the segments for the sofa frame, bottom sofa cushions, sofa arm covers, and the decorative pillows. After the customer picks a color, you can input that value in the attribute field on the Common Attribute form. The color is then applied as the answer to all of the segments that are associated with that particular common attribute.

You can display up to three different hot spot values on the Configured Item Revisions form. The initial hot spots that appear after successful calculation are set by the processing options. To select other hot spot values, click on the description of the hot spot you wish to change and select another hot spot user defined code.

The Configurator system also calculates the weight of a configured item based on the multilevel items that comprise the parent item. You can choose to designate a base weight for the configured item. The weight is calculated as the item is entered within order entry. You must enter the same weight units of measure for each segment that comprises the configured parent item. Weight is calculated by using P rule components only.

Within the order entry process, you use the Validate Configuration feature to process your configured answers as they are entered. The Validate Configuration feature expands the multilevel structure of the configured item. This feature is set up to process when you reset the configuration to the default segment answers, when you return string history, or when you manually click the Validate Configuration button on the Tool menu.

The Validate Configuration functionality uses the cross-segment editing rules to validate feature and option compatibility. After Validate Configuration functionality is performed, the system displays any errors found, and a stop sign at the bottom of the form. You can read the error messages to determine how to fix the configuration choices to create a valid configuration.

If no errors exist and the configuration is valid, the Add to Order Button will be enabled and the hots spots will be populated with values. The system processes derived calculations and assembly inclusion rules according to the segment values.

# Understanding Validate Configuration

During order entry, the Validate Configuration feature verifies Configurator processes level-by-level in the following order:

- Segment agreement

  System processing includes user defined code validation, range checking, alpha versus numeric checking, length checking, and required versus optional checking.

- C assembly inclusion rules

The system processes C rules first because the calculated segment answer might be required to validate the configuration. The calculated segment answer might also be needed to perform additional calculations for the configured item.

- Cross-segment editing rules

  The system validates the configuration before processing the remaining rules.

- P assembly inclusion rules
- Q assembly inclusion rules, as needed

  The system processes Q assembly inclusion rules during Sales Quotes (P4210) (to establish cost) and Order Processing (R31410) (to create the parts list and establish cost), depending upon system setup.

- R assembly inclusion rules, as needed

  The system processes R assembly inclusion rules during Sales Quotes (P4210) (to establish cost) and Order Processing (R31410) (to create the routing and establish cost), depending upon system setup.

- X assembly inclusion rules
- H assembly inclusion rules

## Prerequisites

Before you complete the tasks in this section:

- Set the Sales Order Entry (P4210) processing option for the work order line type to create work orders, or define the W line type in the branch/plant record for each configured item.

  If you leave the processing option blank, the system supplies the line type from the branch/plant.

- Set the processing options for the Sales Order Entry versions that you will use for Sales Quote, Transfer Order Entry, and Direct Ship Order Entry for configured items.
- Set the processing options for the Purchase Order Entry (P4310) version that you will use for configured items.
- Set the processing options for the Work Order Entry (P48013) version that you will use for configured items.
- Set the processing options for Configured Item Revisions (P3210) in the Configurator system.

  Use the Interactive Versions application (GH9011) to define versions and set processing options. The order entry versions that you create and set refer to a version of Configured Item Revisions. These processing options control media objects, cross-segment editing rule processing, form and tree display characteristics, initial hot spot selections, defaults for nonstandard components and price adjustments, defaults for the display of common attributes among configured items, and Component Revision form options.

# Entering Orders for Configured Items

This section provides an overview of configured item order revision, and discusses how to:

- Set processing options for Configured Item Revisions (P3210)
- Enter an order for a configured item
- View configured item attachments during order entry
- Entering an order based on a previously ordered configured item

# Understanding Configured Item Order Revision

If a customer calls and needs to add or change information on an order, you can revise the order for a configured item. The Configurator system also allows you to revise the work order for a configured item.

Revising orders can include the following:

| Revision | Description |
|---|---|
| Changing quantity | The system changes the order quantity and, if you set a processing option, also changes the quantity on the work order. |
| Changing segment value | The system changes the segment values on the order and, if you set a processing option, also changes the segment values on the work order. Changing a segment value might produce new configured components or prices. You might need to run work order processing again. |
| Changing pick date | The system recalculates work order start dates, based on lead times. When you change the pick date for an order, the system supports multilevel back-scheduling for the associated work orders. |
| Purging order lines | The system purges order lines for components that are no longer required after the change. |
| Calculating new order line numbers | The system uses the base line number for the configured item and increments by .001 for each configured component. |
| Canceling an order | When you cancel an order for a configured item, the system cancels the subassemblies and lower-level segments for the item. |
| Reassigning work order numbers | The system retains work orders that are still valid after revising the order. The system might cancel work orders that are no longer required after the change by changing the status code of the work order. |
| Changing the work order cutoff status code | When working with Work Order Entry (P48013), if the work order status is less than the cutoff status, the system changes the work order. If the begin status code is not blank, the system updates the status to what is defined in the processing option.<br><br>If the work order status is greater than or equal to the cutoff status, the system does not change the work order. If the change status code is not blank, the work order status is updated to what you defined in the processing option. |

| Revision | Description |
| --- | --- |
| Placing the order on hold (hold status code) | If the work order status in Work Order Entry (P48013) is less than the cutoff status and the hold status code is not blank, the system updates the work order status to the hold status code that is defined in the processing option.<br><br>If the work order status is greater than or equal to the cutoff status, the system does not update the work order. |
| Canceling the order (cancel status code) | If the work order status is less than the cutoff status and the cancel status code is not blank, Work Order Entry (P48013) updates the work order status to the cancel status code that is defined in the processing option.<br><br>If the work order status is greater than or equal to the cutoff status, the system does not update the work order. |
| Creating new work orders | The program creates a new work order, if required, after the change. |

# Forms Used to Enter Orders for Configured Items

| Form Name | Form ID | Navigation | Usage |
|---|---|---|---|
| Customer Service Inquiry | W4210E | Daily Processing menu (G32), choose Sales Order Entry | You can also use the Purchase Order Entry (P4310) or Work Order Entry (P48013) program to enter an order for a configured item. |
| Sales Order Detail Revisions | W4210A | On Customer Service Inquiry, click Add. | Add information about the customer and the configured item. |
| Configured Item Revisions | W3210B | On Sales Order Detail Revisions, do one of the following:<br>To enter an order, enter values in the fields and click OK.<br>To revise an order, select a row and select Kits/Configurator from the Row menu. Revise the answers and click the Validate Configuration button. | Enter orders for a configured item or revise an order for an existing configured item. |
| Edit Item/Price/Cost | W3210A | On Configured Item Revisions, press the Edit Item/Price/Cost button.<br>To return, click Close. On Configured Item Revisions, click the Validate Configuration button. | After you enter an order, you can review the multilevel structure of your configured item in a navigation tree structure.<br>Items in the tree were added by either a P assembly inclusion rule or Add Component. Prices in the tree were added by an X assembly inclusion rule or Add Price/Cost. The icon next to each line in the tree designates if the line was system-generated from an assembly inclusion rule or user-added. |

# Setting Processing Options for Configured Item Revisions (P3210)

Processing options enable you to specify the default processing for programs and reports.

For programs, you can specify options such as the default values for specific transactions, whether fields appear on a form, and the version of the program that you want to run.

For reports, processing options enable you to specify the information that appears on reports. For example, you set a processing option to include the fiscal year or the number of aging days on a report.

Do not modify EnterpriseOne demo versions, which are identified by ZJDE or XJDE prefixes. Copy these versions or create new versions to change any values, including the version number, version title, prompting options, security, and processing options.

## Defaults

These processing options specify the default information that the system uses during Configured Item Revisions (P3210).

**Hot Spots:**

1. Hot Spot Selection (Top)

A user defined code stored in table 32/HS that indicates the type of information that appears in the Hot spot field, for example, the domestic price, foreign price, or weight.

2. Hot Spot Selection (Middle)

A user defined code stored in table 32/HS that indicates the type of information that appears in the Hot spot field, for example, the domestic price, foreign price, or weight.

3. Hot Spot Selection (Bottom)

A user defined code stored in table 32/HS that indicates the type of information that appears in the Hot spot field, for example, the domestic price, foreign price, or weight.

**User Added Items:**

4. Configurator Print Flag

Use this processing option to determine whether configured parts print on sales orders and work orders. This processing option is used in the Pick Slip, Invoice Print, Bill of Lading, and Print Parts List programs. Values are:

*Y:* Print on the sales and work order. You can also use 1.

*N:* Do not print on the sales and work order. You can also use 0.

*2:* Print on the sales order only.

*3:* Print on the work order only.

**User Added Price/Cost:**

5. Line Type

Use this processing option to control how the system processes lines on a transaction. The line type 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.

This processing option uses line type to group X rule prices added on the fly. Values are:

*S:* Stock item

*J:* Job cost

*N:* Non-stock item

*F:* Freight

*T:* Text information

*M:* Miscellaneous charges and credits

*W:* Work order

## Edits

Use this processing option to specify how the system processes orders with allowed lot status.

**1. Enter Allowed Lot Status Group to Validate** Use this processing option to validate the lot status code against specified lot status group. This processing option allows the sales order system to process configured components (on-hold) with allowed lot status. If the non-blank lot status codes exist in the Allowed Lot Status table (F41081), then the system treats the user defined lot status codes as blank and the on-hold item shall continue through the sales order process.

## Processing

These processing options specify how the system processes and displays values within Configured Item Revisions (P3210).

**Cross Segment Editing:** 1. Error Display

Use this processing option to specify whether to process and display all cross-segment editing errors from calculation functionality. Values are:

*1:* Continue cross-segment editing processes and display all errors.

*Blank:* Stop cross-segment editing processes at the first error

**Media Objects:** 2. Media Object Display

Use this processing option to specify whether to display media objects on the Configured Item Revisions form. This option controls context sensitive display of media objects related to items, segments, and user defined code values. Values are:

*1:* Display media objects.

*Blank:* Do not display media objects.

3. Media Object Display Order

Use this processing option to specify the order in which media objects appear on the Configured Item Revisions form, if there is more than one media object type attached to a configured item or segment. If there is more than one media object of the same type, the first attached object in the selected type will be displayed. Values are:

*1:* Text

*2:* Image

*3:* OLE

*Blank:* Image

**Common Attributes:** 4. Common Attribute Display

Use this processing option to specify whether the system displays common attributes among configured items. Values are:

*1:* Display common attributes without automatic prompt.

*2:* Display common attributes with automatic prompt.

*Blank:* Do not display common attributes.

5. Common Attribute Display Scope

Use this processing option to specify whether to display common attributes specific to the configured item. Values are:

*1:* Display all common attributes.

*Blank:* Display only common attributes used in configuration.

6. 'C' Rules Calculation

Use this processing option to specify whether to perform calculations using C rules for configured items upon entry. Values are:

*Blank:* Perform upon entry

*1:* Omit upon entry

7. Substitute Configured Item Text

---

**Note.** Store and Forward mode disregards this option (always replaces text)

---

Use this processing option to specify whether to substitute Configured Item Text (which exists as a media object) or to append it. Values are:

*Blank:* Append existing text

*1:* Substitute all existing text

### Versions

These processing options specify the versions to be used by the configurator during Configured Item Revisions (P3210).

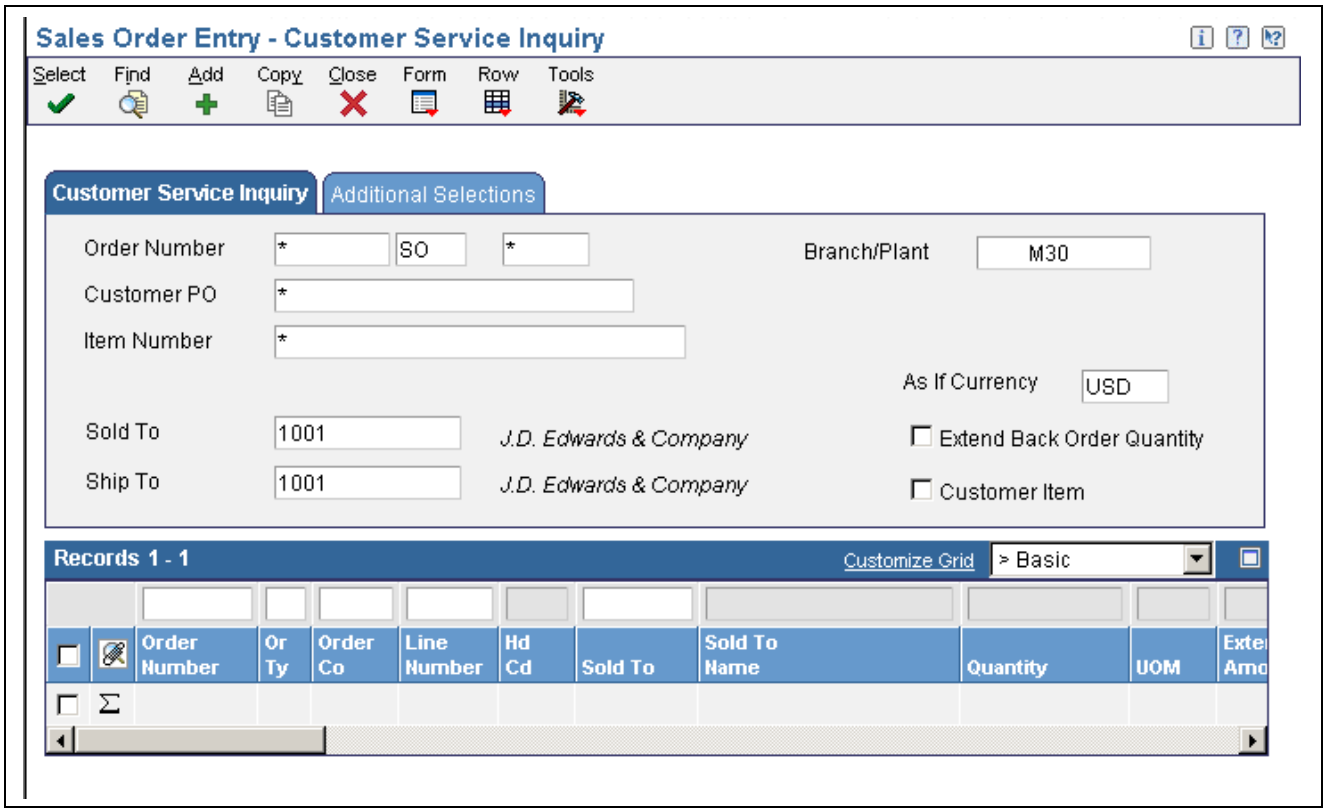
**Versions to be used by Configurator**

1. Transfer Order Version — This version of Transfer Orders will be used if any Transfer Orders are created during the configuration process.

Use this processing option to specify the version of the Transfer Orders program (P4210) that the system uses when it configures the order. Based on the needs of your customers, you can create multiple versions of this program.

## Entering an Order for a Configured Item

Access the Configured Item Revisions form.



Customer Service Inquiry form

To enter an order for a configured item:

1. To accept the default values, click the Validate Configuration button and continue to step 5.
2. To change values for the segments, if there is a UDC table attached to the segment, delect a value from the drop down box. If no UDC is attached. Enter your answer in the Enter Answer column.
3. If you do not receive any errors, click Add to Order

   You cannot complete your order until you correct all hard errors.

## Viewing Configured Item Attachments During Order Entry

Access the Configured Item Revisions form.

To view configured item attachments during order entry:

1. Select the Attachments tab.
2. From the drop down box, select Item, Attribute (segment), or Value.
3. The appropriate media object will display.

## Entering an Order Based on a Previously Ordered Configured Item

Access the Work with Configured String History form.

To enter an order based on a previously ordered configured item:

1. Select the Configured Item History tab.

2. Complete the search fields and click Find.
3. Select a sales order line, choose Display Config. from the Row menu.
4. On Work with Configuration, review the configuration tree and segment values
5. Click Close.
6. On Work with Configured String History, choose a sales order and click Select.

   The configuration information is brought back to the new order where it can be revised or used as is.
7. On Configured Item Revisions, make any necessary changes and click Validate Configuration.

   The values in the Answer field change to those of the order that you selected on Work with Configured String History.
8. If you do not receive any errors, click Add to Order.

# Assigning Common Attributes to Configured Items

This section provides an overview of configured item common attributes and discusses how to assign common attributes to configured items.

## Understanding Configured Item Common Attributes

To better organize your configured items and simplify configurations that are entered during order entry, you can assign common attributes to configured item segments. Common attributes are initially linked to a segment in Configured Item Segments (P3291). You assign common attribute values on the Configurator Common Attributes form.

Common attribute values operate as default answers for each configuration level. For example, a common attribute code defined as Color might have a value Red. With common attributes activated, each configured level with the common attribute code of Color automatically returns the Red value.

You set a processing option to either view common attributes for all configured items or view them as they apply within the current configuration. Additionally, you can change common attribute values during order entry.

If you choose not to set the processing option to automatically prompt for common attributes, you can access Configurator Common Attributes by selecting the Common Attributes Form exit on Configured Item Revisions.

Even if you automatically display common attributes, you can use the Form exit to access the Configurator Common Attributes form during order entry to change the value for all associated segments. On the Configurator Common Attributes form, when you click OK, the Configured Item Revisions form appears, and you can continue to enter the order.

You also have the ability to change a single segment value via the Answer field.

## Prerequisite

Set the processing option for Configured Item Revisions (P3210) to automatically appear to display common attributes.

## Form Used to Assign Common Attributes to Configured Items

| Form Name | Form ID | Navigation | Usage |
|---|---|---|---|
| Configurator Common Attributes | W32944A | From the Daily Processing menu (G32), select Sales Order Entry.<br>On Customer Service Inquiry, click Add.<br>On Sales Order Detail Revisions, enter the required customer and configured item information and click OK. | Assign common attributes to configured items. |

## Assigning Common Attribute Values

Access the Configurator Common Attributes form.

**Common Attribute** A code that identifies and defines a unit of information. It is an alphanumeric code up to 8 characters long that does not allow blanks or special characters such as %, &, or +. You create new data items using system codes 55-59. You cannot change the alias.

**Attribute Value** An answer to the configurator feature and option questions that appear during order entry.

When you define cross-segment editing rules, you compare the segment answers to values to determine invalid configurations. When you define assembly inclusion rules, you create unique configurations by comparing the segment answers to values to assign parts, prices, calculated values, or routing steps.

# Entering Nonstandard Components and Price Adjustments

This section provides an overview of nonstandard components and price adjustments, and discusses how to add nonstandard components and price adjustments.

## Understanding Nonstandard Components and Price Adjustments

When you need to add special parts or prices to further customize a configured item, you can enter nonstandard configured components and price adjustments. Entering nonstandard components and price adjustments allows you to customize your configured item without creating new assembly inclusion rules, tables, or smart parts.

Nonstandard components are priced according to the Kit/Configurator Pricing Method for the configured parent item. Price or cost adjustments are similar to the X assembly inclusion rules that are set up for the configured item. They affect only the sales order, not the work order.

Nonstandard components and price adjustments are added on the Component Revision form. This form allows you to review all of the order components and prices before the line item is confirmed. To review your nonstandard configuration, choose Refresh Tree from the Form menu.

You can delete nonstandard components or price adjustments for your configured parent item. You cannot delete standard components and price adjustments. A nonstandard component or price adjustment can be distinguished from a standard component or price by the icon that precedes it in the navigation tree on the Component Revision form.

---

**Note.** On Configured Item Revisions form, items in the tree are added by the P assembly inclusion rule. Prices in the tree are added by an X assembly inclusion rule. The icon next to each line in the tree designates if the line was system-generated from an assembly inclusion rule or user-added.

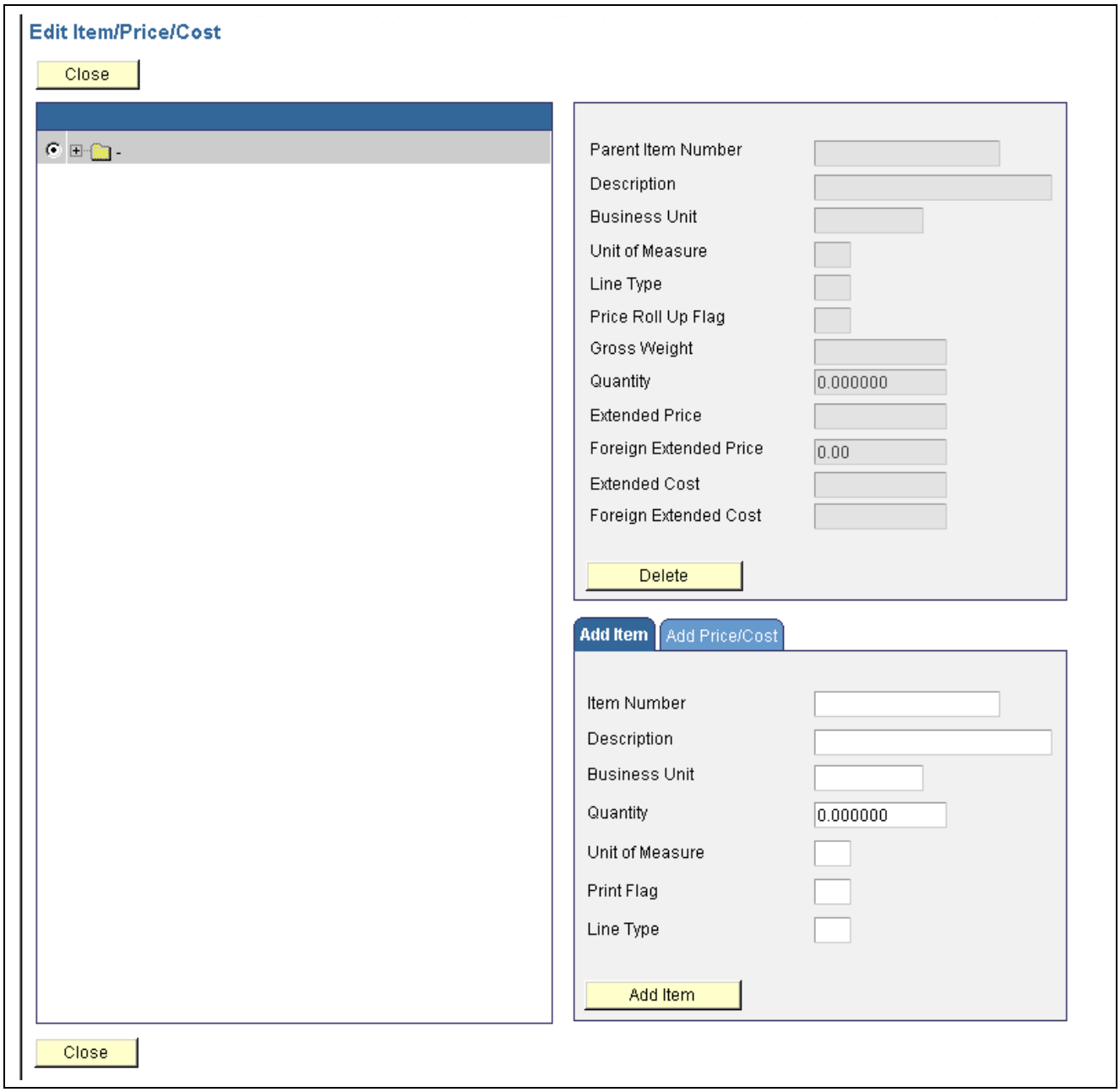
---

## Form Used to Add Nonstandard Components and Price Adjustments

| Form Name | Form ID | Navigation | Usage |
|---|---|---|---|
| Edit Item/Cost/Price | W3210A | From the Daily Processing menu (G32), choose Sales Order Entry.<br>On Customer Service Inquiry, click Add.<br>On Sales Order Detail Revisions, enter the required customer and configured item information and click OK.<br>On Configured Item Revisions, press the Edit Item/Cost/Price button. | Add nonstandard components and price adjustments. |

## Adding Nonstandard Components and Price Adjustments

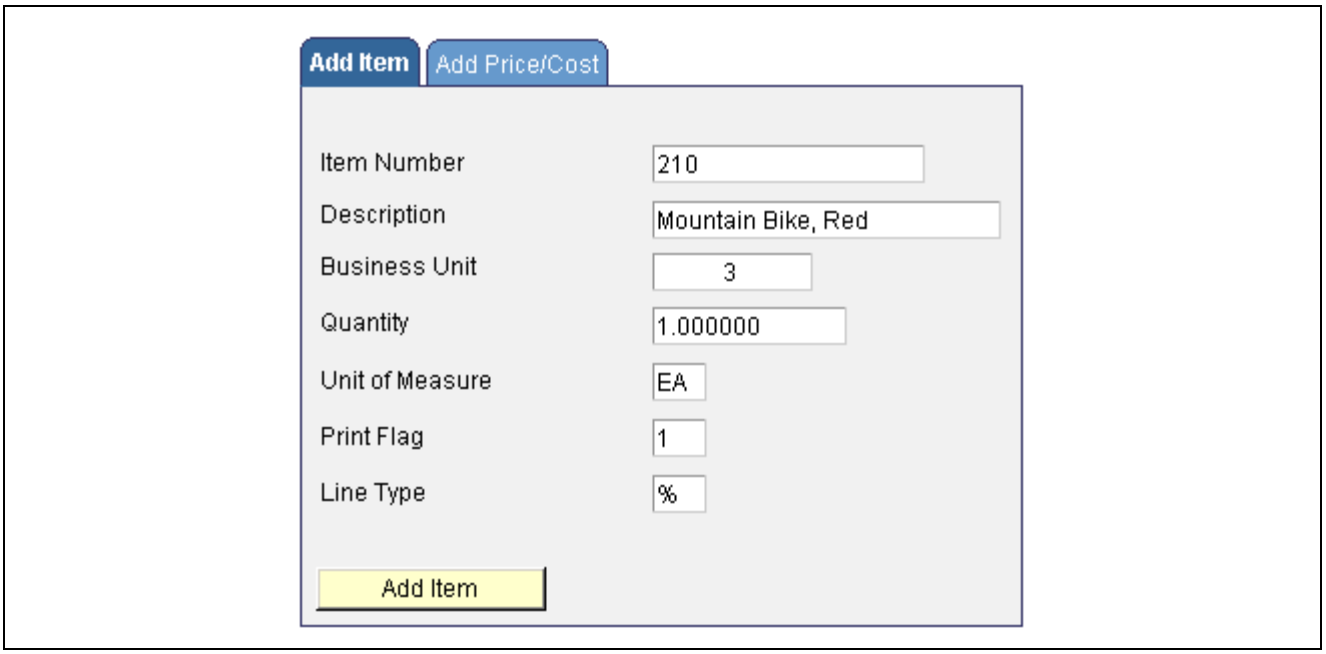
Access the Component Revision form.




Edit Item/Price/Cost form

## Add Component

Select the Add Item tab.




Add Item form

**Print Flag**

A user defined code (32/PF) that indicates whether the system prints the configurator part on the sales order and work order. The system uses the value that you enter in this field to affect programs such as Print Pick Slips (R42520), Print Invoices (R42565), Bill of Lading (R42530), and parts list on Work Order Print (R31415). Values are:

*0:* Do not print the configurator part on the sales order or the work order.

*1:* Print the configurator part on both the sales order and the work order.

*2:* Print the configurator part on the sales order only.

*3:* Print the configurator part on the work order only.

**Line Type**

A code that controls how the system processes lines on a transaction. It controls the systems with which the transaction interfaces, such as General Ledger, Job Cost, Accounts Payable, Accounts Receivable, and Inventory Management. It also specifies the conditions under which a line prints on reports, and it is included in calculations.

Codes include the following:

*S:* Stock item

*J:* Job cost

*N:* Nonstock item

*F:* Freight

*T:* Text information

*M:* Miscellaneous charges and credits

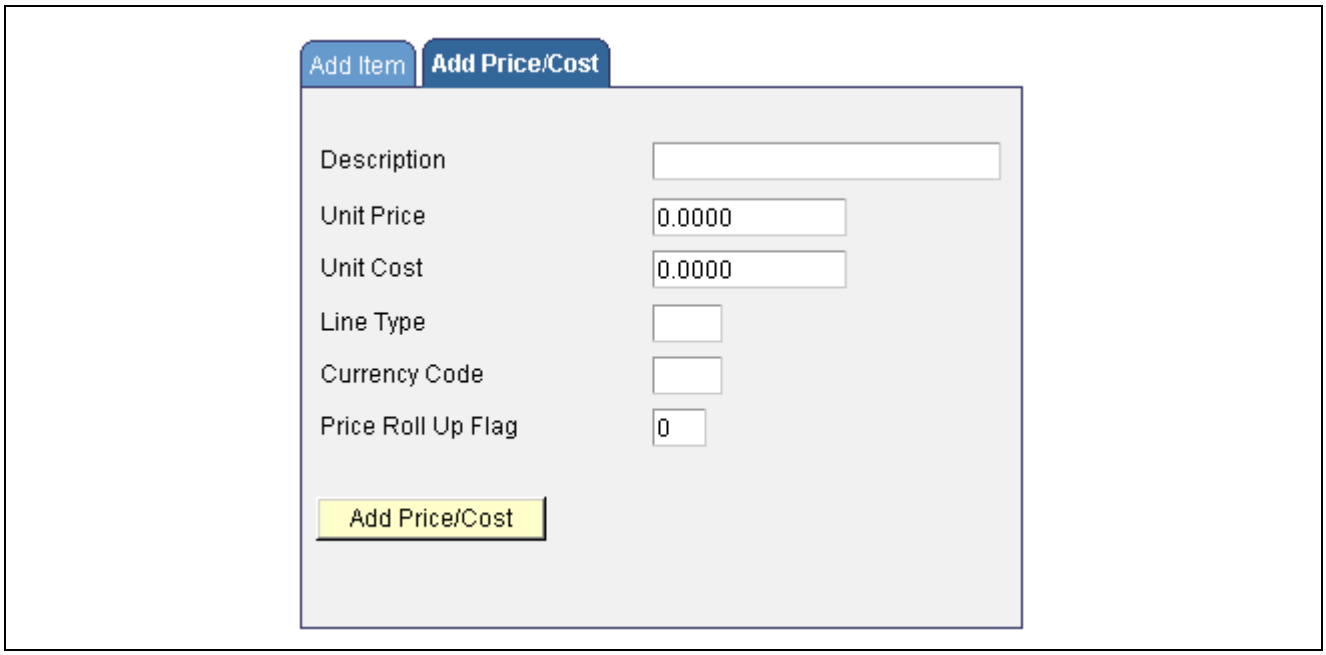
*W:* Work order

**Add Item**

Enter values in the fields on this tab and click the Add Item button to add the component.

### Add Price/Cost

Select the Add Price/Cost tab.




Add Price/Cost form

**Unit Price** 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 Item Base Price File table (F4106).

**Unit Cost** The amount per unit, derived by dividing the total cost by the unit quantity.

**Price Roll Up Flag** A user defined code (32/PP) that indicates whether the price or cost of an add-on is included in the price or cost of the parent configured item. Values are:

*0:* Separate the price or cost of the add-on.

*1:* Include the price or cost of the add-on in the price or cost of the parent item. When you choose this value, the extended price or cost is zero.

---

**Note.** After you finish adding nonstandard components and price adjustments, click Cancel. Then, on Configured Item Revisions, click the Calc button. If you do not receive any errors, click OK. You cannot complete your order until you correct all hard errors.

---

## Working with Configured Item Sales Quotes

Sales quotes are entered in the same way that you enter a sales order, except that the document (order) type is set for sales quotes. You can later convert a sales quote into a sales order.

# Working with Error Messages for Configured Items

This section provides and overview of configured item error messages, and discusses how to correct error messages.

# Understanding Configured Item Error Messages

During the calculation process within order entry, the system verifies the segment values that you enter with the cross-segment editing rules and configured item segments. The system verifies that you have not entered any values that violate the editing rules. If a segment value violates an editing rule, either a hard or a soft error message appears.

Hard error messages indicate significant errors from cross-segment error checking. When you receive a hard error message, you cannot proceed with the order until you correct the error.

Soft error messages do not prevent you from completing the order, but they do provide error information. You can choose either to correct the error or leave it as it is, and the order processes either way.

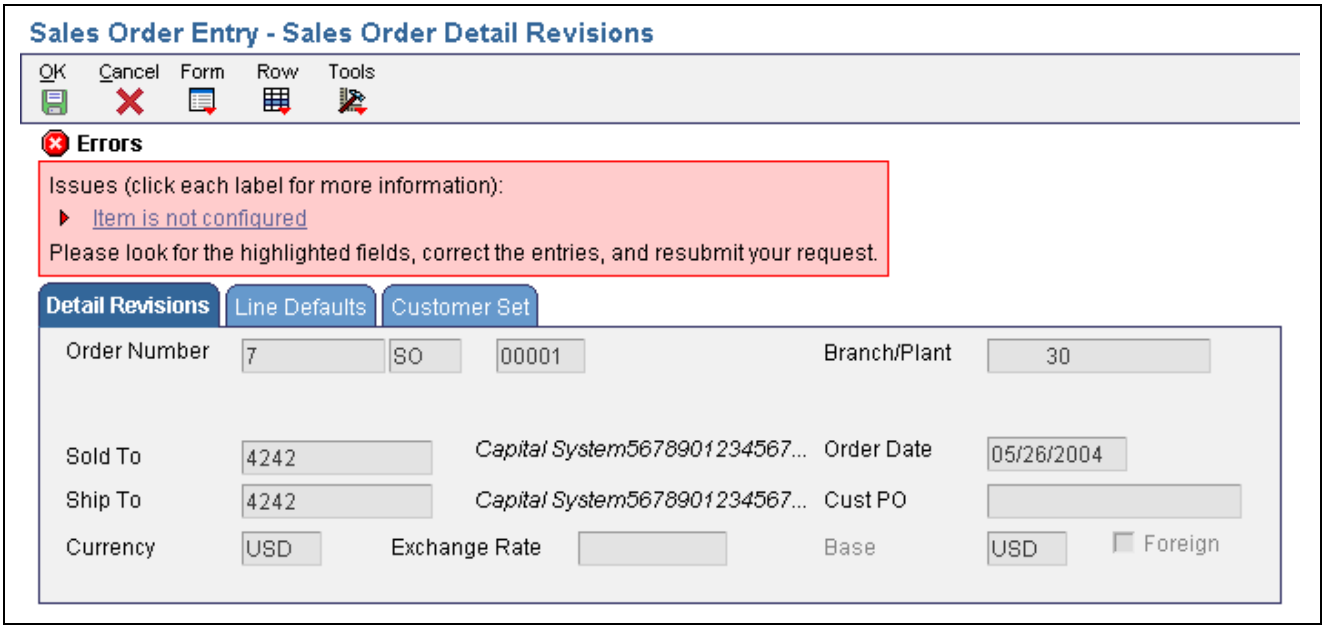
If the system finds errors in cross-segment editing rules, you receive notification that error messages exist after the calculation processes.

# Form Used to Correct Configured Item Error Messages

| Form Name | Form ID | Navigation | Usage |
|---|---|---|---|
| Configured Item Revisions | W3210B | From the Daily Processing menu (G32), choose Sales Order Entry.<br>On Customer Service Inquiry, click Add.<br>On Sales Order Detail Revisions, enter the required customer and configured item information and click OK. | Correct error messages for configured items. |

# Correcting Configured Item Error Messages

Access the Configured Item Revisions form.




Error Messages

To correct error messages for configured items:

On Configured Item Revisions, any errors encountered during Validate Configuration processing appear , and a red stop sign appears on the bottom of the form.

1. Click the Display Errors button to view your cross-segment editing error.
2. To change values for the segments, select a value from the drop down box, or enter a value in the Enter Answer column.
3. When you have finished, click the Validate Configuration button to verify that the error has been corrected.
4. Click Add to Order.

   You cannot complete your order until you correct all hard errors.

# Reviewing Configured Text

This section provides an overview of configured text, and discusses how to review configured text.

## Understanding Configured Text

Configured or generic text for a configured item is displayed in a media object. The generic text generated for a configured item is based on the setup defined on Configured Item Segments (P3291).

Configured text can include the following:

- Part number of the configured parent
- Segment number
- Segment description
- Segment value
- Description of the associated user defined code table value

During order entry, the configurator system generates one copy of text for each configured item and attaches it to the Configurator Master Table (F3201). The generic text can be accessed from a Row menu exit on an inquiry form in an order entry program such as Sales Order Entry (P4210), Purchase Order Entry (P4310), or Manufacturing Work Order Processing (P48013).

Attaching the generic text to table F3201, rather than directly to an order, allows for both greater control of the text and use of the text for each order.

The Substitute Configured Item Text processing option on the Processing tab of the Configured Item Revisions program (P3210) controls how the generic text is generated. The processing option gives the user the option either to replace all of the text every time a change is made or to append the new text to the bottom of the existing text.

## Form Used to Review Configured Text

| Form Name | Form ID | Navigation | Usage |
|---|---|---|---|
| Customer Service Inquiry | W4210E | From the Daily Processing menu (G32), choose Sales Order Entry.<br>On Customer Service Inquiry, select an order and select Confg Generic Text form the Row menu. | Review the text for a configured item. The information that displays in the media object is defined in Configured Item Segments. |

## Reviewing Configured Text

Access Customer Service Inquiry.

1. On Customer Service Inquiry, locate the sales order for the configured item.
2. Select an order in the detail area
3. From the Row menu, choose Confg Generic Text.
4. On Media Objects, review the text for the configured item order.

The information that displays in the media object was defined in Configured Item Segments.

## Setting Processing Options for Configured Item Specifications (P32942)

These processing options specify how the system processes and displays values within Configured Item Specifications (P32942).

### Defaults

These processing options specify the default information that the system uses during Configured Item Specifications (P32942).

**Hot Spots:**

1. Hot Spot Selection (Top)

A user defined code stored in table 32/HS that indicates the type of information that appears in the Hot spot field, for example, the domestic price, foreign price, or weight.

2. Hot Spot Selection (Middle)

A user defined code stored in table 32/HS that indicates the type of information that appears in the Hot spot field, for example, the domestic price, foreign price, or weight.

3. Hot Spot Selection (Bottom)

A user defined code stored in table 32/HS that indicates the type of information that appears in the Hot spot field, for example, the domestic price, foreign price, or weight.

**User Added Items:**

4. Configurator Print Flag

Use this processing option to determine whether configured parts print on sales orders and work orders. This processing option is used in the Pick Slip, Invoice Print, Bill of Lading, and Print Parts List programs. Values are:

*Y:* Print on the sales and work order. You can also use 1.

*N:* Do not print on the sales and work order. You can also use 0.

*2:* Print on the sales order only.

*3:* Print on the work order only.

**User Added Price/Cost:** 5. Line Type

Use this processing option to control how the system processes lines on a transaction. The line type 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. This processing option uses line type to group X rule prices added on the fly. Values are:

*S:* Stock item

*J:* Job cost

*N:* Non-stock item

*F:* Freight

*T:* Text information

*M:* Miscellaneous charges and credits

*W:* Work order

## Processing

These processing options specify the processing information that the system uses during Configured Item Specifications (P32942).

**Cross Segment Editing:** 1. Error Display

Use this processing option to specify whether to process and display all cross-segment editing errors from calculation functionality. Values are:

*1:* Continue cross-segment editing processes and display all errors.

*Blank:* Stop cross-segment editing processes at the first error.

**Component Revision:** 2. Pre-expand Tree

Use this processing option to control the tree display of a configured item on the Component Revisions form. Values are:

*1:* Load the component revisions tree pre-expanded.

*Blank:* Load the component revisions tree without expanding.

**Media Objects:** 3. Media Object Display

Use this processing option to specify whether to display media objects on the Configured Item Specifications form. This option controls context sensitive display of media objects related to items, segments, and user defined code values. Values are:

*1:* Display media objects.

*Blank:* Do not display media objects.

4. Media Object Display Order

'1' - Text

'2' - Image

'3' - OLE If left blank, '2' will be used

Use this processing option to specify the order in which media objects appear on the Configured Item Specifications form, if there is more than one media object type attached to a configured item or segment. If there is more than one media object of the same type, the first attached object in the selected type will be displayed. Values are:

*1:* Text

*2:* Image

*3:* OLE Blank Image

**Configured Item Tree Display:**

5. Primary Item Number

Use this processing option to control how the tree structure appears on the Configured Item Specifications form. Values are:

*1:* Suppress the primary item number on the tree structure.

*Blank:* Do not suppress the primary item number on the tree structure.

6. Branch/Plant

Use this processing option to control how the tree structure appears on the Configured Item Specifications form. Values are:

*1* Suppress branch/plant on the tree structure.

*Blank* Do not suppress branch/plant on the tree structure.

7. Item Description

Use this processing option to control how the tree structure appears on the Configured Item Specifications form. Values are:

*1:* Suppress the item description on the tree structure.

*Blank:* Do not suppress the item description on the tree structure.

8. Quantity

Use this processing option to control how the tree structure appears on the Configured Item Specifications form. Values are:

*1:* Suppress the quantity on the tree structure.

*Blank:* Do not suppress the quantity on the tree structure.

9. Unit of Measure

Use this processing option to control how the tree structure appears on the Configured Item Specifications form. Values are:

*1:* Suppress the unit of measure on the tree structure.

*Blank:* Do not suppress the unit of measure on the tree structure.

10. Component Revision Price

’1’ = Suppress

’2’ = Foreign only

’3’ = Order Mode

’4’ = Both Domestic and Foreign Blank - Domestic only

Use this processing option to specify whether to display a particular price such as domestic, foreign, or order mode on the Component Revision form. Values are:

*1:* Suppress the price.

*2:* Display only foreign price.

*3:* Display only order mode price.

*4:* Display both domestic and foreign prices.

*Blank* Display domestic price only.

11. Component Revision Cost

’1’ = Suppress

’2’ = Foreign only

’3’ = Order Mode

’4’ = Both Domestic and Foreign

Blank - Domestic only

Use this processing option to specify whether to display a particular cost such as domestic, foreign, or order mode on the Component Revision form. Values are:

*1:* Suppress the cost.

*2:* Display the foreign cost only.

*3:* Display the order mode cost only.

*4:* Display both the domestic and foreign costs.

*Blank* Display the domestic cost only.

12. Component Revision Weight

Use this processing option to specify whether the system displays the weight of your configured items on the Component Revision form. Values are:

*1:* Do not display weight of configured items.

*Blank:* Display weight of configured items.

**Price/Cost on Tree:**

13. Price/Cost Description

Use this processing option to control how the tree structure appears on the Configured Item Specifications form. Values are:

*1:* Suppress the price/cost description on the tree structure.

*Blank:* Do not suppress the price/cost description on the tree structure.

14. Unit Price

Use this processing option to control how the tree structure appears on the Configured Item Specifications form. Values are:

*1:* Suppress the unit price on the tree structure.

*Blank:* Do not suppress the unit price on the tree structure.

15. Price Rollup Flag

Use this processing option to control how the tree structure appears on the Configured Item Specifications form. Values are:

*1:* Suppress the price rollup flag on the tree structure.

*Blank:* Do not suppress the price rollup flag on the tree structure.

16. Unit Cost

Use this processing option to control how the tree structure appears on the Configured Item Specifications form. Values are:

*1:* Suppress the unit cost on the tree structure.

*Blank:* Do not suppress the unit cost on the tree structure.

17. Common Attribute Display

’1’ - On, No Automatic Prompt

’2’ - On, Automatic Prompt Blank - Off

Use this processing option to specify whether the system displays common attributes among configured items. Values are:

*1:* Display common attributes without automatic prompt.

*2:* Display common attributes with automatic prompt.

*Blank* Do not display common attributes.

18. Common Attribute Display Scope

*1:* Display all Common Attributes

*Blank:* Display active Common Attributes

Use this processing option to specify whether to display common attributes specific to the configured item. Values are:

*1:* Display all common attributes.

*Blank:* Display only common attributes used in configuration.

19. ’C’ Rules Calculation

*1:* Omit upon entry

*Blank:* Perform upon entry

Use this processing option to specify whether to perform calculations using C rules for configured items upon entry. Values are:

*Blank:* Perform upon entry

*1:* Omit upon entry

20. Substitute Configured Item Text

*1:* Substitute all existing text

*Blank:* Append existing text

---

**Note.** Store and Forward mode disregards this option (always replaces text)

---

Use this processing option to specify whether to substitute Configured Item Text (which exists as a media object) or to append it. Values are:

*Blank:* Append existing text

*1:* Substitute all existing text

## Versions

These processing options specify the versions to be used by the configurator during Configured Item Specifications (P32942).

**1. Transfer Order Version - This version of Transfer Orders will be used if any Transfer Orders are created during the configuration process.**

Use this processing option to specify the version of the Transfer Orders program (P4210) that the system uses when it configures the order. Based on the needs of your customers, you can create multiple versions of this program.

# CHAPTER 5

# Entering Orders for Configured Items

This chapter provides an overview of configured item order entry, and discusses how to:

- Convert sales quotes to sales orders for a configured item.
- Work with credit orders for configured items.
- Store and forward sales orders for configured items.

## Understanding Configured Item Orders

This section provides overviews of the items and processes that are used for configured item orders.

### Configured Item Order Entry

After you set up the segments, cross-segment editing rules, assembly inclusion rules, configured tables, media object attachments, and Configured Item Specifications (P32942), the Configurator system is ready to process orders for your configured item. Orders for configured items can be created in Sales Order Entry (P4210), Purchase Orders (P4310), Manufacturing Work Order Processing (P48013), and in Engineer to Order.

The Sales Order Management system supports the following order processing for configured items:

- Sales Orders
- Sales Quotes
- Credit Orders
- Direct Ship Orders
- Transfer Orders
- Interbranch Orders
- Combination Orders
- Store & Forward Orders

You can also create sales proposals within the Sales Order Entry program. Sales proposals contain information such as sales configuration, quotation, company's financial highlights, product information, pricing and discount information, and product availability. You can use an automated document generation system to gather the various pieces of information-such as sales, accounting, marketing, and inventory-from different departments.

---

**Note.** The Configurator system supports most preference profiles. However, it does not support preference profiles for multibranch commitments.

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The Procurement system supports regular purchase orders for configured items. It also supports purchase orders for configured items that are created at the time of sale order entry for direct ship and transfer orders.

The Work Order Management system supports entering work orders for configured items directly through the work order entry process.

The Engineer to Order system supports purchase orders and work orders for configured items. The Project Workbench (P31P001) gives you access to Manufacturing Work Order Processing and Purchase Orders.

---

**Note.** To support the successful creation and completion of the various order types, you must ensure that your configured item is set up appropriately in each branch/plant.

---

## Sales Orders for Configured Items

You enter a sales order when your customer calls and requests a configured item. The sales order is entered, and the item is configured according to customer specifications. For a configured item with a work order line type, the corresponding work orders are created. The item is then built and shipped to the customer.

This section provides overviews of:

- Setup considerations for configured item sales orders.
- Technical considerations for configured item sales orders.

## Technical Considerations for Configured Item Sales Orders

Consider the following:

| If you are using? | You must consider? |
|---|---|
| Multicurrency | The system applies pricing (X) rules to foreign currency sales orders. The system processes price adjustments as a base currency amount and converts the amount to a different currency amount, if necessary.<br><br>During setup, you must define the pricing (X) rule in domestic currency. During sales order entry, the system converts the domestic price to the foreign currency. |
| Line Item Discounting | The system supports line item discounting for configured items at sales order entry. |
| Availability Checking | The system does not support availability checking of configured components. |
| Commitments | The system supports sales order commitments for work order line types for all items.<br><br>The Sales Order Entry (P4210) program commits component parts to the sales order at order entry time. The commitments move to the parts list when Order Processing (R31410) is run. Thus, work order generation does not need to run immediately upon order entry to get the commitments.<br><br>The Order Processing program commits component parts that are related to the configured parent. |

| If you are using? | You must consider? |
|---|---|
| Substitutes/Cross Reference | Substitutes are not set up for configured items because no standard bill of material exists.<br>The cross-reference functionality can be set up and used. It works at Sales Order Entry. |
| Additional order processing | For configured items, the Sales Order Management system does not support the following additional order processing:<br>• Backorders<br>• |

## Setup Considerations for Configured Item Sales Orders

To correctly process the sales order for your configured item, you must set the Sales Order Entry (P4210) processing option for the work order line type to create work orders. Alternatively, you can define the W line type in the branch/plant record for each configured item. If you leave the processing option blank, the system supplies the line type from the branch/plant.

Setting the line type to W allows the corresponding work order headers for the configured item to generate after acceptance of the sales order. Thus, the configured item can be properly manufactured and shipped to the customer.

---

**Note.** To successfully complete a sales order for a configured item, you must have a working knowledge of the Sales Order Management system and its integration with other PeopleSoft EnterpriseOne systems.

---

## Sales Quotes for Configured Items

You enter a sales quote when your customer requires a formal price quote prior to actually placing an order. You enter a sales quote in the same way that you enter a sales order. However, specific configurator constants and processing option settings must be set up to support the configured item sales quote. You enter quote orders to:

- Provide information about price and availability of items.
- Record the quantity and price quotes for future reference.
- Hold the quote until the customer authorizes the order.
- Honor an obligation for a quoted price for a period of time.

When the customer confirms the order, you convert the quote order into an actual sales order.

---

**Note.** When a sales quote is entered, the cost for the transfer of a parent configured item or a component does not accumulate.

---

## Setup Considerations for Configured Item Sales Quotes

To successfully process a sales quote for a configured item, you must set configurator constants and processing options appropriately.

You must specify the document type for sales quotes in the Document Type List field in Configurator Constants. This user defined code is used to define valid document types for sales quotes in your company. The Document Type List value is generally set to QT.

You set the Cost Sales Quotes flag in Configurator Constants to specify how the sales quote cost will be accumulated.

You need to know that costing of configured sales quotes differs from costing of configured sales orders. Typically, the cost of a configured item only accumulates when the Order Processing program (R31410) is run to create the configured item work orders that are related to a sales order.

However, special functionality exists that allows the costs to accumulate for a configured item sales quote. Configurator Constants can be set to accumulate costs when a configured item sales quote is entered. This method of costing a configured item is an exception to the normal costing process and only works for configured sales quotes.

The Cost Sales Quotes field can be set as follows:

- If yes, all costs accumulate from P, Q, R, and X (cost) assembly inclusion rules at the time of sales quote entry.
- If no, only the costs of the P and X (cost) assembly inclusion rules accumulate at the time of sales quote entry.

Order Processing calculates the cost of the configured item based on the P, Q, R, and X (cost) assembly inclusion rules.

Verify that the order type for sales quotes has been set up in the user defined code table 40/BT (Blanket Order Types). The order type is generally SQ.

You now set the processing options for sales quotes, which is a version of Sales Order Entry (P4210).

On the Defaults tab, set the Order Type to your sales quote type, which is typically SQ.

On the Commitment tab, review the Activate Availability Checking field to verify that you have specified how sales quotes affect inventory availability.

The Commit to Quantity 1 or Quantity 2 field on the Commitment Tab should be set to a value of 1 or 2 to prevent work order headers from being created for the sales quote. It is usually set to 1 for quote orders. This field must not be blank for quote orders.

---

**Note.** To successfully complete a sales quote for a configured item, you must have a working knowledge of the Sales Order Management system and its integration with other PeopleSoft EnterpriseOne systems.

---

## Credit Orders for Configured Items

You use credit orders when a customer returns goods that you might return to inventory, or when you receive back damaged goods that you cannot return to inventory. In both cases, you need to issue the necessary credits and make adjustments for the returned merchandise.

If you previously created a sales order and your customer now wants to return the goods, you can use a credit order to manage the return process. You enter credit orders in the same way that you enter sales orders.

In Sales Order Processing, the two methods available for entering credit orders are:

- Entering credit orders manually
- Entering system-generated credit orders (create a credit order from history)

Since configured items have unique setup and processing requirements, the same holds true for creating credit orders. Not all sales order processing methods for creating credit orders are available when using configurator.

The manual entry of credit orders process is not supported for configured items. Ensuring that the original sales information for the parent-configured item is brought into the associated credit order is impossible.

Creating a credit order from history (a system-generated credit order) is the preferred method for configured credit order processing. When you create a credit order from history, you retrieve the original sales order information. This information is especially important for configured items because of the relationship of the parent-configured item, configuration identifier, location, lot number, and price. This method ensures that you get the correct order information for the parent-configured item that is being returned.

Regarding item price: the system issues the customer credit for the amount, based on the unit price that the customer actually paid. This price might be different from the current price. The system retrieves the order information from the S.O. Detail Ledger File table (F42199).

To support the creation of a credit order for a configured item, specific system setups and processing option settings need to be set. This setup includes not only the setup of the credit order, but also the setup of the sales order so that needed sales order history information is stored by the system.

A specific process must be followed during the initial input of a configured item sales order to ensure the successful input of a credit order later. In addition, a specific process must be followed to correctly process credit orders for configured items.

## Setup Considerations for Configured Item Credit Orders

To successfully create a credit order for a configured item, you must verify certain system setups.

You must verify that the Order Activity Rules (P40204) for the document type and line type combination for a sales order are set to record the appropriate information to history. In Order Activity Rules, for your sales order type and work order line type, ensure that the status for Ship Confirmation is set to update the Sales Ledger. This process writes a record to the history table, which includes important information, such as the lot number and location of the parent configured item.

You must set up a document type in Document Type Maintenance (P40040) for credit orders. The Document Type is usually CO.

You must set up a line type for credit orders. The Line Type is usually C.

In Line Type Constants (P40205), ensure that the line type used for the credit order is set to an Inventory Interface of Y. Also, ensure that the Reverse sign checkbox is checked, which puts the item back into inventory.

You must set up the Order Activity Rules for the document type and line type combination for the credit order. In Order Activity Rules, for the credit order, order type and credit line type, ensure that the appropriate order activity rules have been set up.

Create a version of Sales Order Entry (P4210) for credit orders, and set the processing options appropriately.

---

**Note.** To successfully complete a credit order for a configured item, you must have a working knowledge of the Sales Order Management system and its integration with other PeopleSoft EnterpriseOne systems.

---

## Configured Item Credit Orders Process

To ensure the successful input of a credit order, complete the following process:

1. Enter a sales order for the configured item using Sales Order Entry (P4210).
2. Process the associated configured item work orders by running Order Processing (R31410).
3. Complete the configured item work orders including the parent-configured item. This action includes issuing inventory, reporting hours and quantities, and performing a completion.
4. Ship confirm the configured item in Shipment Confirmation (P4205).
5. Run Print Invoices (R42565).

6. Update customer sales in Sales Update (R42800).

   Verify that the processing options are set to purge details to history for the header and detail. On the Update Tab, both the Purge to Sales Detail History File and Purge to Sales Header History fields should be Blank.

7. Enter a credit order from history.
8. Ship confirm the credit order.

   At this point, the material should be added back to inventory in the same location and lot number as the original sales order.

## Direct Ship Orders for Configured Items

A direct ship order is the sale of an item that you purchase from a supplier, who then sends the item directly to your customer.

When you enter a direct ship order, the system simultaneously creates a sales order for the customer and a purchase order for the supplier. The purchase order specifies that you want the supplier to ship the item directly to your customer.

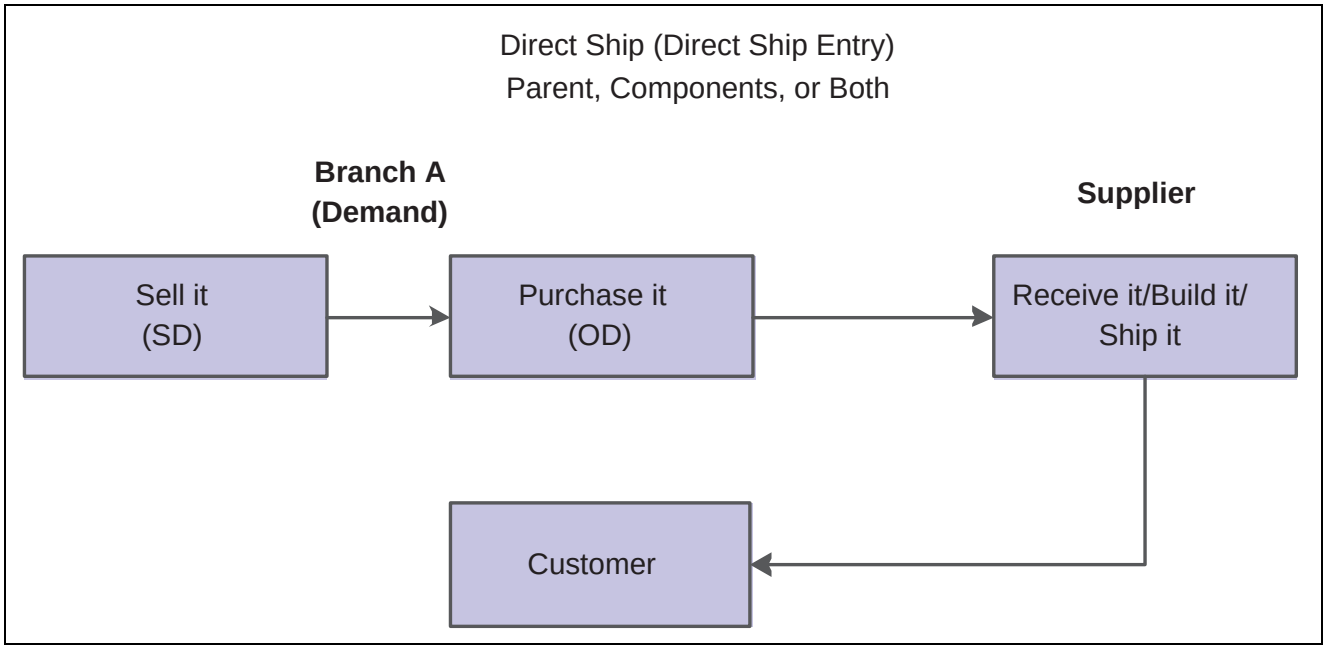
During order entry, the system verifies the item number; but it does not update quantities or check availability.

For configured items, direct ship orders work for the parent-configured item, as well as a component of the parent-configured item.

In a direct ship order for a parent-configured item, the sales order is used to configure the item and, later, to invoice the customer. The purchase order is sent to the supplier, who builds the parent-configured item and ships it to the customer.

In a direct ship order for the sale of a configured item and direct ship of a component, the sales order is used to configure the item, build it, and ship it to the customer. The purchase order is sent to the supplier who builds the component of the configured item and ships it to the customer.

The component of the parent-configured item could be a standard manufactured component, subassembly, or a configured subassembly.




Configured Direct Ship Order

## Setup Considerations for Configured Item Direct Ship Orders

To successfully process a direct ship order for a parent-configured item or a component of the parent-configured item, you must set up the items appropriately.

For any components of the configured item that will generate a direct ship order type, you set the Transaction Type field in Assembly Inclusion Rules (P3293).

Create a version of Sales Order Entry (P4210) for direct ship order entry and set the processing options appropriately. Set the processing options for your version of Purchase Orders (P4310) that will be used with sales order entry to generate the direct ship orders.

The supplier who is used to create the purchase order for a component of a configured item is pulled from the Supplier Number field in the item branch/plant record.

---

**Note.** To successfully complete a direct ship order for a configured item, you must have a working knowledge of the Sales Order Management and Procurement systems, and their integration with other PeopleSoft EnterpriseOne systems.

---

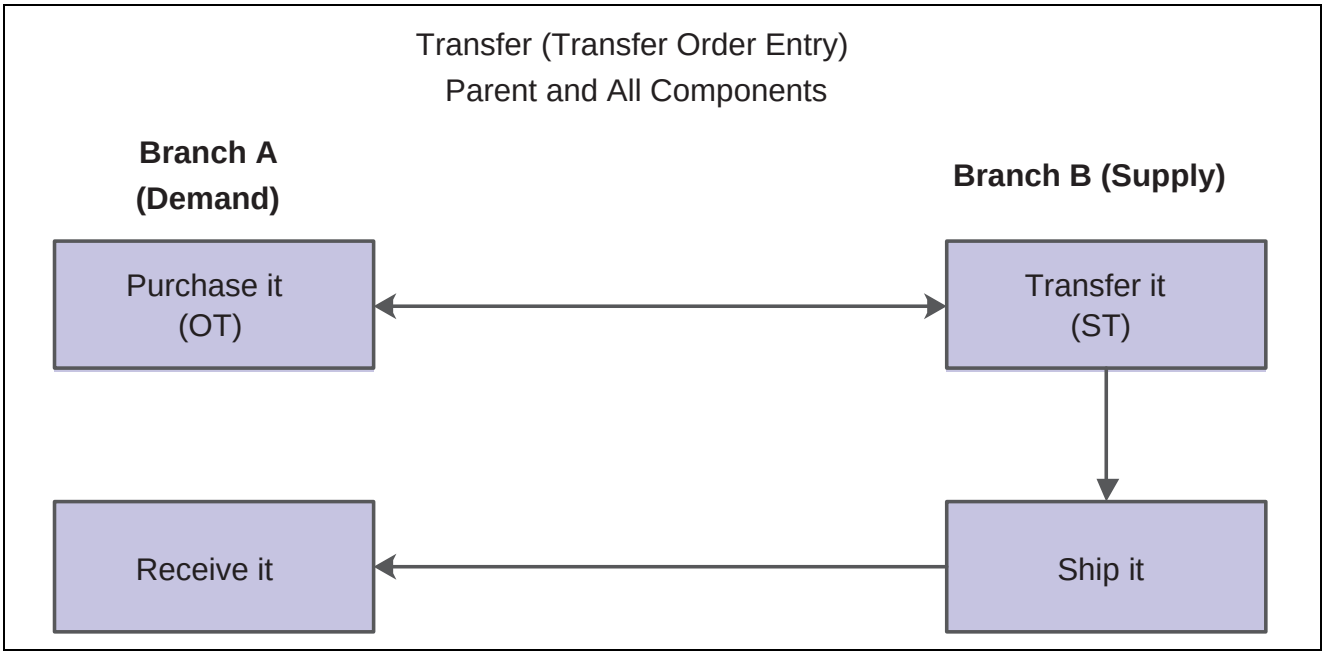
## Transfer Orders for Configured Items

A transfer order ships inventory between branch/plants within your company. When you enter a transfer order, the system creates supporting purchase orders and sales orders that are used to maintain accurate inventory.

You have the ability to transfer configured items between branches. You use Transfer Order Entry version of Sales Order Entry (P4210) to create transfer orders for configured items.

When you enter an order for a configured item directly through Transfer Order Entry, everything on the order is transferred. Thus, the complete parent-configured item is transferred.

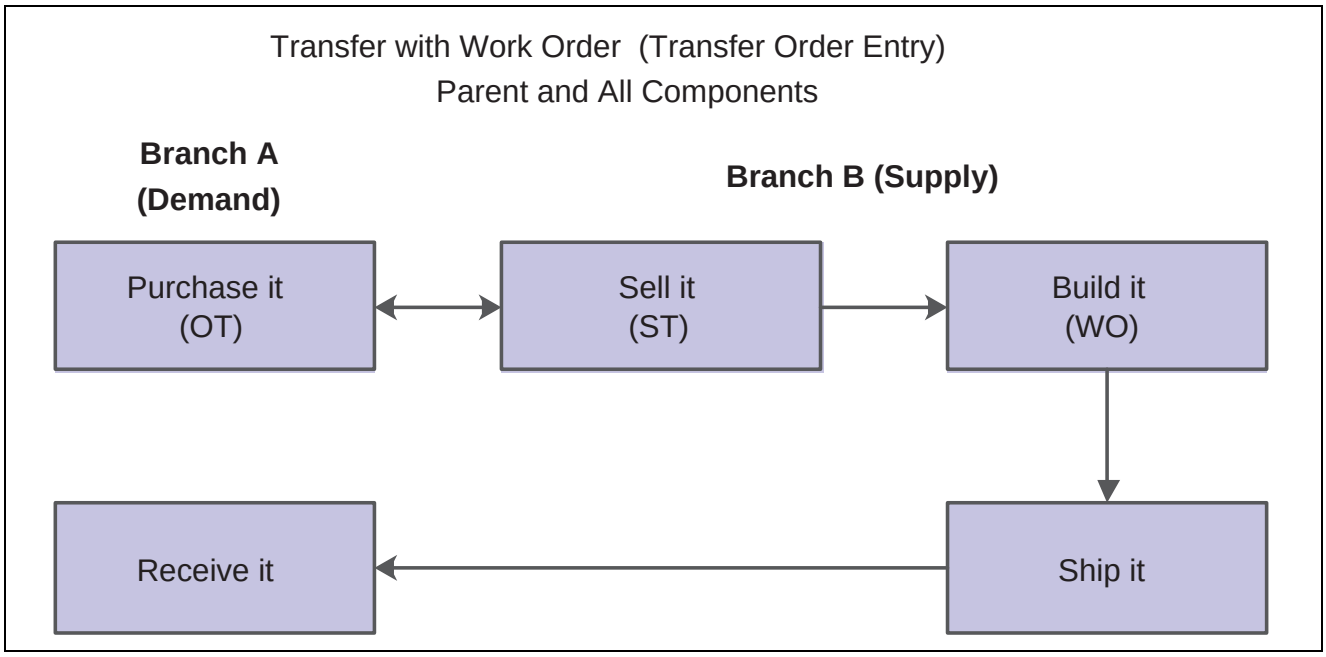
In the transfer order scenario, Branch A has requirements for a configured item that is in Branch B. This configured item consists of the parent and all components. Transfer Order Entry (P4210) is used to configure the item on a purchase order. A corresponding sales order for the configured item is sent to Branch B. The configured item is shipped from Branch B to Branch A, where it is received and stocked in inventory.




Transfer Orders

In some instances, Branch B might have to build the configured item before it can be shipped to Branch A.

The following graphic illustrates the step of generating work orders to manufacture the configured item before it is shipped to Branch A:




Transfer Orders with Work Orders

The system also supports transfer orders for components of the parent-configured item. The component of the parent-configured item could be a standard manufactured component, subassembly, or a configured subassembly. Although the setup requirements vary, the functionality is the same.

---

**Note.** Transfer orders are processed in the same way as a normal sales order, including the processing of P and X assembly inclusion rules.

---

## Setup Considerations for Configured Item Transfer Orders

To successfully process transfer orders for a parent-configured item, you must set up the items appropriately.

On Configured Item Information (F3290) in Configured Item Segments (P3291), you set the Transaction Type for the configured item. The transactions type indicates to the system that this configured item will generate a transfer order.

Also, verify the branch/plant setting.

Create a version of Sales Order Entry (P4210) for transfer order entry and set the processing options appropriately. Set the processing options for your version of Purchase Orders (P4310) that will be used with sales order entry to generate the transfer orders.

---

**Note.** On the processing options, the Cost or Base Price Markup on the Process tab is supported for configured items.

---

To create transfer orders for a component of the parent-configured item, use the stock line type, usually S, on the order for the parent-configured item. This action drives transfers for the components of the configured item.

For any components of the configured item that generate a transfer order, you set the Transaction Type field in Assembly Inclusion Rules (P3293). Also, verify that the Component Branch is set up for your components.

When setting the processing options for Configured Item Specifications (P32942), identify a version of Sales Order Entry (P4210) to use to create orders for the components that require transfer orders.

**Note.** To successfully complete a transfer order for a configured item, you must have a working knowledge of the Sales Order Management and Procurement systems, and their integration with other PeopleSoft EnterpriseOne systems.

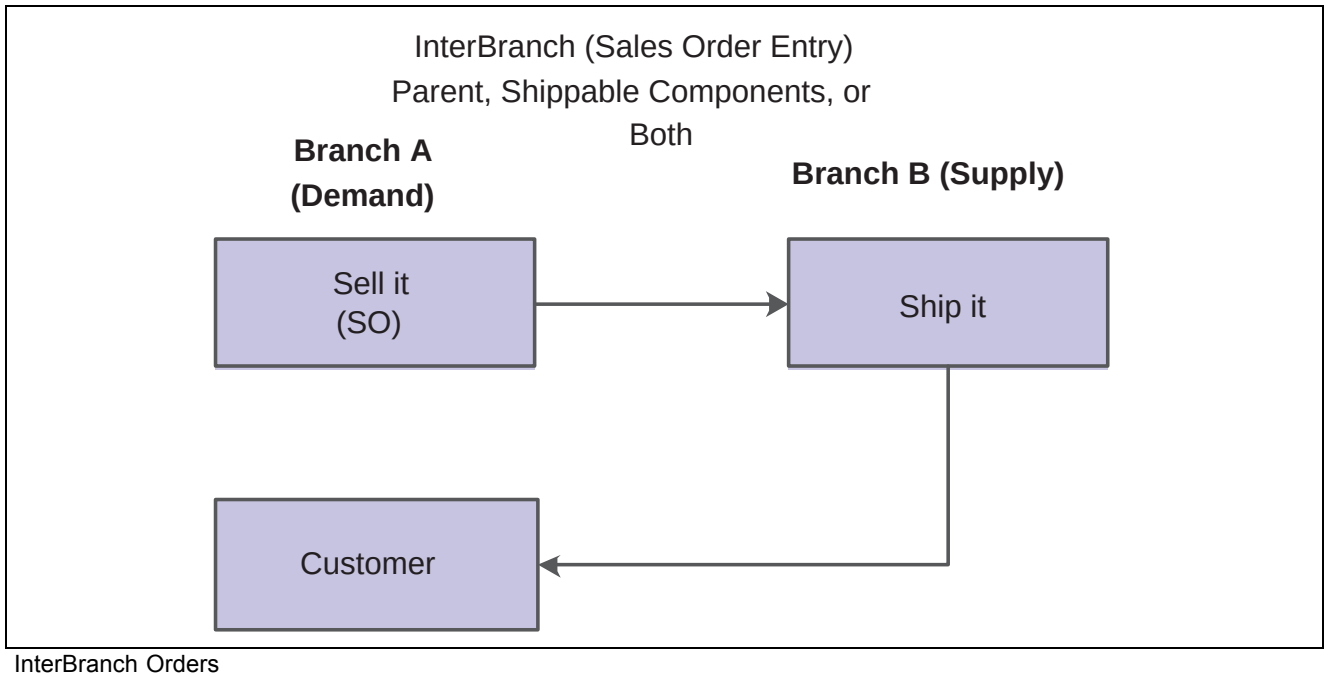
## Interbranch Orders for Configured Items

Interbranch orders allow you to direct ship an item to your customer from another branch of your company. You have the ability to do interbranch orders for configured items.

The sale and interbranch that takes place between Branches A and B could be for the parent-configured item or a component of the parent-configured item. The component of the parent-configured item could be a standard manufactured component, subassembly, or a configured subassembly.

In the case of a sale and interbranch of a parent-configured item, Branch A uses Sales Order Entry (P4210) to order and configure the item, based on customer request. However, Branch B supplies the parent-configured item. Thus, when the order for the configured item is entered, the detail Branch defaults to Branch B. Branch B then ships the item to the customer.

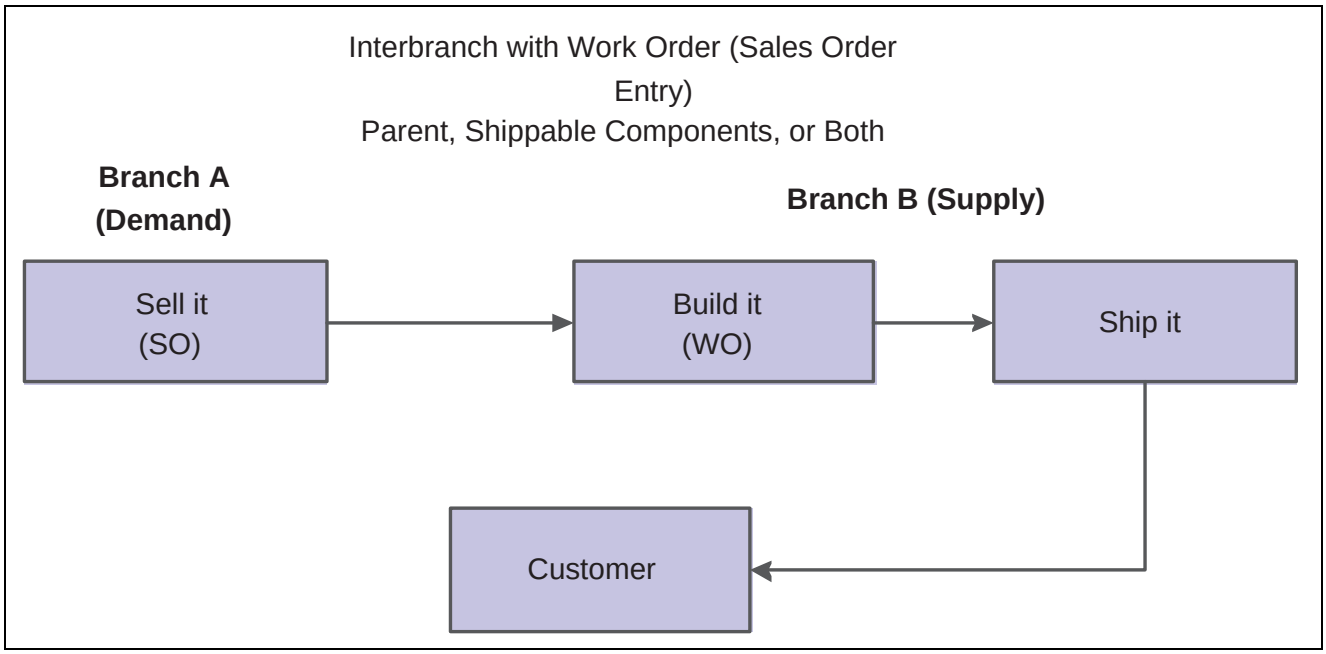
In the case of a sale involving an interbranch of a component of a parent-configured item, Branch A uses Sales Order Entry to configure and order the parent-configured item. The parent-configured item is built in Branch A; however, a component is supplied by Branch B. The component item is shipped separately from the parent item. Thus, Branch A ships the parent item to the customer; and Branch B ships the component item to the customer.




InterBranch Orders

In some instances, Branch B might have to build the parent-configured item or component of the configured item before it can be shipped to the customer.

The following graphic illustrates the step of generating work orders to manufacture the item before it is shipped to the customer:




InterBranch Orders with Work Orders

## Setup Considerations for Configured Item Interbranch Orders

You can create interbranch orders for configured items. To successfully process interbranch orders for a parent-configured item or a component of the parent-configured item, you must set up the items appropriately.

In Configured Item Segments (P3291), verify the branch/plant setting of your configured item.

For any components of the configured item that will generate an interbranch order, you set the Transaction Type field in Assembly Inclusion Rules (P3293). Also verify that the Component Branch is set up for your components.

Set the processing options for Sales Order Entry (P4210) and the Transfer Order Entry version of Sales Order Entry.

---

**Note.** On the processing options, the Cost or Base Price Markup on the Process tab is supported for configured items.

---

For configured item interbranch orders, no additional orders are created at order entry time. Configurator follows the processing option for the running version of Sales Order Entry for the cost or base price markup.

---

**Note.** To successfully complete an interbranch order for a configured item, you must have a working knowledge of the Sales Order Management system and its integration with other PeopleSoft EnterpriseOne systems.

---

## Combination Orders for Configured Items

The system gives you the ability to use various order types with one another to create a combination of orders for configured items. Although many combinations of orders can exist, examples of sales and transfer orders are outlined below.

The sale and transfer that takes place between Branches A and B could be for the parent-configured item or a component of the parent-configured item. The component of the parent-configured item could be a standard manufactured component, subassembly, or a configured subassembly.

In the case of the sale and transfer of a component of a parent-configured item, Branch A uses Sales Order Entry to configure and order the parent-configured item. The parent-configured item is built in Branch A; however, a component is supplied by Branch B. The purchase order is sent to Branch B. Branch B uses the accompanying sales order to pick the configured item and ship it to Branch A. Branch A receives the item, issues the item, and completes the build of the parent-configured item. Branch A then ships the complete parent-configured item to the customer, using the original sales order that was created in Sales Order Entry.

---

**Note.** The version of Sales Order Entry that you use must reference the correct version of Configured Item Specifications (P32942) to call the correct Transfer Order Entry version of Sales Order Entry (P4210).

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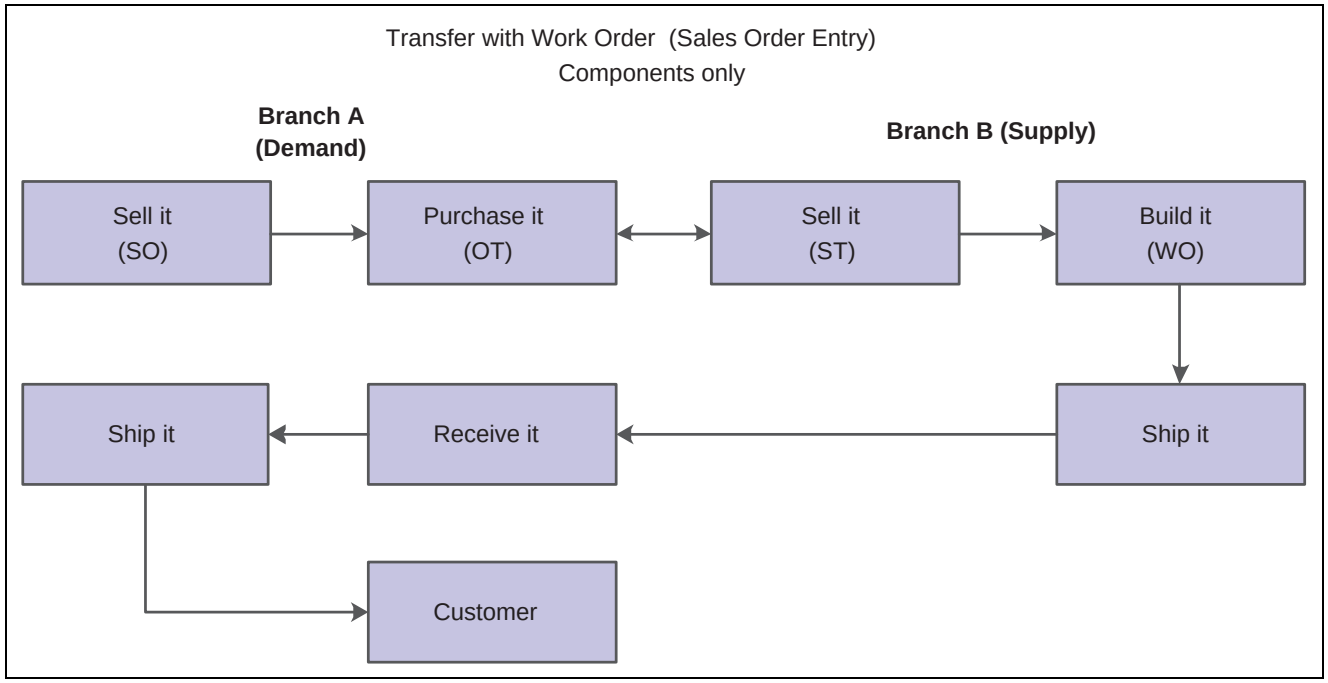
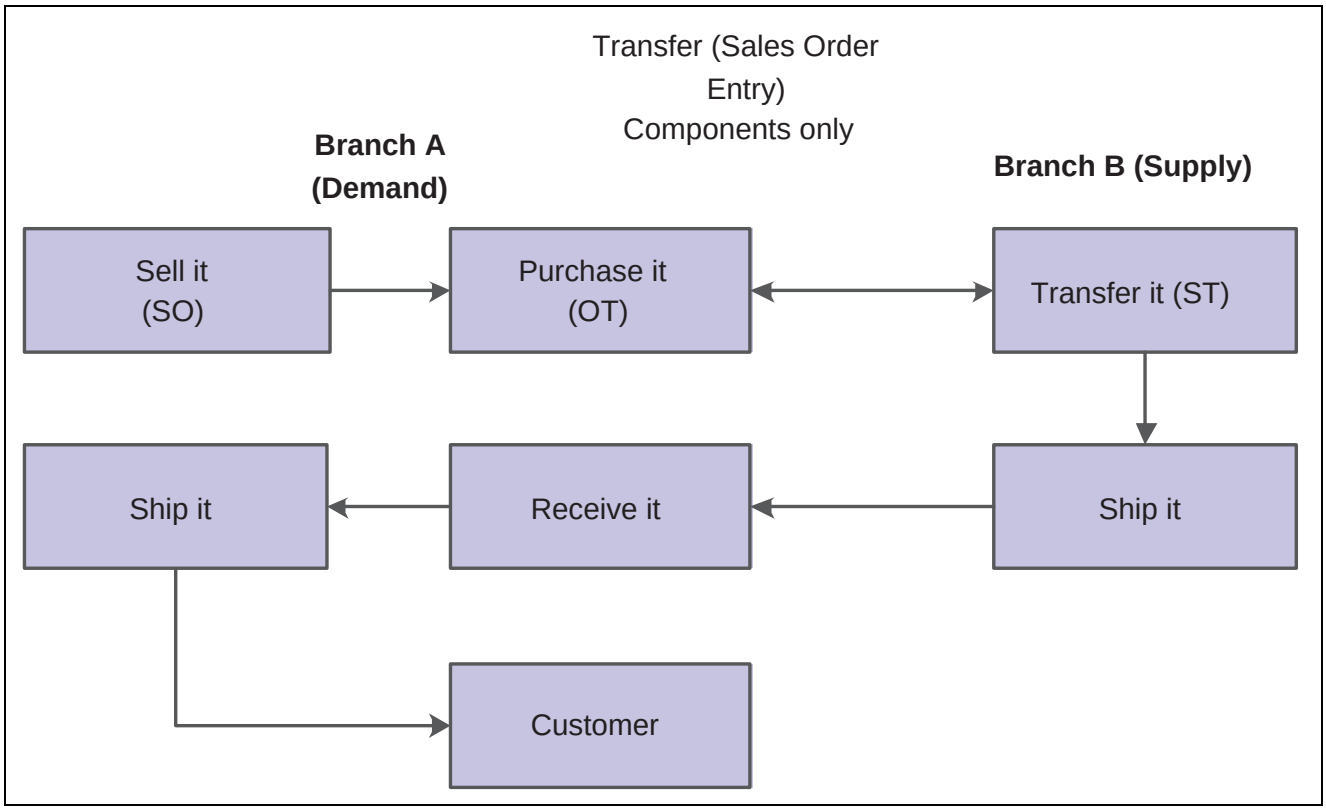



Combination Transfer Order with Work Order

In some instances, Branch B might have to build the item before it can be shipped to Branch A.

The following graphic illustrates the step of generating work orders to manufacture the item before it is shipped to Branch A:




Combination Transfer Order with Work Orders

## Setup Considerations for Configured Item Combination Orders

To successfully process combination orders for a parent-configured item or components of the parent-configured item, you must set up the items appropriately and also verify the branch/plant setting.

For any components of the configured item that will generate an order, you set the Transaction Type field in Assembly Inclusion Rules (P3293). Also, verify that the Component Branch is set up for your components.

Create the required versions of Sales Order Entry (P4210) and Purchase Order Entry (P4310). Set the processing options appropriately.

When setting the processing options for Configured Item Specifications (P32942), identify a Transfer Order Entry version of Sales Order Entry that can be used to create orders for the components that require transfer orders.

---

**Note.** To successfully complete combination orders for a configured item, you must have a working knowledge of the Sales Order Management, Procurement, and Shop Floor Management systems, and their integration with other PeopleSoft EnterpriseOne systems.

---

## Sales Order Batch Processing for Configured Items

After the system creates orders, you can either process the sales orders as they exist or reprocess the configured item using rules that are defined on the server. To process the sales orders, you must run the Batch Order Edit and Creation program on the Additional Order Processes menu (G4212). The system edits the information that you enter and creates all of the orders at one time. To ensure the integrity of the data, the system creates sales orders for batch orders only after the editing process is complete.

Any of the orders that contain errors remain in the batch receiver tables as unprocessed. You must correct this information, and then rerun the Batch Order Edit and Creation program.

On Work With Batch Versions - Available Versions, select an existing version or create a new version to process batch sales orders.

When processing the sales orders that you uploaded, use the same program that you use to process batch input sales orders.

For configured items, the system performs the following tasks:

1. Accepts the configured item as entered or revalidates the configured item by retrieving segment values
2. Retrieves segment order values from the Configured Item Segments table (F3291)
3. Processes cross-segment editing rules and assembly inclusion rules
4. Stores information in the appropriate sales order and configurator tables
5. Supports availability checking for stocked configured items
6. Reports errors, including:
   - Segment UDC values
   - Segment range
   - Required segments
   - Alphanumeric segment requirements
   - Cross-segment editing rules
   - Assembly inclusion rules
7. Creates a configured sales order for transactions with no errors

You can upload prices from the PC or recalculate them with the Sales Order Batch Transaction Editor version of the Batch Order Edit and Creation (R4210Z) program. If you upload prices, existing prices are overridden.

When you connect to the server, you can review errors and batch status codes for each transaction. The following batch status codes identify where orders are in the process:

1. The transaction is available for processing.
2. The transaction contains errors.
3. The system is processing the transactions.
4. The upload transmission is active.
5. The transaction is unavailable and waiting for server response.
6. Complete. The transactions are updated to the sales order header and detail files on the server.

You should correct errors with the server version of the Store and Forward Sales Order Entry version of the Sales Order Entry program (P4210), and then rerun the Batch Order Edit and Creation program.

## Purchase Orders for Configured Items

You enter a purchase order for a configured item when you must send configured item specifications to suppliers.

Purchase Orders (P4310) can be accessed from a menu or the Project Workbench (P31P001) in the Engineer to Order system. The input of a purchase order for a configured item is similar to the input of a sales order.

Purchase Orders can be executed to display the Order Heading or Order Detail form. After the heading information is entered, the configured item is entered in the detail section. Once the configured segments are answered and validated via Configured Item Specifications (P32942), the Purchase Order Entry form is returned.

A stock line type, usually S, is used on the purchase order.

Purchase orders for configured items differ from sales orders in that purchase orders do not have components in the configuration that generate purchase order detail lines. The purchase order has a single line containing the parent-configured item only. The purchase order could be for a configured subassembly of the parent-configured item.

X assembly inclusion rules are processed for a configured purchase order, but all costs are rolled into the cost of the parent-configured item.

No automatic inventory search is performed even if the Configurator Constants are set to perform the search.

For configured purchase orders, the Add Component and Add Price/Cost tabs on the Component Revision form in Configured Item Specifications are not accessible.

A media object is attached to the line of the purchase order. The media object contains the generic configured text as set up in Configured Item Segments (P3291). This attachment is used to communicate the configuration to the supplier.

The Configurator Costing Method field in Item Master is used by the purchase order to cost the configured item on the order. Additionally, Advanced Pricing can be used to price the configured item. However, no general ledger entries are created.

As an example, suppose that Branch A needs to stock a configured item. Purchase Order Entry is used to order and configure the item. The purchase order is sent to the supplier, who then ships the configured item to Branch A. Branch A receives the configured item into inventory.

Purchase orders are also created at the time of sales order entry for transfer, direct ship, and combination orders for configured items.

During PO Receipts (P4312), the configuration ID and lot number are linked to the purchase order. You can receive the configured item to stock or to a sales order.

## Setup Considerations for Configured Item Purchase Orders

To correctly process the purchase order for your configured item, you must set the Purchase Orders (P4310) processing option for the stock line type. Alternatively, you can define the S line type in the branch/plant record for each configured item. If you leave the processing option blank, the system supplies the line type from the branch/plant.

You must also set the processing option to call the correct version of Configured Item Specifications (P32942).

In the Item Master, you can set the Configurator Costing Method field to facilitate costing the configured item on a purchase order. Additionally, Advanced Pricing can be used to price the configured item. However, no general ledger entries are created.

---

**Note.** To successfully complete a purchase order for a configured item, you must have a working knowledge of the Procurement system and its integration with other PeopleSoft EnterpriseOne systems.

---

## Work Orders for Configured Items

You enter a work order for a configured item when you want to build a configured item. The configured item could be intended to fill an order, or it can be put into inventory for future use.

During sales order entry, work order headers are created for associated configured items based on system setup and processing option settings. Once created, the work order headers are used in the shop floor management process to manufacture the configured item. Work orders for configured items can also be created directly in Manufacturing Work Order Processing (P48013), which can be accessed from a menu or the Workbench in the Engineer to Order system.

The input of a work order for a configured item is similar to the input of a regular work order. Creation of a work order for a configured item is initiated from Work Order Entry. The parent-configured item is input on the work order, and Configured Item Specifications (P32942) is called to answer and validate the configured segments. Once the configuration is accepted, the Work Order Entry form is returned. Work orders are created for child-configured items, if necessary.

A media object is attached to the line of the work order. The media object contains the generic configured text as set up in Configured Item Segments (P3291).

The work order entry process for configured items rolls up cost but not price.

## Setup Considerations for Configured Item Work Orders

To process the work order for your configured item, you must set the Manufacturing Work Order Processing (P48013) processing option for Document Type. You define the document type that to use for work orders.

You must also set the processing option to call the correct version of Configured Item Specifications (P32942).

In the Branch/Plant, verify that the line type of each configured item is the work order line type.

---

**Note.** To successfully complete a work order for a configured item, you must have a working knowledge of the Product Data Management and Shop Floor Management systems, and their integration with other PeopleSoft EnterpriseOne systems.

---

## Orders for Configured Items in Engineer to Order

Engineer to Order supports the move from mass production to a product of one production methodology. In this engineer-to-order environment, project management becomes of prime importance, given the amount of unknown information with which to deal. ETO supports the full lifecycle of typical project-oriented operations, which includes the Initiation, Planning, Execution and Control, and Close phases of a project.

In ETO, you can enter a work order or purchase order for a configured item. The Project Workbench (P31P001) gives you access to Manufacturing Work Order Processing (P48013) through the Row menu. You can also attach existing work orders for a configured item to a project.

Purchase Orders (P4310) is accessed from the Project Workbench by the Row menu to Part List Revision. During the configuration of a purchase order in ETO, P and X assembly inclusion rules are evaluated.

You can enter an order for the parent-configured item, also called root or top-level configured item, or a configured subassembly of the parent.

---

**Note.** On Configured Item Specifications (P32942), the Inventory Search menu option is disabled for ETO. In ETO, all inventory is project-specific, and must be manufactured or purchased specifically for the project.

---

## Adding New Work Orders for a Configured Item to a Project

On Project Workbench (P31P001), you can add a new work order for a root-configured item. Once the work order is entered, you enter specifications for the configured item by choosing Configurator WO from the Row menu. Configured Item Specifications (P32942) is called, and the configuration for the item can be set.

Configurator creates work orders for the child configured items, if necessary. Configurator also associates the generated child configured work orders to the ETO project.

The result is work orders that are created for the configured item and its configured components, as well as parts lists and routings.

---

**Note.** The system does not allow the addition of any other order types, such as Summary or Manufacturing, as children to the root configured work order or any of its children.

---

### Attaching Existing Work Orders for a Configured Item to a Project

You have the ability to attach a pre-existing set of configured work orders to an ETO project via the Project Workbench (P31P001). The configured work orders must have been created using Manufacturing Work Order Processing (P48013). Additional criteria must also be met:

- If the work order is a configured work order, it must be the root or top-level order.
- The configured work order cannot already be associated with a project.
- The work order can have no material issued to its parts list.
- The work order can have no activity reported against it.

You cannot attach a pre-existing set of configured work orders to an ETO project if the orders were created using Sales Order Entry (P4210). If the configured work orders created from a sales order are attached to an ETO project, two sets of sales orders could possibly exist against the work order. The first would be the original sales order, and the second would be the sales order against which the configured item can be shipped from the Project Workbench. To avoid any issues, configured work orders created from sales order cannot be attached to an ETO project.

### Viewing a Configuration Entry for a Project

After committing the work order records from the Project Workbench (P31P001) and Configured Item Specifications (P32942) programs, you can view the specifications for the root configured work order and all its children by using Work with Segment Values (P32983).

### Setup Considerations for Configured Item Orders in Engineer to Order

Orders for configured items can be used in Engineer to Order, once the configurator system is set up.

---

**Note.** To successfully complete an order for a configured item in Engineer to Order, you must have a working knowledge of the Product Data Management, Shop Floor Management, Procurement, and Engineer to Order systems; and their integration with other PeopleSoft EnterpriseOne systems.

---

### Order Modification for Configured Items

The extensive functionality and flexibility in the software makes change management an important consideration during system setup and the definition of business processes. The system supports linking multiple order types for configured items; and although system controls do exist in some areas (such as status codes), you need to know that the majority of order change management must be handled through business processes and, possibly, manual intervention.

## Prerequisite

Set the processing options for Configured Item Specifications (P32942) in the Configurator system.

# Entering a Sales Quote for a Configured Item

This section provides an overview of the sales quote process and discusses how to convert a sales quote to a sales order for configured items.

## Understanding a Sales Quote for a Configured Item

If you created a sales quote and your customer authorizes the purchase of the quoted items, you can use the sales quote to create a sales order.

In Sales Order Processing, three methods are available for converting a sales quote to a sales order:

- Creating a sales quote
- Releasing a quote order
- Converting a sales quote to a sales order

Since configured items have unique setup and processing requirements, the same holds true for creating a configured item sales quote. The automatic creation of a sales quote order is supported for configured items. Releasing sales quote to sales order functionality is supported for configured items.

Converting sales quote to sales order is the preferred process for configured quote processing. The converting sales quote method has the logic to keep the configuration link intact. Thus, when the sales quote is converted to a sales order, the new sales order includes the link, insuring that you can get back into the configuration after sales order creation.

To support the creation of the sales order from the sales quote for the configured item, specific processing options must be set prior to the conversion process.

### Setup Considerations for a Sales Quote for a Configured Item

To successfully convert a sales quote into a sales order for a configured item, you must set the sales quote entry processing options for your version appropriately. You use your regular version of Sales Quote (P4210) to convert the quote to an order.

On the Defaults tab, you must set the Order Type to your sales order type, which is typically SO.

Set the Line Type to W to generate work order headers for the configured item.

On the Duplication tab, set the Order Type to a non-quote document type. Typically, it is set to SO.

On the Commitment tab, set the Commit to Quantity 1 or Quantity 2 field to blank. This field must be blank for sales orders to ensure that the appropriate work order headers are created at sales order entry.

During sales quote entry, this processing option was set to a value of 1 or 2 to prevent work order headers from being created for the sales quote.

---

**Note.** To successfully complete a conversion from a sales quote to a sales order for a configured item, you must have a working knowledge of the Sales Order Management system and its integration with other PeopleSoft EnterpriseOne systems.

In addition, PeopleSoft suggests that you use your regular version of the Sales Quote program to convert sales quotes to sales orders for configured items.

---

## Converting Sales Quotes to Sales Orders for Configured Items

To convert a sales quote to a sales order for a configured item:

1. From the Daily Processing menu (G32), choose Sales Quote.
2. On Customer Service Inquiry, locate the sales quote.
3. Select the sales quote and click select.
4. Click OK.

   Process the sales order.

# Working with Credit Orders for Configured Items

This section discusses how to:

- Enter configured item credit orders.
- Adjust inventory for configured items.
- Enter credit memos for configured items.

## Entering Configured Item Credit Orders

To enter a credit order for a configured item:

1. From the Additional Order Processes menu (G4212), choose Credit Orders From History.
2. On Customer Service Inquiry, click Add.
3. On Sales Order Detail Revisions, choose Credit Memo from the Form menu.
4. On Work With Sales Ledger Inquiry, enter the sales order number from which to create the credit order and click Find.
5. Highlight the parent item line (parent configured item).

   **Note.** This line must be created at the point of ship confirm. It has the proper lot number, which will ensure the proper configuration identifier and price.

6. Click Select Line on the Row exit.

   **Important!** Click Select Line only once. You do not exit to any other form; the screen blinks but no other change is indicated.

7. On Work With Sales Ledger Inquiry, click Close.
8. On Sales Order Detail Revisions, click OK.

   The system creates the credit order.

## Adjusting Inventory for a Configured Item

If you do not want to create a credit order for a configured item, an alternative exists. The alternative consists of performing an inventory adjustment and entering a credit memo for the customer.

An inventory adjustment is performed on the parent-configured item to adjust it back into stock. The stocked configured item can then be re-sold.

---

**Note.** Before performing these steps, you might need to create automatic accounting instructions (AAIs) to support the financial transactions. You might also need to create a new document type to keep track of the transactions.

---

See Adjusting Inventory in the Inventory Management Guide for additional information.

To enter an inventory adjustment for a configured item:

1. From the Inventory Master/Transactions menu (G4111), choose Adjustments.
2. On Work With Inventory Adjustments, click Add.
3. On Inventory Adjustments, complete the following fields in the header:
   - Branch/Plant
   - Transaction Date
   - Document Number
   - Document Type
   - G/L Date
   - Explanation
4. Complete the following fields in the detail area:
   - Item Number
   - Quantity
   - UM
   - Branch/Plant
5. Highlight the row and take the Row exit to Select from history, which displays the order history for the item.
6. On Work with Configured String History, highlight the appropriate order for use in the inventory adjustment and click Select.
7. On Inventory Adjustments, complete the following fields and click OK:
   - Location
   - Lot/Serial

   The system processes the transaction and displays a document number, document type, and batch number for the transaction.

## Entering Credit Memos for Configured Items

After the parent-configured item has been adjusted into inventory, you create a credit memo for the customer. The memo gives the customer credit for the return of the configured item.

See Standard Invoice Entry in the Accounts Receivable Guide for instructions to complete this task, and additional information about entering credit memos.

# Storing and Forwarding Sales Orders for Configured Items

This section provides an overview of storing and forwarding sales orders, and discusses how to:

- Create orders for configured items that you store and forward.
- Upload configured item sales orders to the server.

## Understanding Sales Order Storage and Forwarding for Configured Items

Store and forward sales order processing provides an efficient way to integrate a field sales force into the sales order management process. Store and forward sales orders ensure accuracy and timeliness. With store and forward, the field sales force can create sales orders on a PC and upload them to your server. If you are at a remote site and do not have a dedicated line with which to access the server, a more productive and cost-effective process might be to create sales orders on your PC during normal business hours. Then you can upload them to the server for processing during off-peak hours.

**Note.** The store and forward process only works for a regular sales order.

When you create sales orders that you store and forward, the system edits and validates each sales order, based on the information that you downloaded from the tables. It also creates a transaction control record for each sales order, assigns it a status of 1 (ready to process), and stores it in the Transaction Control File table (F0041Z1).

For configured items, the system performs the following task:

- Stores segments in the Configurator Segment Detail table (F3211)
- Prices, costs, and discounts the configured item
- Processes cross-segment editing rules and assembly inclusion rules
- Attaches configured text
- Stores configured item information in the Sales Order Header File (F4201) and the Sales Order Detail File (F4211) tables
- Stores configuration ID history information on the PC
- Stores configurator information in a variety of S/32 files, such as F3201, F3211, F3215, and F3216
- Supports adding nonstandard components and price adjustments
- Supports base pricing and discounting

The Store and Forward Sales Order process does not support the following for configured items:

- Order changes after you have updated transactions on the server
- Availability checking of stocked configured items from remote clients
- Line splitting for configured item availability

After you enter a store and forward sales order, the system transfers the header information to the table F4201 and the detail information to table F4211. Configuration information is stored in table F3211. The information remains in those tables until you are ready to process the orders.

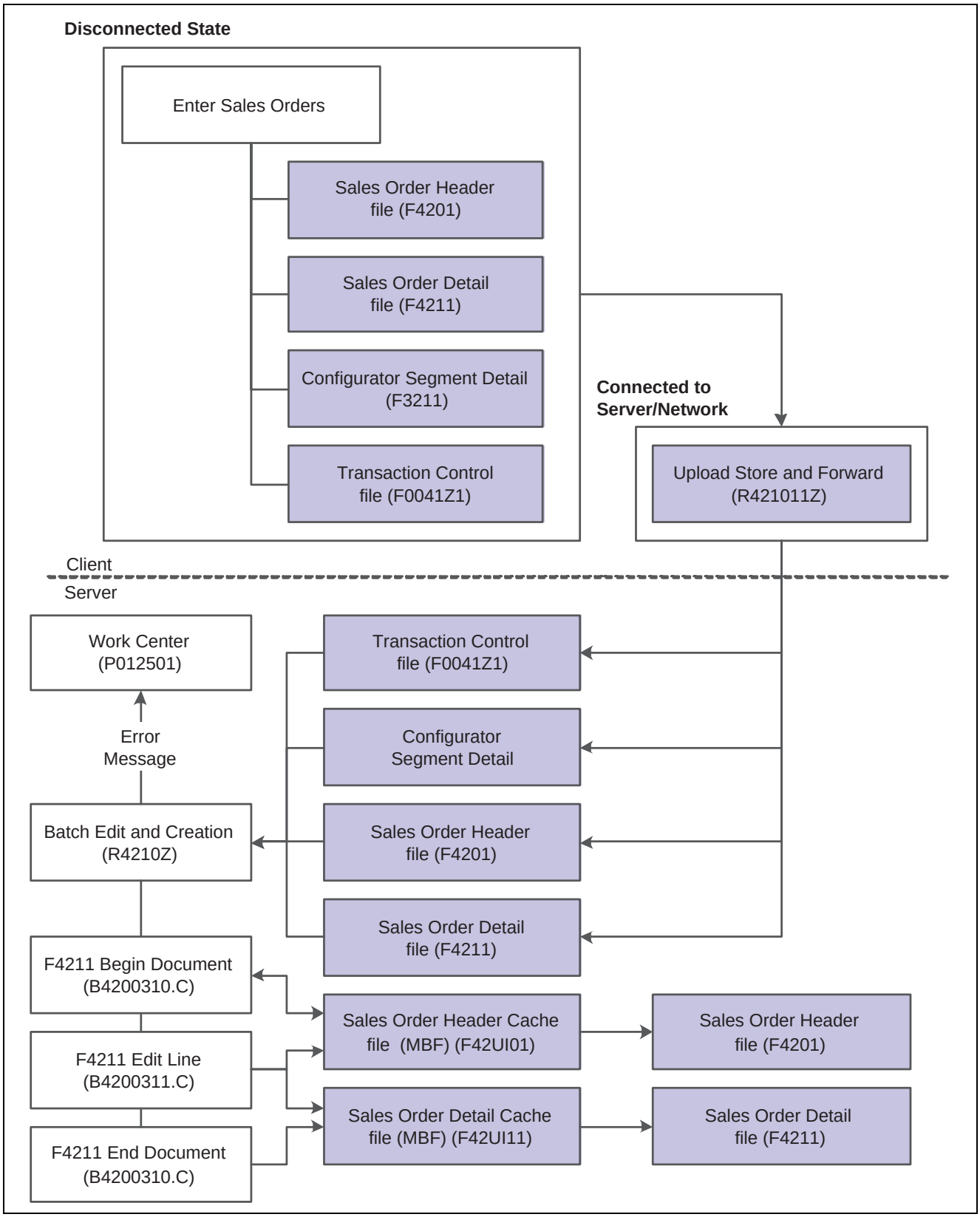
When you are ready to forward the sales orders, you must run the Upload Store And Forward program (R421011Z). The system edits the store and forward order information, and transfers it to a standard sales order.

You must run the Batch Edit and Creation (R4210Z) to generate the sales orders. After the system creates orders, you can either process the sales order as it is or change any detail information by using Sales Order Entry (P4210).

All setup files for the Configurator system are stored on the PC. You should download setup files to the PC whenever significant changes are made.

## Store and Forward Process for Configured Items

The following graphic illustrates the store and forward process for configured items:




Store and Forward Process for Configured Items

### Configured Item Sales Order Server Upload

After creating sales orders on your PC, you must upload them to the server for processing. To do this uploading, you must connect to the server, sign on to your normal production environment, and submit your job locally.

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**Note.** To maximize system performance, upload the sales orders during off-peak hours.

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When you upload sales orders, the system performs the following tasks:

1. Creates records in the Sales Order Header File (F4201) and Sales Order Detail File (F4211) tables on the server.
2. Updates the transaction control status of each sales order to 5 (uploaded) on the PC. After a sales order is updated to this status, you cannot modify it on the PC; you can modify it only on the server.
3. If a sales order on the PC has a status of 1 (ready to process) or 2 (errors), you can make changes to it on the PC.
4. Creates a transaction control record for each sales order on the server and assigns it a status of 1 (ready to process).
5. For configured items, uploads the configured segment tables (F3201, F3211, F3215, and F3216).

After you upload your sales orders and process them, the system edits the transaction control status of the sales orders on the PC to match the status of the sales orders on the server.

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**Note.** The Configurator Segment Detail table (F3211) is used on both the client and server sides. When the server version of the configuration is created, a new number is used to avoid problems with the client side.

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## Prerequisites

Verify that the system administrator downloads the necessary technical master tables before you complete the steps to store and forward sales orders.

To download the master tables for your workstation, you must be connected to the server and signed on to your normal production environment.

Choose the appropriate environment on Select User Environment when you log in to the system. Click Detail to access the name of the environment.

Set the processing options for Configured Item Specifications (P32942).

Set the processing options for the store and forward version of Sales Order Entry (P4210) that will be used for configured items.

### See Also

*Working with Store and Forward Orders in the Sales Order Management Guide*

*Creating Orders that you Store and Forward in the SOM guide*

*Processing options for R4210Z in the SOM guide*

## Creating Orders for Configured Items that You Store and Forward

To create orders for configured items that you store and forward:

1. From the Daily Processing menu (G32), choose Store & Forward Orders.

2. On Store And Forward Order Inquiry, click Add.
3. On Store And Forward Detail Revisions, complete the following required fields with information about the customer:
   - Branch / Plant
   - Sold To
   - Ship To
   - Order Date
4. Complete the following required fields with information about the configured item, and click OK:
   - Quantity Ordered
   - UoM
   - Item Number

   **Note.** The Configurator Common Attribute form might appear before Configured Item Specifications, depending on the processing option setting.
5. On Configured Item Specifications, to accept the default values, click the Calc button and go to step 8.
6. To change values for the segments, click the visual assist in the Answer field.

   Optionally, you can select the segment row and take the Row exit to Values.
7. On Work With Segment Value Selection, choose a row and click Select.

   Repeat this step for every segment that you want to change within your configured item.
8. When you have finished configuring your item, click the Calc button.
9. If you do not receive any errors, click OK.

   **Note.** You cannot complete your order until you correct all hard errors.
10. To finish creating the sales order, do one of the following:
    - Submit the order for processing if the processing options are not set to automatically submit the order.
    - Process the sales orders later by running the Batch Edit and Creation program (R4210Z).

      Regardless of when you process the orders, the Batch Edit and Creation program edits the information and creates the sales orders. If no errors exist, the system adds information to the Sales Order Header File (F4201) and Sales Order Detail File (F4211) tables.

## Uploading Configured Item Sales Orders to the Server

To upload configured item sales orders to the server:

1. From the Daily Processing menu (G32), choose Upload Store and Forward Tran.
2. On Work With Batch Versions - Available Versions, choose the Upload Store And Forward version and click Select.
3. From the Form menu, choose Run.
4. To limit the information that the system uploads, choose the Data Selection option on Version Prompting; and then click Submit.

5. Set the data selection and click OK.
6. Click the Print or Preview option.
7. On Environment Overrides, enter the exact name of the target environment and click OK.

   The system creates a transmission upload report for all of the sales orders that you upload. Use this report to verify that the sales orders have been uploaded correctly.

# CHAPTER 6

# Working with Configured Items

After you enter an order for a configured item, you can work on configured items in your business cycle along with other Manufacturing and Distribution systems.

This chapter provides overviews of configuration IDs, configured items and manufacturing, configured items and distribution, and configured items and procurement, and discusses how to:

- Review configured item history.
- Review related orders for configured items.
- Perform an inventory search for configured items.

## Understanding the Configuration ID

The Configuration ID is an identifier that represents a unique configuration. It is generated from an encryption algorithm. Regardless of the number of segments or levels in the configured item, the system always converts the information into a 32-character digest. The digest is always a full 32 characters in length, consists of numbers and characters, and does not contain any blanks. You cannot determine the initial value from the digest, it has no significant meaning.

Configurator maintains its configuration and identifies it by using the Configuration ID. The Configuration ID ties with the system order number and line number to create a unique identity in the configurator system. A Configuration ID is created for both parent and component configured items. The Configuration ID is created and stored in configurator tables that are used by the Configurator System. Thus, the user does not see or use the Configuration ID.

**Note.** The line number is not used in the Engineer to Order (ETO) process because each configured item task in the ETO system has its own work order number, and only one configuration per work order can exist.

## Understanding Configured Items and Manufacturing

After you have entered an order for a configured item, you use programs in the Manufacturing system to monitor production of the configured item within the Manufacturing and Distribution Planning, and Shop Floor Management systems.

This section includes overviews of:

- Configured item planning.
- Configured item work order processing.
- Configured item costing and accounting
- Configured item work orders.

- Engineer to Order configured item work order modification.
- Work-in-progress (WIP) revaluation for configured items.
- Hours and quantities on configured item work orders.
- Work order completions for configured items.

# Understanding Configured Item Planning

Configured items present a unique challenge for planning since the final configuration is unknown until an order is entered and accepted.

A configured end item cannot be planned in a branch/plant or across multiple facilities because the end item product is not yet defined. Planning bills are used to plan and acquire parts for the features and options of configured items before orders are entered in the system.

Once an order is entered and the final configuration is known, the system can plan the non-configured components of the configured items.

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**Note.** The configured item must be set up in each of the branch/plants where the configured item is to be planned and built. If the configured item is only set up in one branch/plant, then it must be manufactured in that branch/plant.

Once configured item setup is complete, all setup data can be copied to each branch/plant. However, the management of changes to the configured item setup must be addressed in your business processes because the data in each branch/plant must be maintained and kept in synch.

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A configured item itself cannot be planned across branch/plants, but the components to complete the configured item can be planned as supply from various branches.

During sales order entry, only some of the components can be written to the Sales Order Detail File table (F4211). Thus, all components are written to the Configurator Component Table (F3215). When a component does not generate a detail line for the sales order, the item is soft committed. Table F3215 records the soft commit in the Commitment field (COMM). Before Order Processing (R31410) is run, the components that are not in table F4211are invisible to material requirements planning (MRP). Thus, another business function reads selected records from table F3215 and accumulates requirements that represent the demand of a configuration.

Once Order Processing is run, the configured item has a bill of material and routing. Items in table F3215 are written to the Work Order Parts List table (F3111).

The Quantity Type CFD in user defined code 34/QT designates component demand from table F3215. Processing option settings in the planning programs determine configurator component inclusion in the planning process.

## Setup Considerations for Configured Item Planning

To successfully plan components of a configured item, you must set the processing options appropriately.

A configurator processing option on the Mfg Mode tab in the MRP/MPS Requirements Planning (R3482) and Master Planning Schedule - Multiple Plant (R3483) programs allows the user to determine if the components of a configured item will be planned. To plan the components of a configured item, the processing option is set to 1 to include configuration components from the Configurator Component Table (F3215) and the Work Order Parts List table (F3111) as demand items. If you are not concerned with planning components of a configured item, set the processing option to blank, which saves processing time.

The MRP/MPS Requirements Planning and Master Planning Schedule - Multiple Plant programs use the quantity type and processing option in conjunction to determine if components for a configured item should be included in planning.

**Note.** To successfully complete planning for a configured item, you must have a working knowledge of the Product Data Management, Forecast Management, and Requirements Planning systems; and their integration with other PeopleSoft EnterpriseOne systems.

# Understanding Configured Item Work Order Processing

After you have created configured item work order headers through an order entry program such as Sales Order Entry (P4210) or Manufacturing Work Order Processing (P48013), you must run Order Processing (R31410) to perform the following:

- Generate the work order parts list from the sales order, if applicable, and P assembly inclusion rules.
- Include additional parts on the work order parts list from Q assembly inclusion rules.
- Create the work order routing instructions from the R assembly inclusion rules.
- Commit inventory.
- Back-schedule configured routings.

**Note.** Commitment of components is done at Sales Order Entry instead of only during Order Processing. The components will be committed to the sales order at order entry time and then will move to the parts list when Order Processing is run. Thus, you do not need to run Order Processing immediately to get commitments for components.

## Engineer to Order Configured Item Work Order Processing

The creation of work orders for configured items in an engineer to order (ETO) project is handled differently from the standard process.

The Process Project version of Order Processing (R31410) can be run from the Project Workbench over the entire project structure. This action processes all of the configured work orders residing in the structure from the lowest level to the root level.

The Process Task version of Order Processing (R31410) can be run from the Project Workbench at a singular task level. A warning is issued to the user to verify that all lower level configured work orders have been processed prior to processing the current level. Child tasks for the selected configured work order task must be processed before processing the current task.

## Setup Considerations for Configured Item Work Order Processing

To correctly process work orders for your configured item, you must set the processing options for Order Processing (R31410) accordingly. You might want to create a separate version of Order Processing that is specifically for configured items.

On the Process tab, set the Generate Parts List and Routing Instructions field to create both the parts list and routing. This option must be used for configurator processing.

Set the Update Parts List and Routing Instructions field to update the existing parts list and routing instructions when changes are made to an order and Order Processing is re-run.

On the Parts List tab, leave the Substitutions field blank. Substitutions are defined in the bill of material. Since configured items do not have a standard bill of material, no substitutions can exist.

When a configured item is entered on a sales order, the original line type of the components has an inventory interface and drives commitments. The commitments remain against the sales order until Order Processing is run.

The only commitment that remains on the sales order is for the parent configured item. This commitment remains to drive demand and fulfill the sales order.

On the Sales/Config tab, identify a status in the Next Status field. This value identifies the next status of component lines on a sales order for a configured item. It can be any valid status for the line type that was entered in the Line Type processing option field.

On the Sales/Config tab, set the Standard Cost Calculation field to calculate the standard cost for the configured item.

Typically, the standard cost for an item is calculated based on the manufacturing bill of material and manufacturing routing. However, configured items do not have a manufacturing bill of material or manufacturing routing. The bill of material and routing for a configured item can be defined once the final configuration is known after order entry.

Order Processing determines the standard cost of a configured item from the configured parts list and routing. The cost of the configured item includes the labor on the configured routing, material and components on the configured parts list and outside operation information. The cost is stored in the Production Cost table (F3102), which is also called the Work Order Variance table. The program also updates standard costs on the associated sales order detail line.

The option to calculate the standard cost only if it has not already been done gives the user some flexibility when processing sales quotes or changing a sales order. This processing option setting allows the user to keep the original cost or recalculate it.

The Printing 1 Tab processing options define how the work order parts list prints.

The Printing 2 Tab processing options define how the routing instructions print on the work order.

On the Printing 2 Tab, identify a value in the Sales Order Text Lines field. If you set the processing option to print work orders, the Sales Order Text Lines processing option setting specifies whether the system prints sales order text lines on the work order. The text lines print in the remarks area of the work order.

Configured items always print the sales order generic text on the work order, regardless of how this option is set.

The Configurator Generic Text processing option gives you the ability to print the generic text from the order on the work order.

## Data Sequencing

Data sequencing is very important when generating the work orders for configured items. Data sequencing must be set in descending order, which creates the configured work orders in the proper order - from the bottom up. This process ensures that the work orders are generated with accurate standard cost and accurate back-scheduled dates.

During order entry, the system generates the associated work order headers for configured items with a work order line type. The actual work order number is assigned from the top level down, as illustrated by the following table:

| Order Number | Item Number | Item Description | Work Order Number |
|---|---|---|---|
| 3726 | 6000 | Forklift | 67890 |

| Order Number | Item Number | Item Description | Work Order Number |
|---|---|---|---|
| 3726 | 6100 | Boom | 67891 |
| 3726 | 6200 | Fork | 67892 |

During order entry, a requested date is entered for the configured item. The system uses the requested date on the order and lead-time information from the Leadtime Level field on the Additional System Information form in the Item Master (P4101) to back-schedule the work order headers that are generated during order entry.

When Order Processing is run, the work order headers are used to generate the work orders; no update to the work order header exists. Order Processing back schedules the start and end dates of each routing operation on the work orders, based on the dates in the work order headers.

Thus, Order Processing calculates lead times for multilevel configured items. However, Leadtime Rollup does not support configured items.

You can generate work orders without setting the data sequencing to descending order, and the work orders are then created correctly with the associated parts lists and routing. However, standard costing and back scheduling of the routing operations are not generated correctly.

---

**Note.** To successfully complete the generation of a work order for a configured item, you must have a working knowledge of the Shop Floor Management, Product Costing, and Manufacturing Accounting systems; and their integration with other PeopleSoft EnterpriseOne systems.

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# Understanding Configured Item Costing and Accounting

Costing for configured items is different from costing for non-configured items. After you enter an order for a configured item, you use programs in the Shop Floor Management system to work with product costing and manufacturing accounting for configured items.

You must also be aware of how configured item orders entered in the Sales Order Management and Procurement systems are costed.

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**Note.** To successfully complete product costing and manufacturing accounting for a configured item, you must have a working knowledge of the Inventory Management, Sales Order Management, Procurement, Product Data Management, and Shop Floor Management systems; and their integration with other PeopleSoft EnterpriseOne systems.

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See Working with Product Costing for Configured Item in the PCMA Guide

## Configured Item Manufacturing Accounting

Manufacturing accounting for configured items occurs during Work Order Completions (P31114).

The work orders for configured items must be completed from the lowest level configured item to the top level configured item. This order is the same as completing the highest work order number down to the lowest. For example, the work orders for the forklift are completed in the following order:

- Item 6200, fork
- Item 6100, boom
- Item 6000, forklift

Completing the work order consists of issuing material, reporting labor, and then reporting the completion of the item that the work order represents. The cost of the work order is created, and the item can be issued to the next level. Thus, completing the configured item work orders in the correct order ensures that the associated costs are created and carried over to the next level work order.

At completions, the configured item is completed to a unique location and lot number. The Configuration ID is associated to the item and work order number by the system. When the configured item is completed, the system updates the Item Cost File table (F4105) at the item, branch/plant, location, and lot level. The system uses the configuration-specific standard costs in the Production Cost table (F3102) for related Manufacturing Accounting transactions.

The Item Ledger File table (F4111) is then created with the correct cost from table F4105.

---

**Note.** As you manufacture configured items, no engineering variance exists because the configured item has no standard bill of material or routing.

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## Engineer to Order Configured Item Costing

Engineer to Order (ETO) requires the best estimate of cost for a configured item. When the user has defined the configuration via Configured Item Specifications (P32942) and all child configured work orders have been created, Estimated Cost is updated on the Project Workbench (P31P001) for the root configured work order and all its child configured work orders. The Estimated Cost update is applicable both during the generation of child configured work orders via definition of the configuration or during changes to an existing configuration.

To obtain the best estimate of cost, the Q and R assembly inclusion rules are processed for ETO. This process is the same as the process for costing Sales Quotes.

Configured Item Specifications also return a cost value. This value is placed in the Total Estimated Cost field for the task.

Since cost records are not written to the Production Cost table (F3102) at the time of creation of ETO configured work orders, the Estimated Cost fields in the work order header records and Project Workbench are blank. Therefore, the costs of the configured item and its children are not included in project costs until Order Processing (R31410) is run.

When Order Processing is run either for a single configured work order or over an entire ETO project, the Planned Production Costs should be rolled back into the Project Workbench for the configured work orders.

When shop floor activities are performed against the configured work orders and Actual Production Costs are recorded, Rollup of Actual Costs to Project should accurately update the Actual Costs on the Project Workbench.

You have the ability to roll up Estimated, Planned, and Actual Costs from table F3102 and update the Project Workbench.

Whenever a new root configured work order is added to the Project Workbench structure, Estimated Costs are *not* updated.

When the quote is accepted, Estimated Costs for all configured work orders are locked down; and the Total Estimated Costs are copied to the Total Budgeted Costs.

The following table indicates the source of cost generation in table F3102 for configured items in ETO:

| Costing Method | Standard | Current | Total Planned | Total Actual | Quantity Completed | Scrapped | Unaccounted Completed | Unaccounted Scrapped |
|---|---|---|---|---|---|---|---|---|
| Standard Costing | P48013 | P48013 | Not used | R31410/ R31802A | R31802A | R31802A | R31802A | Not used |

## Configured Item Sales Orders in Costing

The P assembly inclusion rules define components that appear as sales order detail lines on the order. The cost of each component that appears as a sales order detail line is shown as retrieved from the Item Cost File table (F4105).

Configurator retrieves the cost of all components and the X assembly inclusion rules, and rolls them up to arrive at the sales order cost of the parent configured item. Once these costs have been established, the system updates the unit cost and extended cost on the sales order for the top-level configured item only.

When Order Processing (R31410) is run, the Production Cost table (F3102) records for P, Q, and R assembly inclusion rules are calculated and written back to the sales order. These rules, in combination with X rules that have been defined to roll up to the parent, make up the cost of the parent configured item.

Cost that is defined by the X assembly inclusion rules affects only the sales order, not the work order. Thus, associated X assembly inclusion rule costs are not seen in table F3102.

## Configured Item Purchase Orders in Costing

Purchase Orders (P4310) uses the Supplier Price/Catalog File table (F41061) and the Item Cost File table (F4105) to determine purchase order cost. The Purchase Orders program searches table F41061 first and then searches table F4105 to find a cost for the item. The Purchase Order Cost Method (PCSM) on the Cost Revisions program (P4105) is used to retrieve the cost from table F4105.

The Configurator Costing Method field in Item Master (P4101) is used to cost configured items on purchase orders.

When creating a purchase order for a configured item using Configurator Costing Methods 1, 2, or 4, tables F41061 and F4105 are searched to find the component costs or the cost of the parent if using method 2.

Next, for Configurator Costing Method 1 and 2, any necessary X assembly inclusion rules are added.

Finally, any purchase order advanced price adjustment that exists is calculated, according to the Configurator Costing Method, to arrive at the final purchase order cost.

For Configurator Costing Method 4, as in the sales order Kit/Configurator Pricing Method 4, advanced pricing adjustments are applied to the components before the X assembly inclusion rules are added.

## Differences in Costing of Orders

Given the differences in cost calculation between sales orders and purchase orders, these costs are probably different. The cost on a purchase order is different from the cost shown on the sales order detail line. This situation is especially true in a standard cost (Cost Method 07) manufacturing environment where standard cost is calculated and frozen with a number of variables accounted for beyond the cost of the item from the supplier.

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**Note.** The Configurator Costing Method field in the Item Master (P4101) is used by the purchase order system only, and not by the sales order system for detail line cost calculation.

Complications in costing can arise from other variables, such as currency and unit of measure conversions, edits, overrides, or other system variables that can affect sales order and purchase order costs.

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### Configured Item Direct Ship Orders in Costing

For direct ship orders of configured items or configured components, the cost is driven by the purchase order and written back to the sales order detail line. In this case, a combination of both the Configurator Costing Method in the Item Master program (P4101) and the Cost Method in the Cost Revisions program (P4105) are used as the basis for calculating the cost. The Configurator Costing Method determines how to roll up the cost, after which the cost is either the standard or non-standard cost.

The only exception to this situation occurs when Sales Order Entry (P4210) is using standard cost (Cost Method 07), which is common in a manufacturing accounting environment. In this case, the purchase order detail line does not write to the sales order. The sales order rolls up costs as it would in a non-direct ship order.

### Configured Item Transfer Orders in Costing

Transfer orders derive their sales order detail cost from the shipping branch/plant. The transfer purchase order cost is equal to the unit price (not cost) of the related sales order.

For the parent of a configured item transfer order, the sales order cost is equal to the rolled-up cost of the components from the shipping branch/plant; and the related purchase order cost is equal to the unit price of the transfer sales order detail line.

For both configured and non-configured transferred components, the sales order cost on the original sales order is driven by the unit price of the related transfer order. The Cost or Base Price Markup processing option on the Process Tab in Sales Order Entry (P4210) determines how this is calculated. A value of Blank in this field means that the sales order cost is equal to the rolled-up cost of the shipping branch/plant.

A value of 1 calculates the rolled-up cost of the shipping branch/plant, multiplies that by the mark-up percentage found in the Branch Relationships Master File table (F3403), and writes the resulting cost to the sales order detail line.

A value of 2 calculates the base price from the shipping branch/plant, using the price roll-up method, and returns that value to the sales order detail cost.

Again, in all cases, the cost on the transfer purchase order is equal to the unit price of the transfer sales order.

### Configured Item Interbranch Orders in Costing

Interbranch sales order detail lines derive their cost from the Cost or Base Price Markup processing option on the Process Tab in Sales Order Entry (P4210). This situation is similar to the costing process for transfer orders.

The cost is equal to either the cost from the shipping branch/plant, the cost from the shipping branch/plant multiplied by a mark-up percentage, or the price from the shipping branch/plant.

When the interbranch purchase order is created, the cost is equal to the cost that was calculated for the original sales order.

## Understanding Work Orders for Configured Items

An existing configured work order can be modified only by the program that created the work order. When changing a configured work order, the user has the option of launching Configured Item Specifications (P32942) to modify its configuration and the configuration of all its child work orders.

The user can modify the configuration of an existing non-Engineer to Order (ETO) configured work order by launching Configured Item Specifications only when the work order is at the top level in the configuration.

Any changes to a configured work order or its configuration impacts all of its child work orders. Thus, order quantity, dates, and parent work order number of the child work orders change. Changing the configuration in Configured Item Specifications can also result in the creation of additional work orders or existing work orders being excluded from the configuration.

---

**Note.** This functionality is relative to work orders that are created in Sales Order Entry (P4210) and Manufacturing Work Order Processing (P48013). This functionality does not include work orders that are created for a project in the ETO system.

---

After you modify an existing configured work order, you can run the Order Processing program again to reattach the parts list and route it to a configured item.

The Held Status Code, Changed Status Code (Before Cutoff), Changed Status Code (After Cutoff), Canceled Status Code, and Cutoff Status Code fields on the Sales Process (Sales/Configured) tab of the Work Order Entry (P48013) processing options are used to define the work order cutoff status. The values in these fields are used to modify the status of sales order-generated work orders and configured work orders that are created from Manufacturing Work Order Processing.

For sales order-generated work orders, the cutoff status determines when the changes to the sales order do not affect the work order. In other words, if the work order is already at that status or higher and you change the sales order, then the work order status changes; but the parts list and routing are not affected.

## Net Change Logic for Configured Work Orders

When a configured work order or its configuration is changed, Net Change logic should not be executed for any work order in the configuration. Changes in the configuration can result in work orders being removed and new ones being added to the configuration. This situation might make the parts list and routings that are attached to existing work orders invalid. Therefore, automatically changing quantities on existing parts lists and hours in existing routings is invalid. They need to be reattached by running Order Processing against all of the work orders in the configuration.

## Configured Item Work Order Modification Without Excluding or Adding a Work Order

The two ways to change the configuration of an existing configured work order without excluding any work order or adding new work orders are:

- Change the order quantity, dates, or unit of measure on any of the work orders in the configuration; and launch Configured Item Specifications (P32942).

  The user validates the configuration without making any changes, and then clicks OK.

- Set up the assembly inclusion rules for a configured item to change the order quantity and dates of lower-level work orders when a segment answer is changed.

  The user can launch Configured Item Specifications for any existing work order in the configuration and change the segment answers to satisfy the above-mentioned rule.

In both of these cases, order quantities and dates of all of the lower-level work orders should be recalculated correctly if the work orders are below the Cutoff Status. All work orders that were below the Cutoff Status are moved to Changed Status (Before Cutoff).

If the status of a work order being changed is greater than or equal to the Cutoff Status, the status is moved to Changed Status (After Cutoff). Order quantity, dates, and unit of measure of such work orders should not be changed.

Parts list quantities and routing hours for items that do not have a work order must be recalculated when Order Processing (R31410) is run against all of the work orders in the configuration.

## Configured Item Work Order Modification to Remove a Work Order

You can review the configuration of an existing configured work order in Configured Item Specifications (P32942) and change the configuration to remove an item from the configuration.

If the item has a work order that is associated with it, then the work order and all its children work orders (if any) should be moved to a Canceled Status if the existing status of the work order is less than the Cutoff Status. If the existing status of the work order is greater than or equal to the Cutoff Status, then the work order should not be moved to a Canceled Status.

The status of work orders that were retained in the configuration should be moved to Changed Status (Before Cutoff) if their existing status is below the Cutoff Status. If the status of the work orders being retained is greater than or equal to the Cutoff Status, then the status should be moved to Changed Status (After Cutoff).

If the status of a lower level configured work order is greater then the Cutoff Status, then it is not cancelled when it is removed from the configuration. However, its parent work order could have been moved to a Canceled Status. If Work Order Completions (P31114) is run against the lower-level work order, then the corresponding parts list line in its parent work order's parts list is split, updated, or both, with completions quantity, lot, and location. The parts list quantity in the updated line is hard-committed to the completions lot and location. The user is responsible for relieving these commitments.

If a configured work order is moved to a Canceled Status because it is removed from the configuration, the parent work order field should not be blanked out to prevent inaccurate processing.

If the item does not have a work order that is associated with it, then it should be excluded from the configuration and the parts list of its parent work order when Order Processing (R31410) is run against all of the work orders in the configuration.

## Configured Item Work Order Modification to Add a Work Order

You can review the configuration of an existing configured work order in Configured Item Specifications (P32942) and change the configuration to add an item into the configuration. If you add an item to the configuration, then the following functionality must happen, depending on the stocking type of the item.

If the item is a configured item, then it should be added to the configuration tree. If the configured item has a work order line type, then work orders must be created for it and any of its children that have a work order line type in the assembly inclusion rules.

If the item is a non-configured item with a work order line type in the assembly inclusion rules and then a work order must be created for the non-configured item.

The dates of all the newly added and existing work orders must be recalculated correctly.

All newly created work orders must be at the Beginning Status. All existing work orders in the configuration that have a status which is less than Cutoff Status must be moved to Changed Status (Before Cutoff). All existing work orders in the configuration that have a status greater than or equal to Cutoff Status must be moved to Changed Status (After Cutoff).

If the item does not have a work order line type, then it should be added to the parts list of its parent item's work order when Order Processing (R31410) is run against all of the work orders in the configuration.

## Configured Item Work Order Modification in Costing

Modifying existing configured work orders should not automatically change any costs that are reported against any work order in the configuration. Columns for standard costs and units in the Production Cost table (F3102) are populated when Order Processing (R31410) is run. The columns for current costs and units in table F3102 are not populated for configured work orders.

If the configuration is changed before Order Processing is run for any work order in the configuration, no changes in costs need to take place because no costs exist.

If a configured work order is changed after Order Processing was run against any or all work orders in its configuration, Order Processing needs to be re-run to recalculate the parts list, routings, and F3102 costs that are associated with the new parts list and routings.

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**Note.** This process eliminates the planned variance for the work order.

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## Understanding Engineer to Order Configured Item Work Order Modification

You can add configured work orders as tasks on a project in Engineer to Order (ETO). After the orders are added, you can modify or delete the entire configuration from which the orders were originated.

Changes to configured work orders in an ETO project are done from the Project Workbench (P31P001). Work orders can be changed for configured items that are created in an ETO project both before and after the work order records are committed.

---

**Note.** You cannot make any changes to an ETO project configured work order directly through the Manufacturing Work Order Processing program (P48013).

---

Before allowing any modifications, Project Workbench verifies that none of the configured work orders has any activity reported against it. In addition, if the user needs to delete an entire configuration, Workbench needs to verify that the configured tasks do not have any existing dependencies.

When you enter Configured Item Specifications via Project Workbench to make any changes, you are issued a warning if task dependencies exist for either the root configured work order or any of its child work orders.

---

**Note.** If you override the warning and make changes to the configuration resulting in the removal of an existing configured work order from the structure, your are responsible to manually remove any task dependencies to avoid any problems with scheduling.

---

Any changes to dates-such as Planned Start and Planned End-quantity, and unit of measure (UOM) launch Configured Item Specifications (P32942). For the root configured work order, Project Workbench launches the Configured Item Specifications program in change mode, allowing the user to modify the configuration.

Before the work order records are committed from Project Workbench or Configured Item Specifications, the user has the ability to re-enter only the root configured work order in Project Workbench to access and revise Configured Item Specifications.

After the work order records are committed from Project Workbench and Configured Item Specifications, the user can re-enter only the root configured work order in Project Workbench to access and revise Configured Item Specifications. This action is only allowed if no shop floor activity has been reported against the root configured work order or any of its child orders. Thus, no material should have been issued to the configured work order's parts list; and no activity should have been reported against the configured work order.

When the user changes the configuration of an existing ETO Configured Work order, then the resulting changes to other items and work orders in the configuration is the same as when a configuration of a non-ETO configured work order is changed in a similar manner. Statuses that are used to change the statuses of work orders in the configuration are read from the processing options of Manufacturing Work Order Processing (P48013).

When the entire ETO project is back-scheduled, then the dates on all ETO configured work orders, if any, also change. The work orders are not be moved to a Changed status as the work order project is not called to update the work orders with new dates. Project Workbench calls another process to update the project work order records with new dates.

If the status of a lower level non-ETO configured work order is greater then the Cutoff Status, then it is not cancelled when it is removed from the configuration. However, its parent work order could have been moved to a Canceled Status. If Work Order Completions (P31114) is run against the lower level work order, then the corresponding parts list line in its parent work order's parts list is split and updated with completions quantity, lot, and location. The parts list quantity in the updated line is hard-committed to the completions lot and location. The user is responsible to relieve these commitments.

## Net Change Logic for Configured Work Orders in ETO

When an ETO configured work order or its configuration is changed, Net Change logic should not be executed for any work order in the configuration. Changes in the configuration might result in work orders being removed and new ones being added to the configuration. This situation can make the parts list and routings that are attached to existing work orders invalid. Therefore, automatically changing quantities on existing parts lists and hours in existing routings is invalid. They need to be reattached by running Order Processing (R31410) against all of the work orders in the configuration.

However, when changes to dates are made on configured work orders via the Project Workbench, Net Change processing is executed if Net Change is enabled.

## Work Order Modification for Configured Items in ETO to Remove a Work Order

Either before or after committing the work order records from Project Workbench (P31P001) to the database, the user is allowed to delete only the root configured work order.

When the user selects an ETO configured work order in the Project Workbench grid and cancels it by choosing Cancel Task from the Row menu, then only that work order is moved to a Canceled Status, regardless of its level in the configuration and its existing status. In this case, the Cancelled Status is read from the processing options of Project Workbench.

If a work order with financial commitments, project-specific inventory commitments, or any other activity reported against it is removed from the configuration, it is not cancelled if its status is greater than the Cutoff Status. However, its parent work order could have been moved to a Cancelled Status. In such a scenario, the work order with activity reported against it is orphaned. The user is responsible to relieve the financial and project-specific inventory commitments created for the orphaned work order.

Deleting the root configured work order deletes all of the child configured work orders and configurator data that exists in System 32 tables.

The existing configuration is not deleted from the System 32 tables but kept as reference material.

However, reference to the work orders is removed from the Configurator Master Table (F3201), Work Order Master File table (F4801), and Work Order Master Tag File table (F4801T).

The corresponding project number in the cancelled work order header records is not erased.

## Costing Modified Work Orders for Configured Items in ETO

Once the configuration for a root configured item has been defined via Configured Item Specifications (P32942) and all child configured work orders have been created, Estimated Costs should be updated on the Project Workbench (P31P001) for all configured work orders (root configured work order and child configured work orders). This updating is applicable during the generation of child configured work orders via definition of the configuration and during the changing of an existing configuration.

When a new root configured work order is added to the Workbench structure, Estimated Costs should *not* be updated.

### Changes to the Configuration Once an ETO Project Quote is Accepted

If the user decides to make changes to the configuration or decides to add a new set of configured work orders, the user must consider the way that ETO works if it interfaces with Job Cost; he or she must be well aware of the repercussions.

Changes made to the configuration that result in the addition of a new configured work order in the same structure are not a problem since the new task does not have an Original Budget. The functionality works this way if any manufacturing work order is added after the quote is accepted.

If changes to the configuration result in the deletion of a configured work order from the existing structure, then the Original Budget amount might require modification. Budgets that are associated with the work order which was deleted might exist, and these budgets might already have been uploaded to Job Cost. Nothing happens automatically in the system because tight integrity between ETO and Job Cost does not exist. No system checks are in place to verify if the user manually added Cost Code and Cost Type to the Project Structure in Job Cost and also manually added Budgets.

Thus, the user can unlock the project, and delete account and budget information that was manually added to ensure the accuracy of the budget amounts.

## Understanding Work-In-Process (WIP) Revaluation for Configured Items

Work-in-process (WIP) revaluation can be performed for configured items.

In the standard costing process, WIP revaluation includes both material and labor cost changes.

In the actual costing process, WIP revaluation includes only material cost changes.

## Understanding Hours and Quantities on Configured Item Work Orders

As production continues on the work order for a configured item, you must record the hours spent on production and the number of items completed in that time. This procedure allows you to monitor progress and costs, and compare them to the standard hours and quantities that you estimated for the job.

After you enter hours and quantities, either manually through Work Order Time Entry (P311221) or through payroll time entry, you can review and revise them before you post them to the Manufacturing system for further tracking and cost accounting.

You can review the quantities that are entered against the operations scheduled for the work order for a configured item, including the actual quantity ordered, completed, and scrapped for each operation. You can also view the standard and variance values, along with the status code, which can be updated for the operation.

## Understanding Work Order Completions for Configured Items

The Work Order Completions (P31114) program uses the information that is entered in the Shop Floor Management system to create general ledger journal entries. Shop Floor Management creates no interactive journal entries. Instead, it processes all journal entries in batch.

For configured items, the system updates new locations with standard costs from the Production Cost table (F3102) so that transactions in the Distribution system use the correct costs. For configured items, a unique lot number and location must be entered at completions. The Work Order Completions program hard-commits the associated sales order, and updates the lot and location information for the sales order.

The parts list of a parent configured work order contains a split, update, or both, when a completion is entered for a lower-level configured work order. The child work order number is written to the parts line of the parent work order. This record is written in the Work Order Parts List table (F3111).

### Setup Considerations for Configured Item Work Order Completions

To successfully complete a work order for a configured item, you must set the processing options for Work Order Completions (P31114) based on your business processes.

Since configured items must be lot controlled, the Lot Process Type field on Item Master (P4101) is set appropriately to create a lot number that is based on your business process. Configured items must also be stocked in a specific location.

On Work Order Completions, the Sales Orders tab provides processing options that determine if the lot number and location are entered either manually by the user at completion or automatically by the system.

On the Sales Orders tab, set the Work Order Lot and Location Defaults field accordingly.

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**Note.** You must turn off Location Control on the Branch/Plant Constants.

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Set the Sales Order Lot and Location field accordingly to update the sales order with the lot and location information when the work order is completed.

# Understanding Configured Items and Distribution

After you have entered a sales order and completed work orders for a configured item, use programs in the Distribution system to complete the sales order processing cycle.

This section includes overviews of:

- Configured item inventory.
- Configured item availability.
- Pick lists.
- Shipments.
- Invoices.

## Understanding Configured Item Inventory

The Configurator system enables you to stock configured items. For stocked configured items, you can use programs within the Distribution system to do the following:

- Review configuration-specific costing information.
- Determine availability of configured end-items.

  You can search for segments or an exact configuration match.

- Select a stocked configured item during Sales Order Entry (P4210).

  The system hard-commits the item, does not generate a work order, and uses costs in the Item Branch File table (F4102).

- Perform inventory transactions, such as:
- Simple issues
- Transfers
- Adjustments

The Inventory Management system does not support reclassifications of configured items.

You can adjust quantities for configured items in a specific location. The Configurator system supports adjustments for locations with existing inventory and adjustments from zero quantity, as long as the configuration-specific history is defined in the system.

# Understanding Configured Item Availability

Use the Summary Availability, Detailed Availability, and Customer Service Inquiry forms to review configured item information.

You can use the Summary Availability form in the Item Availability (P41202) program to review inventory locations that contain stock for a configured item. Review information-such as on-hand, committed, and available quantities for each location-that is in the detail area.

You can use the Detailed Availability form in the Item Availability program to review the status of configured items in a specific location. Review information in the detail area, such as on-hand quantity of a configured item and related commitments for that quantity.

You can use the Customer Service Inquiry form in Sales Order Entry (P4210) to do the following:

- Locate current sales order information in the Sales Order Detail File (F4211) and the Sales Order History File (F42119) tables.
- Provide information at the sales order, customer, and item levels.
- Change associated text for the sales order line.

## Configured Item Availability During Sales Order Entry

To check availability during Sales Order Entry (P4210), you must turn on the Check Availability option in Configurator Constants (P3209). If the system finds the exact item and configuration ID during sales order entry, all of the locations that contain the specific configuration appear. You can review segment values for all levels of the configured item and select an item to use on the sales order. Once an item is selected, sales order entry commits that configured item to the sales order with the Line Type that is defined in Configurator Constants. The system does not check the availability of components.

---

**Note.** The system does not perform automatic line splitting if the quantity ordered differs from the quantity selected.

---

# Understanding Pick Lists

After you generate sales and work orders for configured items, use the Print Pick Slips program (R42520) to print pick lists. Pick lists include the following information:

- Order quantities picked and moved to the staging or shipping area of the warehouse

- Price by line item and for the order as a whole, which is useful for COD (cash on delivery) deliveries
- Driver signature line
- Customer signature line

# Understanding Shipments

The Configurator system supports shipments of configured items. However, the system does not allow you to backorder a configured item.

Use the Shipment Confirmation program (P4205) to do the following:

- Locate existing order information.
- Add additional line items (non-inventory items only).
- Change the shipped, backorder, and cancel quantities.
- Specify a container ID, carrier code, and shipment date for each line item.
- Override the ship to address.
- Ship from other or multiple locations.
- Adjust inventory (on-hand or hard-commits).
- Confirm shipment.
- Record serial numbers for shipped items.
- Review the Freight/Additional Charges Revisions program.

## Partial Shipments for Configured Items

The system allows you to ship part of an order quantity for configured items so that you can do the following:

- Ship configured items as they are completed.
- Reduce inventory handling costs.
- Receive payments for shipped quantities of the order.

Sales orders for configured items can often have large order quantities, including parts and subassemblies. Typically, as configured items (and their components) are completed, they remain in inventory until the entire order is complete. However, by shipping partial quantities of configured items as they are completed, you can effectively manage inventory and reduce handling costs, and you can periodically bill for the quantity completed instead of waiting for the entire order to be completed.

---

**Note.** The back-order feature is not available when shipping partial quantities of a configured item.

---

## Partial Order Quantity Shipping of a Configured Item

When a customer orders a quantity of configured items, you can ship less than the total order quantity as you manufacture the items. For example, a customer might order a large quantity of personal computers. As you complete the computers, you can make multiple shipments of the personal computers until you complete the original order.

The following table illustrates a typical sequence of events that you can follow to ship a partial quantity of a configured item:

| Program Used | Description of Steps |
| --- | --- |
| Sales Order Entry (P4210) | You enter a sales order for a configured item. The system creates related work orders when the order line type is W (work order). |
| Order Processing (R31410) | You run the Order Processing program. The system attaches parts lists and routings for all related work orders. |
| Work Order Inventory Issues (P31113) | You issue parts for the work orders that are associated with a configured item, beginning at the lowest level work order. If the configured item consists of nested configured items, such as the forklift (item 6000) in the pristine data, the sequence is as follows:<br>• Issue and then complete the work order for the fork (item 6200).<br>• Issue and then complete the work order for the boom assembly (item 6100).<br>• Issue and then complete the work order for the forklift (item 6000). |
| Work Order Completions (P31114) | The inventory is created in this step. For an order of configured items that is not shipped until the entire order quantity is completed, a scenario like the one illustrated with the forklift is typical. For a partial shipment, Work Order Completions is the first opportunity to split the sales order. When partially completing a work order for a configured item, the related sales order lines are also split through work order completions. For example, if the original quantity on the sales order for a configured item is ten, but only six are complete, the related sales order line is split into two lines to show the partial quantity that is complete (ready for shipment) on one line and the rest of the quantity that is not yet complete on another line.<br>For each order quantity of a configured item that you complete, you must assign a lot and location. When you ship partial quantities, you can assign each partial quantity of the original order to a different lot and location.<br>Splitting the sales order from Work Order Completions does not prevent you from further splitting the sales order from Ship Confirm. |

| Program Used | Description of Steps |
| --- | --- |
| Print Pick Slips (R42520) | You run the Print Pick Slips program for the appropriate work orders. The system prints a pick list for warehouse workers to use when they pull the order. |
| Shipment Confirmation (P4205) | Continuing the partial completion scenario above (six of ten items are completed), you might choose to ship all six of the completed items; or you might choose to ship only some of them. If you choose to ship all six, the sales order displays two sets of lines for the configured item. One line is for the six items that are completed. The completed items have the original line number and a new status (next status). The completed items are also hard-committed to the lot number that was assigned to them on Work Order Completions. The other line is for the four items that are not yet completed. These items remain at the same status but have a new line number. When the sales order line is split, the new line number is the highest whole line number for the sales order, incremented by 1.00. The items do not have a lot number assigned to them. If you select the first line and ship the entire quantity (six) of completed items on that line, then that line is finished. You have completed a partial shipment.<br><br>If you choose to ship only some of the six completed items, you can use Shipment Confirmation to designate, by lot or location, which items you shipped. Just as you use Work Order Completions to designate which items are complete, you can use Shipment Confirmation to designate which of the completed items have been shipped to the customer. The sales order displays three sets of lines for the configured item:<br><br>• One line for the items that are completed and shipped<br>• One line for items that are completed but not shipped<br>• One line for the items that are not complete<br><br>You can continue to split the shipment as many times as necessary to meet your business needs.<br><br>After the sales order detail line is split, the work order line in the Work Order Master File (F4801) table is updated with the new sales order line number. This action is taken so that the work order always points to the sales order with incomplete quantity.<br><br>When you ship a partial quantity of a configured item, the system maintains the relationships of the configured item's components to their parent. The components become text line types and are included in the parent configured item. These text lines do not appear on Shipment Confirmation. Miscellaneous line types, such as freight charges, also do not appear on Ship Confirm. |

### Partial Order Quantity Shipping of Components

In addition to shipping a partial quantity of completed configured items, you can also ship partial quantities of components. You can ship partial quantities of only those components for which the parent does not generate a work order to complete (a stock line type).

For example, a customer might order a large number of personal computers that include a monitor, CPU with preloaded software, keyboard, mouse, and cabling. To begin the transition from the old to the new personal computers, the customer might request that you ship the CPUs and the software prior to the rest of the components so that the customer can install the software and set up the CPUs before actually assembling the personal computer.

In this scenario, you can ship all or a part of the CPUs and software (components) separately from the personal computers (parent configured items). You can override the quantity to be shipped for the CPUs and software, and disassociate them from the parent configured item. The CPU becomes a new parent, and the software remains a child of the CPU; but both are disassociated from the personal computers. You must manage, track, and ship any remaining quantities of the CPUs and software separately from the personal computers until you have shipped the entire order quantity on the original sales order.

## Understanding Invoices

Use the Print Invoices (R42565) program to print sales order invoices. You can print invoices in proof mode, review them, and then print the final invoices and update the files. You can also print invoices in draft mode to review the invoice before updating it. In addition, you can print an invoice from history.

# Understanding Configured Items and Procurement

After you have entered a purchase order for a configured item, you use programs in the Procurement system to complete the purchase order processing cycle.

### Purchase Order Receipt Entry for Configured Items

When you receive goods, you verify that the details of the receipt correspond to the information on the purchase order. You use the PO Receipts (P4312) program to receive goods and enter information such as location, quantity, and cost into the system.

When a configured item is received, a unique Configuration ID is associated with it. This ID must match the one on the Item Location File table (F41021) when the item is put into inventory. If a new location is created, the Configuration ID must be recorded on it.

# Reviewing the Configured Item History

This section provides an overview of configured item history, and discusses how to locate and review configured item history.

## Understanding Configured Item History

You can review the configured item history to locate previously ordered configurations at any level of a configured item. The history includes information about customers, orders, order types, and branch/plant.

You retrieve historical orders according to values that are entered in the header of Configured String History (P3296). The order information that appears is retrieved from the Configurator Master Table (F3201) and the Configurator Component Table (F3215).

A Row exit to Display Config accesses and displays the configuration tree and segment answers for a particular order stored in the Configurator Segment Detail (F3211) table.

You can review this history by custom and item to analyze sales and generate custom reports and inquiries.

You can also view the configuration history during order entry, where you can select what to enter on the current order from previously ordered configured items.

## Form Used to Review the Configured Item History

| Form Name | Form ID | Navigation | Usage |
|---|---|---|---|
| Work with Configuration, | W32983B | From the Daily Processing menu (G32), choose Configured Item History.<br>On Work with Configured String History, enter values for the Branch/Plant and Configured Item fields.<br>Optionally, enter values for the Order Number, Or Ty, Order Co, Ord Suf, Address Number, and Ship to Number fields and click Find.<br>Select a row in the grid and take the Row exit to Display Config. | Review the configuration tree and segment values. |

## Locating and Reviewing the Configured Item History

Access the Work with Configuration form.

**Order Number** A number that identifies an original document. This document can be a voucher, a sales order, an invoice, unapplied cash, a journal entry, and so on.

**Or Ty** A user defined code (00/DT) that identifies the type of document. This code also indicates the origin of the transaction. PeopleSoft 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.)

The following document types are defined by PeopleSoft and should not be changed:

*P:* Accounts Payable documents

*R:* Accounts Receivable documents

*T:* Payroll documents

*I:* Inventory documents

*O:* Purchase Order Processing documents

*J:* General Accounting/Joint Interest Billing documents

*S:* Sales Order Processing documents

**Order Co** A number that, along with order number and order type, uniquely identifies an order document (such as a purchase order, a contract, a sales order, and so on).

If you use the Next Numbers by Company/Fiscal Year facility, the Automatic Next Numbers program (X0010) uses the order company to retrieve the correct next number for that company. If two or more order documents have the same order number and order type, the order company lets you locate the desired document.

If you use the regular Next Numbers facility, the order company is not used to assign a next number. In this case, you probably would not use the order company to locate the document.

**Ord Suf** In the A/R and A/P systems, a code that corresponds to the pay item. In the Sales Order and Procurement systems, this code identifies multiple transactions for an original order.

For purchase orders, the code is always 000.

For sales orders with multiple partial receipts against an order, the first receiver used to record receipt has a suffix of 000, the next has a suffix of 001, the next 002, and so on.

**Line Number** 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.

**Close** Click when review is complete.

# Reviewing Related Orders for Configured Items

This section provides an overview of the Related Configured Orders program and discusses how to review related orders for configured items.

## Understanding the Related Configured Orders Program

The Related Configured Orders (P3201) program displays all of the orders that are related to a particular configuration. Related Configured Orders can be accessed through Configured Item Specifications (P32942) or the inquiry form in an order entry program, such as Sales Order Entry (P4210), Purchase Orders (P4310), or Manufacturing Work Order Processing (P48013).

Related Configured Orders gives you the ability to display the configuration tree and segment values, and review attachments. You can also cancel or delete related work orders.

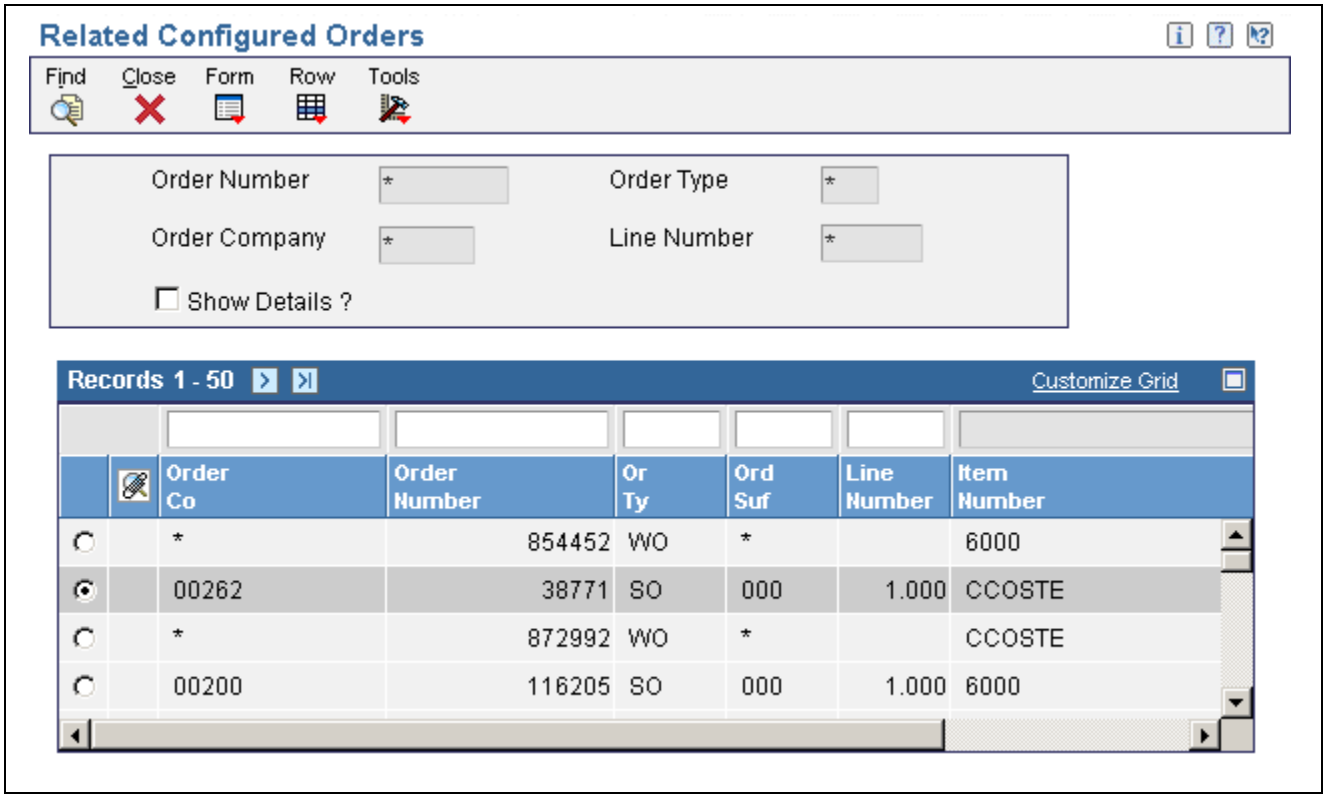
# Form Used to Review Related Orders for Configured Items

| Form Name | Form ID | Navigation | Usage |
|---|---|---|---|
| Related Configured Orders | W3201A | From the Daily Processing menu (G32), choose Sales Order Entry.<br><br>On Customer Service Inquiry, locate the sales order for the configured item. Choose the row and click Select.<br><br>On Sales Order Detail Revisions, select a row and choose Kits/Configurator from the Row menu.<br><br>On Configured Item Specifications, choose Config Related Order from the Form menu. | Review information for the orders that are related to your configuration. |

# Locating and Reviewing Related Orders for Configured Items

Access the Related Configured Orders form.

**Note.** A sales order is being used for ease of understanding. You can use Sales Order Entry, Purchase Order Entry, or Work Order Entry to enter an order for a configured item.




Related Configured Orders form

Take the Form exit to Display Config to review the configuration tree and segment values. Take the Row exit to Attachments to view the attachments. Row and Form exits must be cancelled, and related work orders must be deleted.

When your review is complete, click Close. On Configured Item Specifications, click the Calc button. When the calculation function completes processing without errors, click OK.

**Order Company** A number that, along with order number and order type, uniquely identifies an order document (such as a purchase order, a contract, a sales order, and so on).

If you use the Next Numbers by Company/Fiscal Year facility, the Automatic Next Numbers program (X0010) uses the order company to retrieve the correct next number for that company. If two or more order documents have the same order number and order type, the order company lets you locate the desired document.

If you use the regular Next Numbers facility, the order company is not used to assign a next number. In this case, you probably would not use the order company to locate the document.

**Order Number** A number that identifies an original document. This document can be a voucher, a sales order, an invoice, unapplied cash, a journal entry, and so on.

**Or Ty** A user defined code (00/DT) that identifies the type of document. This code also indicates the origin of the transaction. PeopleSoft 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.)

The following document types are defined by PeopleSoft and should not be changed:

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**Ord Suf** In the A/R and A/P systems, a code that corresponds to the pay item. In the Sales Order and Procurement systems, this code identifies multiple transactions for an original order.

For purchase orders, the code is always 000.

For sales orders with multiple partial receipts against an order, the first receiver used to record receipt has a suffix of 000, the next has a suffix of 001, the next 002, and so on.

**Line Number** 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.

**Item Number** A number that the system assigns to an item. It can be in short, long, or third item number format.

**Business Unit** This branch represents the branch of the segment's configured item number. Use this value to reference a previously selected segment from a different configuration level.

# Performing an Inventory Search for Configured Items

This section includes an overview of the inventory search process, and discusses how to perform an inventory search for configured items.

## Understanding Inventory Search for Configured Items

The Configurator system enables you to search for configured item inventory. You can search by configured item to display the configuration; and review segment information, location, lot/serial numbers, branch/plant, and availability.

**Note.** In Engineer to Order (ETO), the inventory search functionality is disabled because it does not apply to ETO. All of the inventory for ETO is considered project-specific and must be acquired for the project.

## Performing an Inventory Search for Configured Items

To perform an inventory search for configured items:

1. From the Daily Processing menu (G32), choose Configured Item Inventory Search. You can also access Configured Item Inventory Search from the appropriate tab in Configured Item Revisions (P3210).
2. On Configured Item Segment Search, enter a value in the Configured Item field and click Find.
3. Review the following segment information for the configured item:
   - Description
   - Answer
   - Seg
   - Item Number
   - Branch
4. Choose a segment row and choose Segment Value from the Row menu.
5. On Work With Segment Value Selection, review the valid values for the selected segment. If applicable, select a different value and click Select.
6. On Configured Item Segment Search, take the Form exit to Search All.
7. On Select Configured Items - Sales Order Processing, review the following fields:
   - Location
   - Lot/Serial
   - Brn/Plt

- Available

  On Select Configured Items - Sales Order Processing, you can take the Form exit Location Search to search for configured items in specific branch/plants and locations. You can also choose a row and take the Row exit to Display Config to review the configuration for the item.

8. Click Select or Close to return to the previous form.
9. On Configured Item Segment Search, use the Form exit Clear All Values to set the values in the Answer field to an *.
10. Click OK or Cancel when you have completed searching inventory for the configured item.

# CHAPTER 7

# Understanding Kits and Configurator

This chapter provides overviews of the Kits and Configurator tools, and an overview of the main features and differences in the functionality of these tools.

## Kits and Configurator Tools

Kits and Configurator are tools that can be used to support the order entry, manufacture, and shipment of configured items. Each tool has a niche in the manufacturing and distribution model. Having a basic understanding of these tools helps you know which tool is most appropriate to use in a given business situation.

A kit is a collection of inventory items, called components, that are associated with a parent item. The components are stocked inventory items but are sold collectively as a parent item. Kit processing assists order entry personnel in completing an accurate customer order. Kits are used in pick-to-order environments and can even be used for simple products in an assemble-to-order environment. Computers and stereo systems are examples of items that use kit processing for order entry.

The Configurator is used in the pick-to-order (if relationships exist between components), assemble-to-order, and make-to-order environments. Computers and garage doors are examples of items that use the Configurator for order entry.

The following configuration comparison chart highlights some of the main features and differences in functionality between the three methods:

## Configuration Comparison

This table describes the features available in the Kits and Configuration tools:

| Feature | Kits | Configurator |
|---|---|---|
| Product Structure | Single level | Multiple configured levels |
| End Item Identification | Single item number | Unique Configuration ID |
| Order Entry Method | Heads-down data entry | Heads-down data entry |
| Order Entry User Interface | Static grid | Static format |
| Configuration Validation | No cross-reference checking performed | Boolean (If-Then-Else) Logic and/or Tables used to perform cross-reference checking |

| Feature | Kits | Configurator |
|---|---|---|
| Graphic Confirmation | Static media object by sales order line item | Static media object by item or option |
| Configuration Specific Calculations | No calculations | Calculations at the end of the entry process |
| Work Orders | Parent only; no child work orders | Multiple, multilevel work orders (parent/child relationship) |
| Bill of Material/Parts List | Defined by bill of material | Defined by assembly inclusion rules |
| Routing | Basic routing for the parent item | Configured routing |

## Key

*Product Structure* refers to the levels, like levels of a bill of material or the configuration tree structure, and if the items within the structure are configured.

*End Item Identification* refers to the identification of the final parent end item.

*Configuration Validation* refers to the cross-checking of components, assemblies, and configured item selections to ensure a valid configuration of the final parent end item. Configuration comparison

# Glossary of PeopleSoft Terms

**activity** A scheduling entity in PeopleSoft EnterpriseOne Form Design Aid that represents a designated amount of time on a calendar.

**activity rule** The criteria by which an object progresses from one given point to the next in a flow.

**add mode** A condition of a form that enables users to input data.

**Advanced Planning Agent (APAg)** A PeopleSoft EnterpriseOne tool that can be used to extract, transform, and load enterprise data. APAg supports access to data sources in the form of rational databases, flat file format, and other data or message encoding, such as XML.

**application server** A server in a local area network that contains applications shared by network clients.

**as if processing** A process that enables you to view currency amounts as if they were entered in a currency different from the domestic and foreign currency of the transaction.

**alternate currency** A currency that is different from the domestic currency (when dealing with a domestic-only transaction) or the domestic and foreign currency of a transaction.

In PeopleSoft EnterpriseOne Financial Management, alternate currency processing enables you to enter receipts and payments in a currency other than the one in which they were issued.

**as of processing** A process that is run as of a specific point in time to summarize transactions up to that date. For example, you can run various PeopleSoft EnterpriseOne reports as of a specific date to determine balances and amounts of accounts, units, and so on as of that date.

**back-to-back process** A process in PeopleSoft EnterpriseOne Workflow Management that contains the same keys that are used in another process.

**batch processing** A process of transferring records from a third-party system to PeopleSoft EnterpriseOne.

In PeopleSoft EnterpriseOne Financial Management, batch processing enables you to transfer invoices and vouchers that are entered in a system other than EnterpriseOne to PeopleSoft EnterpriseOne Accounts Receivable and PeopleSoft EnterpriseOne Accounts Payable, respectively. In addition, you can transfer address book information, including customer and supplier records, to PeopleSoft EnterpriseOne.

**batch server** A server that is designated for running batch processing requests. A batch server typically does not contain a database nor does it run interactive applications.

**batch-of-one immediate** A transaction method that enables a client application to perform work on a client workstation, then submit the work all at once to a server application for further processing. As a batch process is running on the server, the client application can continue performing other tasks.

See also direct connect and store-and-forward.

**business function** A named set of user-created, reusable business rules and logs that can be called through event rules. Business functions can run a transaction or a subset of a transaction (check inventory, issue work orders, and so on). Business functions also contain the application programming interfaces (APIs) that enable them to be called from a form, a database trigger, or a non-EnterpriseOne application. Business functions can be combined with other business functions, forms, event rules, and other components to make up an application. Business functions can be created through

event rules or third-generation languages, such as C. Examples of business functions include Credit Check and Item Availability.

**business function event rule** See named event rule (NER).

**business view** A means for selecting specific columns from one or more PeopleSoft EnterpriseOne tables whose data is used in an application or report. A business view does not select specific rows, nor does it contain any actual data. It is strictly a view through which you can manipulate data.

**central objects merge** A process that blends a customer's modifications to the objects in a current release with objects in a new release.

**central server** A server that has been designated to contain the originally installed version of the software (central objects) for deployment to client computers. In a typical PeopleSoft EnterpriseOne installation, the software is loaded on to one machine—the central server. Then, copies of the software are pushed out or downloaded to various workstations attached to it. That way, if the software is altered or corrupted through its use on workstations, an original set of objects (central objects) is always available on the central server.

**charts** Tables of information in PeopleSoft EnterpriseOne that appear on forms in the software.

**connector** Component-based interoperability model that enables third-party applications and PeopleSoft EnterpriseOne to share logic and data. The PeopleSoft EnterpriseOne connector architecture includes Java and COM connectors.

**contra/clearing account** A general ledger account in PeopleSoft EnterpriseOne Financial Management that is used by the system to offset (balance) journal entries. For example, you can use a contra/clearing account to balance the entries created by allocations in PeopleSoft EnterpriseOne General Accounting.

**Control Table Workbench** An application that, during the installation Workbench processing, runs the batch applications for the planned merges that update the data dictionary, user-defined codes, menus, and user override tables.

**control tables merge** A process that blends a customer's modifications to the control tables with the data that accompanies a new release.

**cost assignment** The process in PeopleSoft EnterpriseOne Advanced Cost Accounting of tracing or allocating resources to activities or cost objects.

**cost component** In PeopleSoft EnterpriseOne Manufacturing Management, an element of an item's cost (for example, material, labor, or overhead).

**cross segment edit** A logic statement that establishes the relationship between configured item segments. Cross segment edits are used to prevent ordering of configurations that cannot be produced.

**currency restatement** The process of converting amounts from one currency into another currency, generally for reporting purposes. You can use the currency restatement process, for example, when many currencies must be restated into a single currency for consolidated reporting.

**database server** A server in a local area network that maintains a database and performs searches for client computers.

**Data Source Workbench** An application that, during the Installation Workbench process, copies all data sources that are defined in the installation plan from the Data Source Master and Table and Data Source Sizing tables in the Planner data source to the System-release number data source. It also updates the Data Source Plan detail record to reflect completion.

**date pattern** A calendar that represents the beginning date for the fiscal year and the ending date for each period in that year in standard and 52-period accounting.

**denominated-in currency** The company currency in which financial reports are based.

**deployment server** A server that is used to install, maintain, and distribute software to one or more enterprise servers and client workstations.

**detail information** Information that relates to individual lines in PeopleSoft EnterpriseOne transactions (for example, voucher pay items and sales order detail lines).

**direct connect** A transaction method in which a client application communicates interactively and directly with a server application.

See also batch-of-one immediate and store-and-forward.

**Do Not Translate (DNT)** A type of data source that must exist on the iSeries because of BLOB restrictions.

**dual pricing** The process of providing prices for goods and services in two currencies.

**edit code** A code that indicates how a specific value for a report or a form should appear or be formatted. The default edit codes that pertain to reporting require particular attention because they account for a substantial amount of information.

**edit mode** A condition of a form that enables users to change data.

**edit rule** A method used for formatting and validating user entries against a predefined rule or set of rules.

**Electronic Data Interchange (EDI)** An interoperability model that enables paperless computer-to-computer exchange of business transactions between PeopleSoft EnterpriseOne and third-party systems. Companies that use EDI must have translator software to convert data from the EDI standard format to the formats of their computer systems.

**embedded event rule** An event rule that is specific to a particular table or application. Examples include form-to-form calls, hiding a field based on a processing option value, and calling a business function. Contrast with the business function event rule.

**Employee Work Center** A central location for sending and receiving all PeopleSoft EnterpriseOne messages (system and user generated), regardless of the originating application or user. Each user has a mailbox that contains workflow and other messages, including Active Messages.

**enterprise server** A server that contains the database and the logic for PeopleSoft EnterpriseOne or PeopleSoft World.

**EnterpriseOne object** A reusable piece of code that is used to build applications. Object types include tables, forms, business functions, data dictionary items, batch processes, business views, event rules, versions, data structures, and media objects.

**EnterpriseOne process** A software process that enables PeopleSoft EnterpriseOne clients and servers to handle processing requests and run transactions. A client runs one process, and servers can have multiple instances of a process. PeopleSoft EnterpriseOne processes can also be dedicated to specific tasks (for example, workflow messages and data replication) to ensure that critical processes don't have to wait if the server is particularly busy.

**Environment Workbench** An application that, during the Installation Workbench process, copies the environment information and Object Configuration Manager tables for each environment from the Planner data source to the System-release number data source. It also updates the Environment Plan detail record to reflect completion.

**escalation monitor** A batch process that monitors pending requests or activities and restarts or forwards them to the next step or user after they have been inactive for a specified amount of time.

**event rule** A logic statement that instructs the system to perform one or more operations based on an activity that can occur in a specific application, such as entering a form or exiting a field.

**facility** An entity within a business for which you want to track costs. For example, a facility might be a warehouse location, job, project, work center, or branch/plant. A facility is sometimes referred to as a *business unit* .

**fast path** A command prompt that enables the user to move quickly among menus and applications by using specific commands.

**file server** A server that stores files to be accessed by other computers on the network. Unlike a disk server, which appears to the user as a remote disk drive, a file server is a sophisticated device that not only stores files, but also manages them and maintains order as network user request files and make changes to these files.

**final mode** The report processing mode of a processing mode of a program that updates or creates data records.

**FTP server** A server that responds to requests for files via file transfer protocol.

**header information** Information at the beginning of a table or form. Header information is used to identify or provide control information for the group of records that follows.

**interface table** See Z tables.

**integration server** A server that facilitates interaction between diverse operating systems and applications across internal and external networked computer systems.

**integrity test** A process used to supplement a company's internal balancing procedures by locating and reporting balancing problems and data inconsistencies.

**interoperability model** A method for third-party systems to connect to or access PeopleSoft EnterpriseOne.

**in-your-face-error** In PeopleSoft EnterpriseOne, a form-level property which, when enabled, causes the text of application errors to appear on the form.

**IServer service** Developed by PeopleSoft, this internet server service resides on the web server and is used to speed up delivery of the Java class files from the database to the client.

**jargon** An alternative data dictionary item description that PeopleSoft EnterpriseOne or People World displays based on the product code of the current object.

**Java application server** A component-based server that resides in the middle-tier of a server-centric architecture. This server provides middleware services for security and state maintenance, along with data access and persistence.

**JDBNET** A database driver that enables heterogeneous servers to access each other's data.

**JDEBASE Database Middleware** A PeopleSoft proprietary database middleware package that provides platform-independent APIs, along with client-to-server access.

**JDECallObject** An API used by business functions to invoke other business functions.

**jde.ini** A PeopleSoft file (or member for iSeries) that provides the runtime settings required for EnterpriseOne initialization. Specific versions of the file or member must reside on every machine running PeopleSoft EnterpriseOne. This includes workstations and servers.

**JDEIPC** Communications programming tools used by server code to regulate access to the same data in multiprocess environments, communicate and coordinate between processes, and create new processes.

**jde.log** The main diagnostic log file of PeopleSoft EnterpriseOne. This file is always located in the root directory on the primary drive and contains status and error messages from the startup and operation of PeopleSoft EnterpriseOne.

**JDENET** PeopleSoft proprietary communications middleware package. This package is a peer-to-peer, message-based, socket-based, multiprocess communications middleware solution. It handles client-to-server and server-to-server communications for all PeopleSoft EnterpriseOne supported platforms.

**Location Workbench** An application that, during the Installation Workbench process, copies all locations that are defined in the installation plan from the Location Master table in the Planner data source to the System data source.

**logic server** A server in a distributed network that provides the business logic for an application program. In a typical configuration, pristine objects are replicated on to the logic server from the central server. The logic server, in conjunction with workstations, actually performs the processing required when PeopleSoft EnterpriseOne and World software runs.

**MailMerge Workbench** An application that merges Microsoft Word 6.0 (or higher) word-processing documents with PeopleSoft EnterpriseOne records to automatically print business documents. You can use MailMerge Workbench to print documents, such as form letters about verification of employment.

**master business function (MBF)** An interactive master file that serves as a central location for adding, changing, and updating information in a database. Master business functions pass information between data entry forms and the appropriate tables. These master functions provide a common set of functions that contain all of the necessary default and editing rules for related programs. MBFs contain logic that ensures the integrity of adding, updating, and deleting information from databases.

**master table** See published table.

**matching document** A document associated with an original document to complete or change a transaction. For example, in PeopleSoft EnterpriseOne Financial Management, a receipt is the matching document of an invoice, and a payment is the matching document of a voucher.

**media storage object** Files that use one of the following naming conventions that are not organized into table format: Gxxx, xxxGT, or GTxxx.

**message center** A central location for sending and receiving all PeopleSoft EnterpriseOne messages (system and user generated), regardless of the originating application or user.

**messaging adapter** An interoperability model that enables third-party systems to connect to PeopleSoft EnterpriseOne to exchange information through the use of messaging queues.

**messaging server** A server that handles messages that are sent for use by other programs using a messaging API. Messaging servers typically employ a middleware program to perform their functions.

**named event rule (NER)** Encapsulated, reusable business logic created using event rules, rather that C programming. NERs are also called business function event rules. NERs can be reused in multiple places by multiple programs. This modularity lends itself to streamlining, reusability of code, and less work.

***nota fiscal*** In Brazil, a legal document that must accompany all commercial transactions for tax purposes and that must contain information required by tax regulations.

***nota fiscal factura*** In Brazil, a nota fiscal with invoice information.

See also *nota fiscal.*

**Object Configuration Manager (OCM)** In PeopleSoft EnterpriseOne, the object request broker and control center for the runtime environment. OCM keeps track of the runtime locations for business functions, data, and batch applications. When one of these objects is called, OCM directs access to it using defaults and overrides for a given environment and user.

**Object Librarian** A repository of all versions, applications, and business functions reusable in building applications. Object Librarian provides check-out and check-in capabilities for developers, and it controls the creation, modification, and use of PeopleSoft EnterpriseOne objects. Object Librarian supports multiple environments (such as production and development) and enables objects to be easily moved from one environment to another.

**Object Librarian merge** A process that blends any modifications to the Object Librarian in a previous release into the Object Librarian in a new release.

**Open Data Access (ODA)** An interoperability model that enables you to use SQL statements to extract PeopleSoft EnterpriseOne data for summarization and report generation.

**Output Stream Access (OSA)** An interoperability model that enables you to set up an interface for PeopleSoft EnterpriseOne to pass data to another software package, such as Microsoft Excel, for processing.

**package** EnterpriseOne objects are installed to workstations in packages from the deployment server. A package can be compared to a bill of material or kit that indicates the necessary objects for that workstation and where on the deployment server the installation program can find them. It is point-in-time snap shot of the central objects on the deployment server.

**package build** A software application that facilitates the deployment of software changes and new applications to existing users. Additionally, in PeopleSoft EnterpriseOne, a package build can be a compiled version of the software. When you upgrade your version of the ERP software, for example, you are said to take a package build.

Consider the following context: “Also, do not transfer business functions into the production path code until you are ready to deploy, because a global build of business functions done during a package build will automatically include the new functions.” The process of creating a package build is often referred to, as it is in this example, simply as “a package build.”

**package location** The directory structure location for the package and its set of replicated objects. This is usually \\deployment server\release\path_code\package\package name. The subdirectories under this path are where the replicated objects for the package are placed. This is also referred to as where the package is built or stored.

**Package Workbench** An application that, during the Installation Workbench process, transfers the package information tables from the Planner data source to the System-release number data source. It also updates the Package Plan detail record to reflect completion.

**PeopleSoft Database** See JDEBASE Database Middleware.

**planning family** A means of grouping end items whose similarity of design and manufacture facilitates being planned in aggregate.

**preference profile** The ability to define default values for specified fields for a user-defined hierarchy of items, item groups, customers, and customer groups.

**print server** The interface between a printer and a network that enables network clients to connect to the printer and send their print jobs to it. A print server can be a computer, separate hardware device, or even hardware that resides inside of the printer itself.

**pristine environment** A PeopleSoft EnterpriseOne environment used to test unaltered objects with PeopleSoft demonstration data or for training classes. You must have this environment so that you can compare pristine objects that you modify.

**processing option** A data structure that enables users to supply parameters that regulate the running of a batch program or report. For example, you can use processing options to specify default values for certain fields, to determine how information appears or is printed, to specify date ranges, to supply runtime values that regulate program execution, and so on.

**production environment** A PeopleSoft EnterpriseOne environment in which users operate EnterpriseOne software.

**production-grade file server** A file server that has been quality assurance tested and commercialized and that is usually provided in conjunction with user support services.

**program temporary fix (PTF)** A representation of changes to PeopleSoft software that your organization receives on magnetic tapes or disks.

**project** In PeopleSoft EnterpriseOne, a virtual container for objects being developed in Object Management Workbench.

**promotion path** The designated path for advancing objects or projects in a workflow. The following is the normal promotion cycle (path):

11>21>26>28>38>01

In this path, *11* equals new project pending review, *21* equals programming, *26* equals QA test/review, *28* equals QA test/review complete, *38* equals in production, *01* equals complete. During the normal project promotion cycle, developers check objects out of and into the development path code and then promote them to the prototype path code. The objects are then moved to the productions path code before declaring them complete.

**proxy server** A server that acts as a barrier between a workstation and the internet so that the enterprise can ensure security, administrative control, and caching service.

**published table** Also called a master table, this is the central copy to be replicated to other machines. Residing on the publisher machine, the F98DRPUB table identifies all of the published tables and their associated publishers in the enterprise.

**publisher** The server that is responsible for the published table. The F98DRPUB table identifies all of the published tables and their associated publishers in the enterprise.

**pull replication** One of the PeopleSoft methods for replicating data to individual workstations. Such machines are set up as pull subscribers using PeopleSoft EnterpriseOne data replication tools. The only time that pull subscribers are notified of changes, updates, and deletions is when they request such information. The request is in the form of a message that is sent, usually at startup, from the pull subscriber to the server machine that stores the F98DRPCN table.

**QBE** An abbreviation for query by example. In PeopleSoft EnterpriseOne, the QBE line is the top line on a detail area that is used for filtering data.

**real-time event** A service that uses system calls to capture PeopleSoft EnterpriseOne transactions as they occur and to provide notification to third-party software, end users, and other PeopleSoft systems that have requested notification when certain transactions occur.

**refresh** A function used to modify PeopleSoft EnterpriseOne software, or subset of it, such as a table or business data, so that it functions at a new release or cumulative update level, such as B73.2 or B73.2.1.

**replication server** A server that is responsible for replicating central objects to client machines.

**quote order** In PeopleSoft EnterpriseOne Procurement and Subcontract Management, a request from a supplier for item and price information from which you can create a purchase order.

| | |
|---|---|
| | In PeopleSoft EnterpriseOne Sales Order Management, item and price information for a customer who has not yet committed to a sales order. |
| **selection** | Found on PeopleSoft menus, a selection represents functions that you can access from a menu. To make a selection, type the associated number in the Selection field and press Enter. |
| **Server Workbench** | An application that, during the Installation Workbench process, copies the server configuration files from the Planner data source to the System-release number data source. It also updates the Server Plan detail record to reflect completion. |
| **spot rate** | An exchange rate entered at the transaction level. This rate overrides the exchange rate that is set up between two currencies. |
| **Specification merge** | A merge that comprises three merges: Object Librarian merge, Versions List merge, and Central Objects merge. The merges blend customer modifications with data that accompanies a new release. |
| **specification** | A complete description of a PeopleSoft EnterpriseOne object. Each object has its own specification, or name, which is used to build applications. |
| **Specification Table Merge Workbench** | An application that, during the Installation Workbench process, runs the batch applications that update the specification tables. |
| **store-and-forward** | The mode of processing that enables users who are disconnected from a server to enter transactions and then later connect to the server to upload those transactions. |
| **subscriber table** | Table F98DRSUB, which is stored on the publisher server with the F98DRPUB table and identifies all of the subscriber machines for each published table. |
| **supplemental data** | Any type of information that is not maintained in a master file. Supplemental data is usually additional information about employees, applicants, requisitions, and jobs (such as an employee's job skills, degrees, or foreign languages spoken). You can track virtually any type of information that your organization needs.<br><br>For example, in addition to the data in the standard master tables (the Address Book Master, Customer Master, and Supplier Master tables), you can maintain other kinds of data in separate, generic databases. These generic databases enable a standard approach to entering and maintaining supplemental data across PeopleSoft EnterpiseOne systems. |
| **table access management (TAM)** | The PeopleSoft EnterpriseOne component that handles the storage and retrieval of use-defined data. TAM stores information, such as data dictionary definitions; application and report specifications; event rules; table definitions; business function input parameters and library information; and data structure definitions for running applications, reports, and business functions. |
| **Table Conversion Workbench** | An interoperability model that enables the exchange of information between PeopleSoft EnterpriseOne and third-party systems using non-PeopleSoft EnterpriseOne tables. |
| **table conversion** | An interoperability model that enables the exchange of information between PeopleSoft EnterpriseOne and third-party systems using non-PeopleSoft EnterpriseOne tables. |
| **table event rules** | Logic that is attached to database triggers that runs whenever the action specified by the trigger occurs against the table. Although PeopleSoft EnterpriseOne enables event rules to be attached to application events, this functionality is application specific. Table event rules provide embedded logic at the table level. |
| **terminal server** | A server that enables terminals, microcomputers, and other devices to connect to a network or host computer or to devices attached to that particular computer. |

**three-tier processing** The task of entering, reviewing and approving, and posting batches of transactions in PeopleSoft EnterpriseOne.

**three-way voucher match** In PeopleSoft EnterpriseOne Procurement and Subcontract Management, the process of comparing receipt information to supplier's invoices to create vouchers. In a three-way match, you use the receipt records to create vouchers.

**transaction processing (TP) monitor** A monitor that controls data transfer between local and remote terminals and the applications that originated them. TP monitors also protect data integrity in the distributed environment and may include programs that validate data and format terminal screens.

**transaction set** An electronic business transaction (electronic data interchange standard document) made up of segments.

**trigger** One of several events specific to data dictionary items. You can attach logic to a data dictionary item that the system processes automatically when the event occurs.

**triggering event** A specific workflow event that requires special action or has defined consequences or resulting actions.

**two-way voucher match** In PeopleSoft EnterpriseOne Procurement and Subcontract Management, the process of comparing purchase order detail lines to the suppliers' invoices to create vouchers. You do not record receipt information.

**User Overrides merge** Adds new user override records into a customer's user override table.

**variance** In Capital Asset Management, the difference between revenue generated by a piece of equipment and costs incurred by the equipment.

In EnterpriseOne Project Costing and EnterpriseOne Manufacturing Management, the difference between two methods of costing the same item (for example, the difference between the frozen standard cost and the current cost is an engineering variance). Frozen standard costs come from the Cost Components table, and the current costs are calculated using the current bill of material, routing, and overhead rates.

**Version List merge** The Versions List merge preserves any non-XJDE and non-ZJDE version specifications for objects that are valid in the new release, as well as their processing options data.

**visual assist** Forms that can be invoked from a control via a trigger to assist the user in determining what data belongs in the control.

**vocabulary override** An alternate description for a data dictionary item that appears on a specific PeopleSoft EnterpriseOne or World form or report.

**wchar_t** An internal type of a wide character. It is used for writing portable programs for international markets.

**web application server** A web server that enables web applications to exchange data with the back-end systems and databases used in eBusiness transactions.

**web server** A server that sends information as requested by a browser, using the TCP/IP set of protocols. A web server can do more than just coordination of requests from browsers; it can do anything a normal server can do, such as house applications or data. Any computer can be turned into a web server by installing server software and connecting the machine to the internet.

**Windows terminal server** A multiuser server that enables terminals and minimally configured computers to display Windows applications even if they are not capable of running Windows software themselves. All client processing is performed centrally at the Windows terminal server and only display, keystroke, and mouse commands are transmitted over the network to the client terminal device.

**work day calendar** In EnterpriseOne Manufacturing Management, a calendar that is used in planning functions that consecutively lists only working days so that component and work order scheduling can be done based on the actual number of work days available. A work day calendar is sometimes referred to as planning calendar, manufacturing calendar, or shop floor calendar.

**workflow** The automation of a business process, in whole or in part, during which documents, information, or tasks are passed from one participant to another for action, according to a set of procedural rules.

**workgroup server** A server that usually contains subsets of data replicated from a master network server. A workgroup server does not perform application or batch processing.

**XAPI events** A service that uses system calls to capture PeopleSoft EnterpriseOne transactions as they occur and then calls third-party software, end users, and other PeopleSoft systems that have requested notification when the specified transactions occur to return a response.

**XML CallObject** An interoperability capability that enables you to call business functions.

**XML Dispatch** An interoperability capability that provides a single point of entry for all XML documents coming into PeopleSoft EnterpriseOne for responses.

**XML List** An interoperability capability that enables you to request and receive PeopleSoft EnterpriseOne database information in chunks.

**XML Service** An interoperability capability that enables you to request events from one PeopleSoft EnterpriseOne system and receive a response from another PeopleSoft EnterpriseOne system.

**XML Transaction** An interoperability capability that enables you to use a predefined transaction type to send information to or request information from PeopleSoft EnterpriseOne. XML transaction uses interface table functionality.

**XML Transaction Service (XTS)** Transforms an XML document that is not in the PeopleSoft EnterpriseOne format into an XML document that can be processed by PeopleSoft EnterpriseOne. XTS then transforms the response back to the request originator XML format.

**Z event** A service that uses interface table functionality to capture PeopleSoft EnterpriseOne transactions and provide notification to third-party software, end users, and other PeopleSoft systems that have requested to be notified when certain transactions occur.

**Z table** A working table where non-PeopleSoft EnterpriseOne information can be stored and then processed into PeopleSoft EnterpriseOne. Interface tables also can be used to retrieve PeopleSoft EnterpriseOne data. Interface tables are also known as interface tables.

**Z transaction** Third-party data that is properly formatted in interface tables for updating to the PeopleSoft EnterpriseOne database.

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