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Overviews

This section provides overview information about the manufacturing and distribution industry, as well as information about how planning systems in the manufacturing environment operate.

Topics

- Industry Overview
- Planning Systems Overview

Industry Overview

This chapter introduces you to the industry concepts associated with manufacturing and distribution planning. In addition, this chapter outlines several problems inherent in a planning environment and presents J.D. Edwards solutions through Idea to Action.

Topics

- Industry Environment and Concepts for Enterprise Planning
- Idea to Action: The Competitive Advantage

Industry Environment and Concepts for Enterprise Planning

Enterprise planning is an important component of all manufacturing and distribution industries. In virtually every business, management must answer the following fundamental questions:

- Why is our company in business?
- What products does our company produce?
- What goals does our company have?
- How does our company accomplish these goals?

The answer is simple: planning. The development and the execution of plans, however, is anything but simplistic. To inform all participants of an enterprise's objectives and to spread information across an entire organization is a challenge! Also, organizations do not operate in a vacuum, and planners must understand how of an organization's plans can affect another organization.

Planning Across the Supply Chain

How enterprises planned in the past and how they effectively plan in today's global market are very different. In the past, enterprises were self-sufficient, independent organizations. Enterprises made decisions on business needs and the demands of the target market. But changes to the marketplace, technology, and product demand have altered the way a company remains an actively participates in any market.

Today, customer profiling, market analysis, and marketing strategies are standard business practices for enterprises that are serious about competing. Vigorous and dynamic competition is no longer limited to industry giants. Since no business is without competition, all businesses must consider their actions and opportunities with regard to what the competition is doing.

Every generation of business believes that it operates in the most modern of times. However, significant technological advancements have forced business modifications to occur at a remarkable speed in the late twentieth century and into the twenty-first century. Technological advances dominate the modifications that enterprises require. For example, the means by which an enterprise captures, reconfigures, and analyzes business data with computers has changed over the past 30 years from one room with multiple computers capable of accomplishing simple calculations to multiple rooms filled with employees, each with their own computer.

The term `business community' now means a base for global business. Our world that is not one-dimensional, therefore, single-dimensional companies cannot stay in business for the long term. Single-dimensional companies need to increase their business perspective to include a broader view of their business relationships.

The success of any company depends balancing of the management functions between internal and external organizations. An enterprise that successfully balances these functions is well-positioned in the marketplace. This balance is achieved by successfully managing the supply chain, which includes the following functions:

- Purchasing or sourcing
- Demand and forecast planning
- Inventory and production planning
- Warehouse management
- Distribution and transportation
- Accounting
- Customer service

Today, enterprises look closely at how they process information within their structure. Enterprises also coordinate information to optimize operations, which makes information accessible across enterprise boundaries. Market competition drives businesses to analyze how they manage their business operations, and demands that companies seeks more efficient ways to set up, track, and change business processes. Market activities affect the bottom lines of all involved organizations. The more integrated and informed organizations become, the more they benefit from each other's knowledge and skills. Sharing information allows each company to plan and operate more efficiently, regardless of the industry with which they are aligned.

Traditionally, organizations separated their internal and external functions. Planners obtained information for the organization and then forwarded the information into a predetermined path without any coordination or direction across functional areas. Today, all enterprise locations and personnel share information, which increases operating efficiency. For example, sharing information between a design engineer and a program planner promotes smoother processes and higher quality results.

Today's enterprises also share information with their external relationships. An exchange of information between enterprises is a common business strategy that benefits all of the participants. Sharing information with suppliers and customers has increased. Withholding information from other enterprises results in inflated leadtimes and higher costs as protection from unknown fluctuations in the marketplace. As industries search for tools to reduce time to market and the cost of doing business, the benefits of collaboration become clearer.

Companies that actively plan and collaborate not only are better informed and able to plan with more precision, but they also eliminate waste. From vendor scheduling through customer demand, an enterprise develops an integrated schedule when it plan all activities.

Advantages include:

- Companies respond to marketplace demand more quickly when they leverage their expertise and information across planning boundaries.
- A capable supply chain provides supply that consistently matches and supports variations in demand.
- Partners in a supply chain benefit from improved agility and increased profitability.
- Companies use real-time information to make intelligent decisions that increase their future visibility.

Business communities and new business relationships are a challenge to establish and require time, maintenance, and money. However, collaboration delivers an excellent return on investment for most enterprises because it allows the enterprises to become players in a new marketplace.

Different levels of planning provide information that is specific to the level. The information is based on the amount of detail and the time frame that an organization uses in its planning. Each successively lower level of planning increases the amount of detail required for planning and a shorter time frame or time horizon. The lower planning levels must support the goals of the next higher level plan. Ultimately, the lowest planning level represents a plan that occurs in a current time frame and accomplishes the goals of an enterprise's original plan.

The first two levels of planning are described in the following list:

Strategic planning

The highest level of business planning, strategic plan, is the outline of an enterprise. A strategic plan answers the questions presented earlier. The strategic plan defines the boundaries of the company's business plan and corresponds to the company's mission statement. Strategic planning is an expectation of where an enterprise will be in the economy. Strategic planning can project a decade or more into the future, representing broad visionary goals.

Tactical planning

Tactical planning is specific and consists of more detailed than strategic planning. It is the blueprint of an enterprise, and it presents more planning details. The time horizon is usually not as far into the future as the strategic plan. A tactical plan answers the question "How will our enterprise accomplish the strategic plan?" Tactical planning is the first level of defining the direction that the will company take to meet the strategic planning goals. To achieve the goals of an enterprise, a planner must answer questions such as:

- Is our company a service organization?
- Is our company a distributor?
- Is our company a manufacturer?
- If our company is a distributor and manufacturer, will we distribute large or small products to our customers?

Tactical goals narrow an enterprise's focus from an ideal, wide-open, `no limits' planning perspective to defining specific accomplishments that support strategic planning goals. The planning horizon for tactical planning is typically several years in the future, and capital decisions are made in the current time frame and are accomplished later to accommodate future needs of a company. Tactical planning is the highest-level; it balances supply and demand requirements.

Topics

After an enterprise defines both strategic and tactical plans, it refines its plans with the following planning systems:

- Priority Planning
- Capacity Requirements Planning
- Multifacility Planning
- Supplier Scheduling

Priority Planning Systems

Priority planning determines the "what" and the "when" for manufacturing and distribution organizations. Examples of resources include products, goods, and services. Priority planning gives an enterprise tools to schedule goods and to balance known or projected customer demand. The desire to provide the optimum quantity of products to the marketplace is an important focus for marketing functions in an enterprise. The expectations from sales and marketing must balance with a production and distribution organization's ability to provide products, goods, or services.

Various levels of priority planning enable a company to implement decisions that support goals for an enterprise, its supply chain, and its customers. Long-term goals in production planning and the following planning systems form a complete vision for corporate operations.

Topics

- Production planning
- Forecasting
- Manufacturing production scheduling (MPS)
- Manufacturing requirements planning (MRP)
- Manufacturing execution system (MES)
- Sales and operations planning (S&OP)

Production Planning

A production plan supports tactical and strategic planning goals. The level of detail increases as the time horizon decreases. Production planning can span from a few months to several years. When production planning is complete, specifics are available for the types of end items that the enterprise ships to a customer. Projections are made as to the volume of products or services to offer customers. Market benchmarking of other similar industries can determine the projected level of demand for the enterprise's products, goods, or services. In market benchmarking, planners might ask the following questions:

- Who are our potential customers?
- Is our marketplace local, regional, or global?
- How can we anticipate the customer demand for our products and services?

Planners represent this level of detail projections or forecasts through market demand. At the production planning level, companies become and remain competitive depending on how well they satisfy customer demand. The combination of forecasting and production planning allows an enterprise to prepare its business to meet market demands.

Forecasting

Forecasts are the analyses of market demands for an enterprise's goods or services. Planners base their forecasts on the statistical sales history of a product, product line, or similar products, or analyses from external industry information.

Even though forecasting has a margin of error and values may not be exact, planners need to generate forecasts for their enterprise to be competitive in the market. Statistical methods, collaboration, knowledge, and management tools increase forecast accuracy.

A company with a forecast plan is better prepared than one with no forecast plan. An enterprise with a business strategy is proactive when it develops a course of action, and defines resources, such as personnel or machinery. An enterprise without a business strategy can only react to demands as they occur. Enterprises that consistently react to demand are unable to respond quickly to changes in market demands. Often, they have difficulty in winning new customers and keeping current customers. They also risk losing present customers.

Master Production Scheduling (MPS)

Master production scheduling (MPS) or distribution resource planning (DRP) is the next level of the planning structure. MPS is the bridge between planning projections and planning execution. MPS defines product families and the time horizon decreases to weeks and months. Planning at the MPS or DRP level supports each higher level of planning. At this level, specific plans are put in place to provide goods or services being marketed.

MPS or DRP considers what the business what goods or services are available and what elements must be acquired to fulfill customer demand. MPS links information from inventory or distribution activities to final production. Distribution enterprises use MPS to determine required levels of inventory while manufacturing companies use MPS to define deliverables and end products. MPS can identify end products and deliverables as independent demand items. MPS pinpoints the need for these products from actual or projected customer demand. DRP defines the items that an organization manages through its distribution process. DRP provides visibility for the delivery of items throughout the enterprise and ultimately to the customer.

Material Requirements Planning (MRP)

Once the MPS for the finished product is set, the system uses that information to generate lower-level plans of the components required for the finished product. Planning at this level of detail is called Material Requirements Planning (MRP). Planning horizons are in days or weeks. MRP planning supports each higher level of planning. Even at this lower and more detailed planning level, customer satisfaction and market position are primary objectives.

MRP has a dependent demand, or a pre-established relationship, between the end product and the components required to make it. MRP uses a bill of materials, which is a list of materials with numerical relationships to the end product. The planner determines the calculations for specific components based on the demand for the deliverable. MRP planning ensures that the necessary items are available where and when they are needed.

Manufacturing Execution System (MES)

The final level of manufacturing planning is the MES phase. MES is a more detailed version of MRP. In MES, the system plans the exact item, location, and schedule for production activity. The time horizon is days or, potentially, hours and minutes of execution time. The MES plan is the real-time activities that an enterprise accomplishes on the shop floor. This plan provides a dispatch list or immediate set of priorities for each resource that affects an enterprise in a specific time frame.

Sales and Operations Planning (S&OP)

Sales and Operations Planning (S&OP) rounds out enterprise planning. S&OP links between sales and marketing with operations. It also links an enterprise's strategic plan, sales plan, and execution plan for an enterprise. The objective of S&OP is to communicate and integrate a marketing plan that is customer-focused with each element of the supply plan. Management can hold monthly meetings to review the S&OP aggregate schedules and to reconcile disparities between supply and demand for the enterprise product families.

Capacity Requirements Planning (CRP)

Following priority planning, an enterprise should validate its plan to establish a time-phased use of resources. An enterprise uses capacity planning systems to ensure that it can manage the amount of work identified with the priority planning system. CRP analyzes resources such as personnel, equipment, or tooling and evaluates imbalances between the required resources and the amount of resources available. A planner determines whether there is sufficient time to acquire more resources, based on the evaluation, to distribute the workload among other existing resources.

Resource Requirements Planning (RRP)

The time horizon and forecasts for a production plan can be several years. A planner uses resource requirements planning (RRP) to determine if an enterprise has the resources to support the amount and type of work that is scheduled. Using RRP, an enterprise examines purchases of capital equipment, facility changes such as additional acreage or building space, and personnel groups such as engineers and technicians. Projected resources are typically large in scope and cost intensive. An enterprise must also evaluate the desired level of customer service. Enterprises use this information to determine the exact resources needed to support the specific functions. For example, mature products might not use the same level of resources as new product lines. Planners can calculate levels of expected production into the production plan and validate them by RRP.

Rough Cut Capacity Planning (RCCP)

After an enterprise projects the master production schedule, a planner uses rough cut capacity planning (RCCP) to determine the shop floor layout. An enterprise looks at work centers and at all job requirements, such as design engineers, welders, painters, or inspectors. The shop floor layout is at a group or product level. Therefore, the resource validation is also grouped by classification. An enterprise analyzes key facilities, constraint areas that control the level of performance, and constraint skills. A constraint within a production area is the level of output that an enterprise accomplishes at an operation, area, and tool, or by a resource. RCCP validates whether an enterprise can accomplish a planned workload from MPS at a constraint point. Adjustments to capacity include, but are not limited to, the following:

- Increasing available resources through the acquisition of more equipment, tooling, or facility space
- Hiring the necessary resources within a time horizon

If an enterprise cannot acquire the skills or equipment, then it cannot support the associated MPS plan. An organization may require changes at various levels of the planning system to compensate or correct the imbalance between supply and demand.

CRP validates the MRP schedules. CRP analyzes resources that an enterprise needs to support MRP. MRP accounts for each level of production, CRP analyzes work centers and resources and determines any imbalances. With this information, an enterprise can

implement solutions such as placing the workload at another area, offloading work, or acquiring tools and personnel.

Each priority planning system has a validation system that is specific to the planned level of detail and the time horizon. Resource Requirements Planning (RRP) validates production planning, while Rough Cut Capacity Planning (RCCP) validates Master Production Scheduling (MPS). Capacity Requirements Planning (CRP) validates MRP while input/output (I/O) reporting systems validate Manufacturing Execution System (MES).

Input/Output Planning Strategies

Input/output (I/O) analysis on a shop floor validates a work plan. Capacity detail analyzes the tools and the exact skills required to produce items. Few alternatives are available because the time horizon is immediate. Offloading planned work, scheduling overtime, or multiple shifting are possible methods to balance supply and demand discrepancies.

Many companies use the information provided by Manufacturing and Distribution Planning to compare planned goals to actual performance. Discrepancies can be quickly identified and addressed. As metrics are developed over time, a company can compare performance levels with "Best in Class" businesses from their industry. "Best in Class" companies consistently perform well, helping to set benchmarks for the industry as a whole.

Multifacility Planning Systems

Multifacility planning uses techniques that enable demand from one organization in an enterprise to be fulfilled by another organization within the enterprise. To accomplish multifacility planning, companies may need to establish internal supply and demand networks. Enterprises use multifacility planning to integrate a plan across regional, national, and continental boundaries.

Two strategies exist for multifacility planning. The first strategy consolidates all supply from multiple supply locations into a single providing site. This consolidated methodology provides replenished products throughout the enterprise.

The second strategy develops relationships between supply and demand organizations within an enterprise. A demand organization places demands at supply sites according to rules established by the organizations. This relational strategy is based on organization or branch relationships.

A planner can also control inventory through multifacility planning. Because inventory is costly, enterprises use more inventories across plant boundaries. Planners can save on inventory costs when they reduce duplicate stock. The goal of planning across any internal facility boundary is to use existing capabilities within the enterprise before relying on an external supply chain. Other benefits from planning across facilities are cost savings through space utilization, increased accuracy in inventory controls, increased speed to market, and reduced product costs to customers.

Supplier Scheduling Systems

A dependency on goods and services from other organizations has increased the need to establish planning and information methods between supplying links of a supply chain.

Through supplier scheduling, planners can provide suppliers with consistent shipping information and demand profiles to support production and delivery. Planners negotiate order contracts between consumer and supplier through scheduling tools. Order contracts are often defined as blanket orders with established quantities for a demand company. When a company forms a supply chain with a scheduling system, a supplier has accurate data to project plans for demand forecasts, ordering, production, and delivery. A consuming

company benefits since its deliveries from a supplier are dependable. Enterprises can make point-of-use deliveries from the exact location where the supplier delivers the goods to the production location that consumes products. Instead of supplying inventory to stores or warehouses for dissemination, enterprises can deliver from the point of use.

Partnership contracts between companies reduce inventory carrying costs, reduce production leadtimes, and reduce time-to-market for products. An enterprise uses supplier-scheduling methodologies to share planning information across business boundaries. Scheduling enables contributors to a product line to develop schedules that originate from known information. When schedules change, especially in dynamic industries such as electronics and automotive, the demand and supply partners establish communication links to accommodate changes as quickly as possible.

Industry Planning

Companies often must make decisions in less than ideal time horizons. Dynamic changes in today's market require a company to be more flexible and to use more accurate planning methods across the entire supply chain. Where possible, companies are eager to implement a make-to-order environment instead of maintaining a make-to-stock philosophy. Make-to-order manufacturing promotes closer ties to customer demand. Through industry planning, customers receive the item they request instead of choosing from a predetermined selection of items.

The shift in focus requires responsive production and planning. Enterprises need to minimize leadtimes for product availability to reduce wasteful processing. An example of wasteful processing includes unnecessary wait times during production processing.

For example, quick planning is a major factor for staying competitive in the electronics industry. The amount of time it requires for products to be designed, developed, produced and delivered to the marketplace can help or hurt an enterprise. If a product takes too long in the planning, development, and production phases, other competitors may win the market share.

The following table summarizes some critical planning considerations for various industries:

High-tech and electronics industries	These companies have reduced product life cycles. Increasingly aggressive global competition has generated new collaborations among providers. Because technology changes daily, the price of electronic products reduces as new innovations enter the market. Life-cycle profitability becomes another influence in planning for high-tech and electronics industries. As electronic technology enters other product areas, such as toy and appliance manufacturing, improved planning is required. Post-sales customer service is a new area of planning for these industries.
Automobile industry	Automobile manufacturers and their supporting supply chain companies have similar pressures. Frequently, the vehicle manufacturer generates production decisions that flow across a supply chain to supporting organizations. A trend has developed to accept delivery of integrated component sets instead of separate components. As a result, there is greater dependence on suppliers to provide quality configurations to minimize leadtimes. The relationships developed between vehicle manufacturers and their suppliers have led to enhanced levels of collaborative scheduling. To remain competitive in the automobile industry, however, an enterprise must provide post-sales customer service.

Industrial fabrication and assembly (IFA)

In the past, IFA enterprises have relied on high levels of inventory stock to cover periods of excess demand. With increased emphasis on cost efficiencies while maintaining high levels of customer satisfaction, IFA enterprises must increase their planning accuracy and reduce unnecessary levels of costly inventory.

These enterprises decrease production leadtimes and use cost reduction strategies throughout the IFA supply chain. Supplier relationships have changed due to technology advancements. Criteria for supplier selection have changed from long-term alliances to a selection that is influenced heavily by component pricing, availability, and delivery scheduling. Partnering is prevalent across the IFA supply chain, and collaboration is more important as companies seek to reduce production time. Enterprises are seeking to move from make-to-stock production to assemble-to-order production. As technology introduces more products to the marketplace, IFA companies are as aware of expedited time-to-market strategies as their electronics counterpart. Though their products are not as dynamic as those in the high-tech or electronics industries, IFA enterprises recognize the need for better planning to remain competitive in the marketplace.

Pharmaceutical industry

Due to regulations, pharmaceutical industries have unique and critical planning needs. Global competition as well as a growing market of generic products are industry concerns. Generic pharmaceuticals affect competition and require accurate short- and long-term planning. Pharmaceutical industries are looking for more efficient ways to plan cost control measures such as local and international suppliers into their product lines. Enterprises are implementing inventory planning that is managed by their vendors.

Equipment for pharmaceutical production is often specialized. Therefore, capacity planning is important. Planning rules that include product expirations and lot sizing constraints are necessary. Changes in technology also affect pharmaceutical industries. Increased e-commerce is one of the challenges pharmaceutical industries face.

Consumer package goods (CPG) industries

CPG industries are concerned with increased productivity and responding to demands. CPG planning also must include consumer prepackaging in its planning.

CPG industries also want to reduce cost-to-market and eliminate non-value processes. Supply chain planning enables CPG companies to increase forecast accuracy for demand and reduce life-cycle time to market. Throughout the CPG supply chain the following techniques have led the CPG industries to accurate planning for material, labor, and equipment resources:

- Shelf-life management to manage products based on expiration dates
- Brand management to manage trademarked goods to maintain image or advertise product value
- `Just-In-Time' (JIT) management to reduce waste

The ultimate goal of an enterprise is to accurately identify and quickly meet customer demands. To compete in the global marketplace, an enterprise must be able to plan an intelligent course of action across every level of the enterprise, both internally and with the support of the external supply chain.

An enterprise must be flexible and must communicate with its customers to ensure that response time is virtually instantaneous. Organizations that succeed in the new business era will be those that consider the entire relationship, from vendors to customers, in their planning. Successful organizations will:

- Provide products that meet or exceed customer expectations
- Deliver products on time
- Provide excellent customer service and sustain customer satisfaction
- Balance on-time product delivery with the optimal use of materials and resources
- Implement the concept of enterprise optimization throughout the supply chain

Competition and market changes have changed the focus of business practices:

- Total Quality Management tools pinpoint areas of concern and their possible causes
- Statistical process controls, tracking methods, and causal analysis are used to improve operations

Enterprises use a variety of specialized methods to examine their organization to increase their market share. These methods include the following concepts:

- Establishing criteria for organizational health, such as implementing processes to create a healthy operating system
- Establishing criteria for evaluating progress
- Implementing activities to extend an enterprise supply chain across every partner relationship from vendors to customers
- Developing and maintaining enterprise plans where partners will increase corporate visibility and promote flexibility in reacting to unforeseen changes in the marketplace

Idea to Action: The Competitive Advantage

The following examples are typical problems in the manufacturing industry, the business activator that resolves each problem, and the industries that are affected by each problem. When you use business activators to resolve problems, your return on investment is reflected in cost savings, better business visibility, shortened leadtimes, and increased responsiveness to customer demands.

What planning system is suitable for sites in multiple countries?	You can use mulitfacility planning to define bills of material and routings for each facility for the same item. The system displays material, BOMs, and routings for all defined business units. Integration in multifacility planning ensures accurate and efficient planning. It reduces item numbers and work in progress (WIP), which results in cost savings for materials, increased accuracy in inventory, and shortened leadtimes.
Does an effective planning method exist that accounts for actual inventory and WIP?	Through inventory management, a company can accurately and consistently plan across an organization. The planning consists of WIP, inventory levels, BOMs, and routings. Companies use intrasite planning to increase planning accuracy and improve decision making. The system uses WIP and inventory during planning to ensure that inventory is neither overstocked or understocked.

Can forecast accuracy be improved?	Companies use sales order history from the forecast generation to validate information to inventory by item identification. Associating sales history with forecasting techniques contributes to better business visibility, shortened leadtimes, and increased forecast accuracy.
How can my industry balance product launches and maintain cost reductions?	Integrated databases capture production-to-consumer costing by item. Clients can track leadtime and costing for production-to-completion of each item.
Can my company lower the cost of components from multiple suppliers?	Integrated systems allow industries to track components from multiple suppliers. Integrated systems also track acquisition costs and purchases across the entire supply chain.
How can my company track and identify lot-controlled items?	Industries can use single-system processing with MES systems and interoperability solutions to regulate industries. Examples include workflow capabilities and report design. Integration results in cost savings, business visibility, and shortened leadtimes.
How can my company simplify production processes when product customization increases?	Industries can plan at subassembly levels and provide component visibility.
How can my company increase forecasting throughout the supply chain, from suppliers to end customers?	Integrated features, such as Supplier Release Scheduling and planning tools, provide cross-enterprise visibility for accurate planning. Industries have increased forecasting visibility and potential cost savings. Also, industries can bring new products to market more quickly.

Planning Systems Overview

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

Resource and Capacity Planning

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

Resource Requirements Planning (RRP)	Uses a detail or summary forecast to estimate the time and resources that are needed to make a product family.
Rough Cut Capacity Planning (RCCP)	Compares the master production scheduling resource requirements to the capacity available in critical work centers. You use RCCP to determine if you should revise the master schedule to create feasible work loads or improve the use of limited resources.
Capacity Requirements Planning (CRP)	Compares the material requirements plans to the capacity available in all work centers. You use CRP to determine if you should revise the material requirements plan to create feasible work loads or improve the use of limited resources.

Material Planning Operations

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

- Central and satellite distribution centers and warehouses
- Items manufactured in both discrete and process environments
- Engineer-to-order contracted items
- Maintenance, repair, and operational items for plant and equipment maintenance
- Supplier-managed inventory

The Material Planning Operations system consists of:

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

People

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

Management commitment

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

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

Implementation team

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

Education and training

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

Change management

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

Partnership

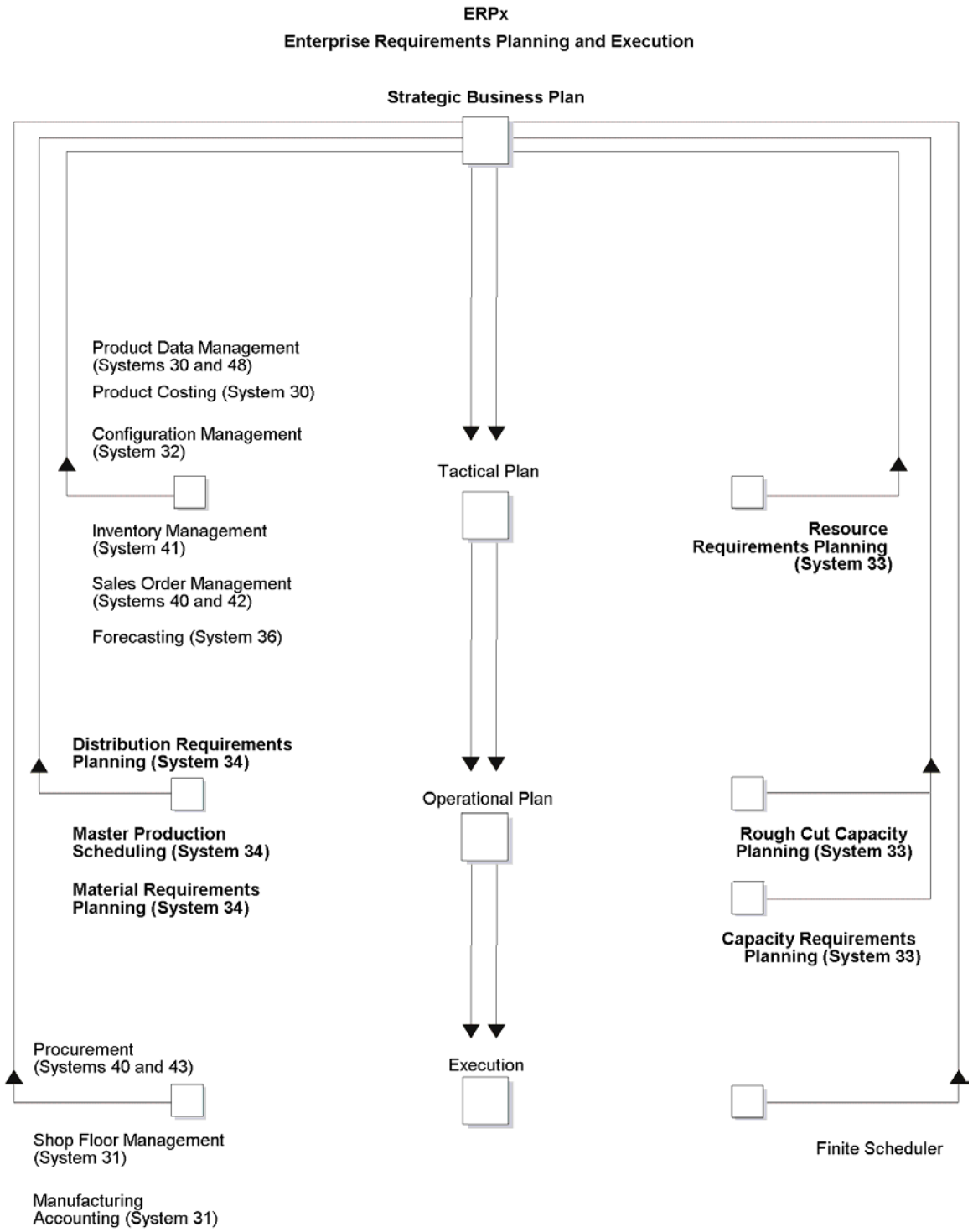
J.D. Edwards Response Line and consulting provides continued support. Our relationship is ongoing for your long-term future success. Business partners broaden this relationship through additional worldwide assistance.

System Integration

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

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

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



Process

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

J.D. Edwards strongly supports best practices as documented by industry experts. As new practices are presented and recommended, J.D. Edwards is committed to enhancing software functionality to support these findings.

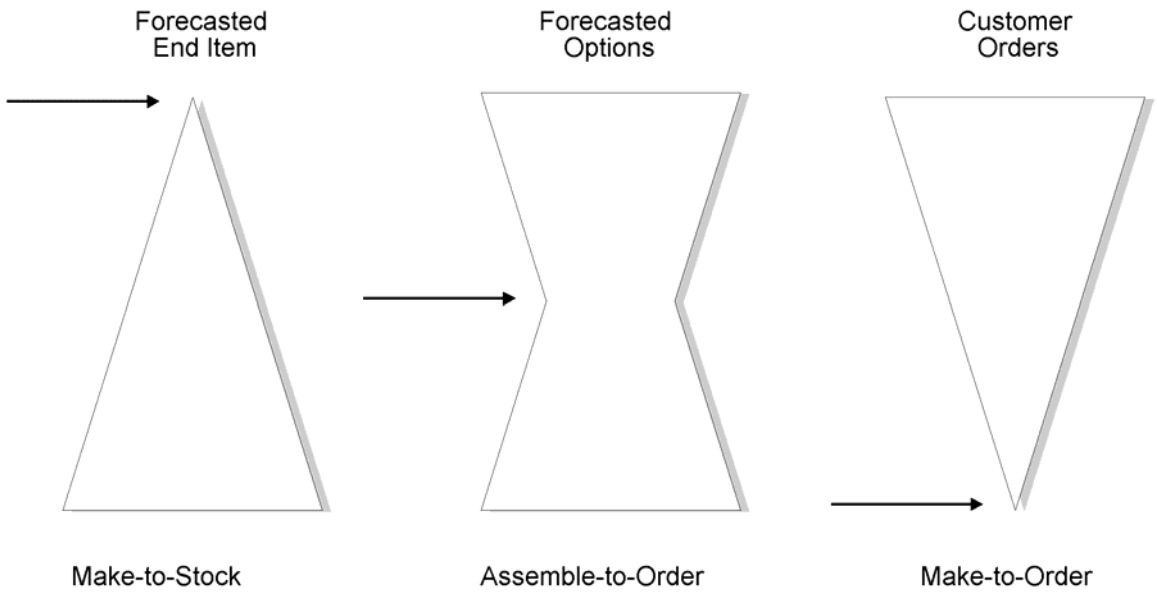
Terms and Concepts

Manufacturing and Distribution Planning uses the following terms and concepts:

Bills of material	The components and relationships required to produce a parent item. Use bills of material to: Maintain many configurations for an item without creating additional part numbers Define quantities of intermediate products in any unit of measure as they progress through the manufacturing process Enter similar items by copying bills of material, routings, and processes
Routings	The operations required to produce the parent item. Use routings to: Define each step of the manufacturing process with allowances for anticipated yield and scrap Add alternate operations to routings
Work centers	The facilities on the shop floor where the routing operations occur. Use work centers to: Define work center number and description Define the number of operators or machines Define setup, labor, machine, and overhead rates Define information for capacity planning
Engineering change orders (ECOs)	The document that you use to define and implement changes to your product structure. Use engineering change orders to: Control item changes from a single source Incorporate approved changes to bills of material

Planning and Production Environments

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



Make-to-stock The manufacture of end items that meet customers' demand occurring after the product is completed. You meet your customer after the product is completed. This environment generally involves retail items. Forecasting of end items is a crucial factor.

Assemble-to-order The manufacture of subassemblies that meet customers' option selections. You meet your customer after options are fabricated but before final assembly of the product. The customer specifies the options in the final product. Some factors to consider in this environment are:

Items are configured according to formally set rules

Items are forecasted and master schedules are created at the option level

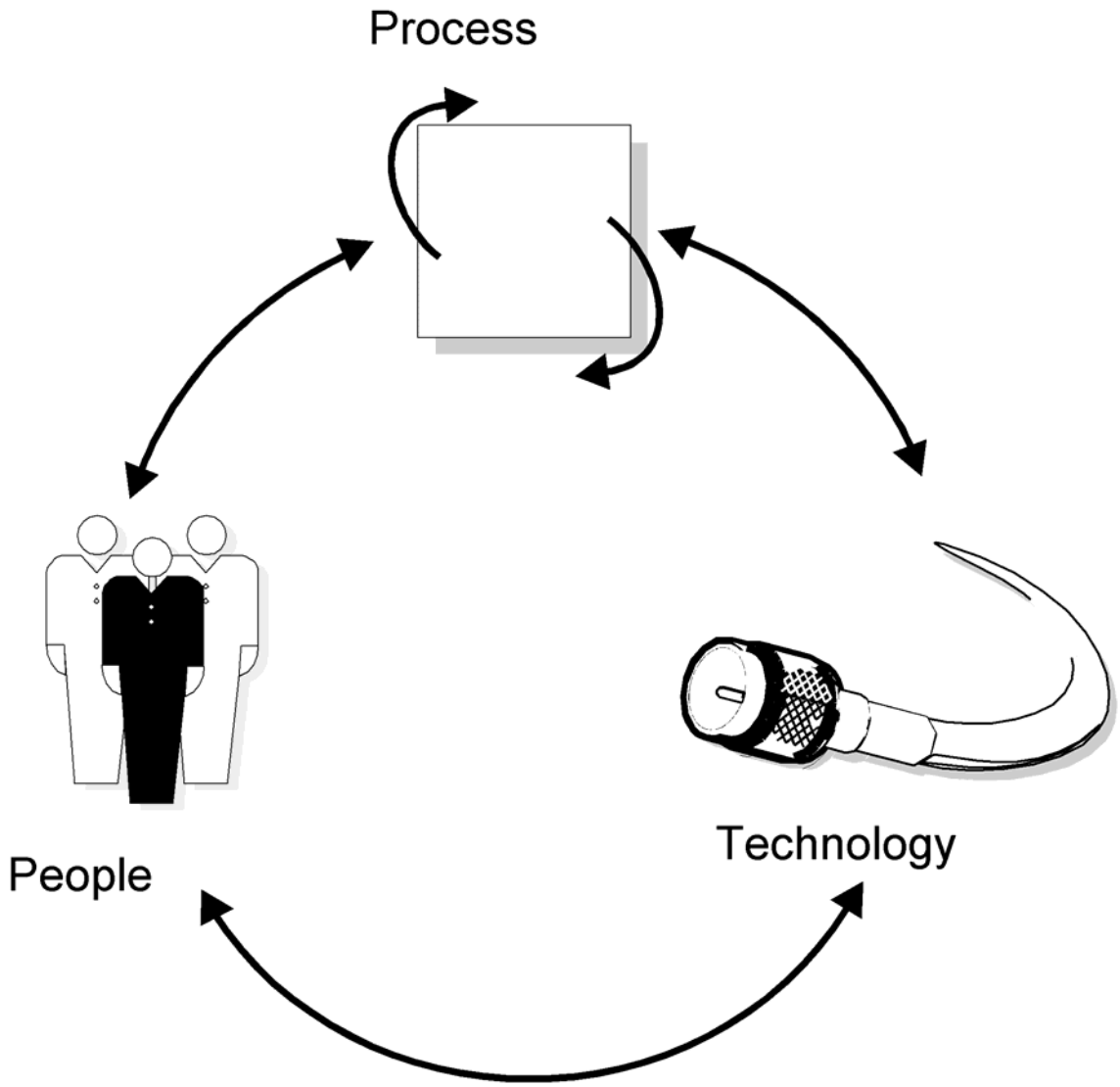
Make-to-order The manufacture of raw materials and components that are stocked to reduce leadtime. You meet your customer before you begin production at any level in the product structure. The product structure includes the following factors:

Products are customized for specific needs

Capacity needs are forecasted

Production requires longer leadtimes

Planning a Total Business Solution



A total business solution integrates three critical elements:

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

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

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

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

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

Technology

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

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

Because J.D. Edwards systems are seamlessly integrated, they provide a unified solution to your enterprise planning. The J.D. Edwards Inventory, Sales, and Procurement systems are fully integrated distribution systems that support the Manufacturing and Distribution Planning system.

Tables for Manufacturing and Distribution Planning

The following tables are used throughout Manufacturing and Distribution Planning.

Item Master (F4101)

Contains basic information about each item defined in inventory, such as:

- Item numbers and descriptions
- Category codes
- Units of measure

Item Branch (F4102)

Contains warehouse or plant-level information, such as:

- Costs
- Quantities
- Location
- Branch level category codes

Bill of Materials Master (F3002)

Contains information at the business unit level about bills of material, such as:

- Costs and quantities of components
- Features and options
- Levels of detail for each bill

Capacity Messages (F3311)	Contains the action messages that are generated by the Resource Requirements Planning, Rough Cut Capacity Planning, and Capacity Requirements Planning programs.
Forecast (F3460)	Contains the forecast data that MRP uses for calculations, and that RRP validates.
Routing Master (F3003)	Stores routing information, including operator sequence, work center, run, setup, and machine time.
Resource Units (F3007)	Contains the available capacity for each work center by day, month, and year.
Work Center Master (F30006)	Contains detail data about all defined work centers.
Resource Profile (F3303)	Contains all resource profiles used in Resource Requirements Planning.
Branch Relationships Master (F3403)	Contains the supply and demand relationship among the branches.
MPS/MRP/DRP Message Review (F3411)	Contains the action messages generated by MPS, MRP, or DRP.
MPS/MRP/DRP Lower Level Requirements (F3412)	Contains the source of gross requirements that are posted to items from parent items.
MPS/MRP/DRP Summary (F3413)	Contains the time series data for forms and reports.
Supplier Schedule Master (F4321)	Contains most of the data that controls scheduling arrangements with the supplier. This table also contains information required for creating and maintaining the schedule, including: • Ship leadtime • Schedule days • Ship pattern • Shipment quantity • Delivery location The system uses information from the Supplier Schedule Master table for each line item on a blanket order that you use in the supplier scheduling process.
Supplier Split Percentages (F43211)	Contains the data that identifies predetermined split percentages between suppliers, by item.

Menu Overview

OneWorld provides access through a menu hierarchy. The hierarchy is organized by system and frequency of use.

Topics

- Resource and Capacity Planning
- Material Planning Operations

Resource and Capacity Planning (G33)



Daily Processing (G3310)

S Resource Requirements Planning (G3311)

S Rough Cut Capacity Planning (G3312)

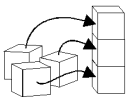
S Capacity Requirements Planning (G3313)



Periodic Processing (G3320)

S Resource Requirements Planning (G3321)

S Rough Cut Capacity Planning (G3322)



System Setup (G3341)

Fast Path Commands for Resource and Capacity Planning

The following table provides the fast path commands that you can use to move among the Resource and Capacity Planning menus. From any menu, you can enter the fast path command in the fast path box.

Title	Menu	Fast Path
Daily Resource Requirements Planning	G3311	DRRP
Daily Rough Cut Capacity Planning	G3312	DRCC

Daily Capacity Requirements Planning	G3313	DCRP
Periodic Resource/Capacity Planning	G3321	PCAP
Resource/Capacity Planning Setup	G3341	CAPS

Material Planning (G34)



Daily Processing (G3410)

S DRP (G3411)
S MPS (G3412)
S MRP (G3413)
S Multi-Plant (G3414)

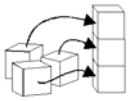


Periodic Processing (G3420)

S Forecasting (G3421)
S Single Site Planning (G3422)
S Multi-Facility Planning (G3423)



Advanced & Technical Operations (G3444)



System Setup (G3440)

S Forecasting Setup (G3441)
S Requirements Planning Setup (G3442)
S Multi-Facility Setup (G3443)

Fast Path Commands for Material Planning

The following table provides the fast path commands that you can use to move among the Material Planning Operations menus. From any menu, you can enter the fast path command in the fast path box.

Title	Menu	Fast Path
Material Planning	G34	MAT
DRP Daily Operations	G3411	DRP
		DDRP
MPS Daily Operations	G3412	MPS
		DMPS
MRP Daily Operations	G3413	MRP
		DMRP
Multi-Plant Planning Daily Operations	G3414	MULTI
		DMP
Single Site Periodic Planning Operations	G3422	PSS
Multi-Plant Facility Planning	G3423	PMP
Material Planning Setup	G3440	SMAT
Material Planning Setup	G3442	MATS
Multi-Plant Setup	G3443	SMP

Understanding Inventory and Sales Management

When you set up your item master and branch/plant information, you provide the Manufacturing and Distribution Planning system with the information it needs to create accurate master schedules, material requirements plans, and distribution requirements plans.

Use the Inventory Management system to specify the following information for each item. This information is critical to the Manufacturing and Distribution Planning system:

- Planner
- Planning family
- Category codes
- Units of measure
- Order policy codes
- Value order policy
- Planning code
- Planning fence rule
- Planning fence
- Freeze fence
- Message display fence
- Leadtimes
- Reorder quantities

See Also

For more information on setting up your item master and branch/plant information, see the following topics in the *Inventory Management Guide:*

- *Entering Item Master Information*
- *Entering Basic Item Information*
- *Assigning Item Responsibility*
- *Enter Item Classification Codes*
- *Entering Item Unit of Measure Information*
- *Entering Item Manufacturing Information*
- *Entering Item Grade and Potency Information*
- *Entering Branch/Plant Information*
- *Assigning an Item to a Branch/Plant*
- *Working with Item Locations*
- *Entering Item Branch Classification Codes*
- *Entering Item Reorder Quantities*
- *Entering Item Branch/Plant Manufacturing Information*
- *Duplicating Item Information for Multiple Branch/Plants*

Understanding Sales Order Management

The Sales Order Management system provides important information to the Manufacturing and Distribution Planning system.

Sales orders have the following significant effects on Manufacturing and Distribution Planning:

- Sales orders are the greatest source of demand for your master scheduled items.
- Pick dates and quantities are used by MRP for material planning.
- Sales orders with a line type of W automatically create work orders.

See Also

For more information on setting up and creating sales orders, see the following topics in the *Sales Order Management Guide:*

- *Working with Header Information*
- *Working with Detail Information*

Understanding Forecasting

Effective management of distribution and manufacturing activities begins with understanding and anticipating the needs of the market. Forecasting is the process of projecting past sales demand into the future. Implementing a forecasting system allows you to assess current market trends and sales quickly so that you can make informed decisions about your operations.

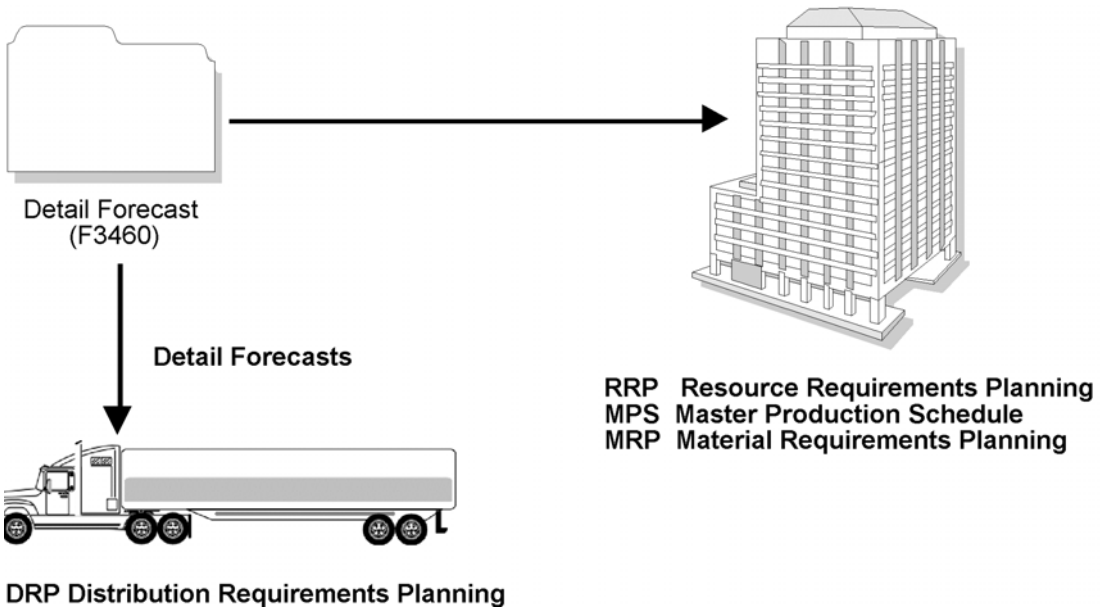
You can use forecasts to make planning decisions about:

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

The Forecasting system generates the following types of forecasts:

Detail forecasts	Detail forecasts are based on individual items.
Summary forecasts	Summary (or aggregated) forecasts are based on larger product groups, such as a product line.
Planning bill forecasts	Planning bill forecasts are based on groups of items in a bill of material format that reflect how an item is sold not how it is built.

The Forecasting system generates demand projections that you use as input for the J.D. Edwards planning and scheduling systems. The planning and scheduling systems calculate material requirements for all component levels, from raw materials to complex subassemblies.



The Resource Requirements Planning (RRP) system uses forecasts to estimate the time and resources needed to make a product.

The Master Production Schedule (MPS) system plans and schedules the products your company expects to manufacture. Forecasts are one MPS input that helps determine demand before you complete your production plans. Additionally, sales orders are the greatest source of demand for MPS.

Material Requirements Planning (MRP) is an ordering and scheduling system that expands the requirements of all MPS parent items to the component levels. You can also use forecasts as input for lower-level MRP components that are service parts with independent demand, which is demand not directly or exclusively tied to production of a particular product at a particular branch or plant.

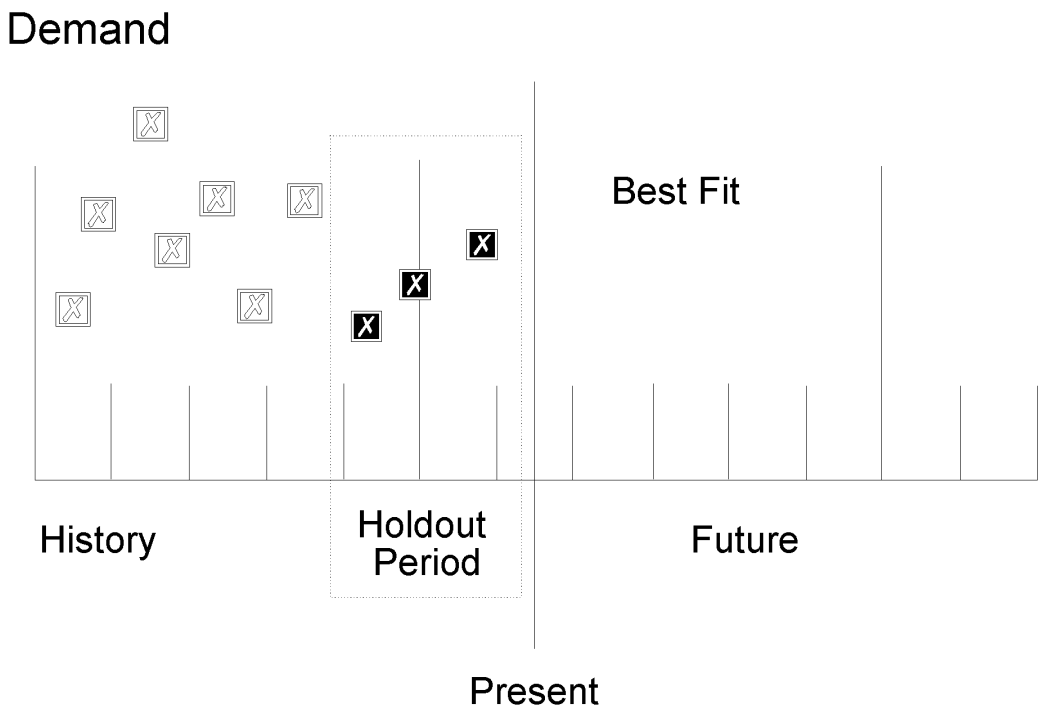
Distribution Requirements Planning (DRP) is a management system that plans and controls the distribution of finished goods. You can use forecasts as input for DRP so you can more accurately plan the demand that you supply through distribution.

Forecasting Levels and Methods

You can generate both detail forecasts (single-item) and summary (product line) forecasts that reflect product demand patterns. The system analyzes past sales to calculate forecasts using 12 forecasting methods. The forecasts include detail information at the item level and higher-level information about a branch or the company as a whole.

Best Fit

The system recommends the best fit forecast by applying the selected forecasting methods to past sales order history and comparing the forecast simulation to the actual history. When you generate a best fit forecast, the system compares actual sales order histories to forecasts for a specific time period and computes how accurately each different forecasting method would have predicted sales. Then, the system recommends the most accurate forecast as the best fit.



The system uses the following sequence of steps to determine the best fit:

1. Uses each specified method to simulate a forecast for the holdout period.
2. Compares actual sales to the simulated forecasts for the holdout period.
3. Calculates the percentage of accuracy or the mean absolute deviation to determine which forecasting method most closely matched the past actual sales. The system

uses either the percentage of accuracy or the mean absolute deviation, based on the processing options that you select.

4. Recommends a best fit forecast by the percentage of accuracy that is closest to 100 percent (over or under) or the mean absolute deviation closest to zero.

Forecasting Methods

The Forecasting system uses 12 methods for quantitative forecasting and indicates which method provides the best fit for your forecasting situation. Specify the method that you want the system to use in the processing options for the Create Detail Forecast program (P34650).

Method 1

Percent Over Last Year

This method uses the Percent Over Last Year formula to multiply each forecast period by the specified percentage increase or decrease.

This method requires the number of periods for the best fit plus one year of sales history to forecast demand. This method is useful to forecast demand for seasonal items with growth or decline.

Method 2

Calculated Percent Over Last Year

This method uses the Calculated Percent Over Last Year formula to compare the past sales of periods specified of sales from the same periods of the previous year. The system determines a percentage increase or decrease, then multiplies each period by the percentage to determine the forecast.

This method requires the number of periods of sales order history plus one year of sales history to forecast demand. This method is useful to forecast short-term demand for seasonal items with growth or decline.

Method 3

Last Year to This Year

This method uses last year's sales for the following year's forecast.

This method requires the number of periods for the best fit plus one year of sales order history to forecast demand. This method is useful to forecast demand for mature products with level demand or seasonal demand without a trend.

Method 4

Moving Average

This method uses the Moving Average formula to average the specified number of periods to project the next period. You should recalculate it often (monthly or at least quarterly) to reflect changing demand level.

This method requires the number of periods for the best fit plus the number of periods of sales order history to forecast demand. This method is useful to forecast demand for mature products without a trend.

Method 5

Linear Approximation

This method uses the Linear Approximation formula to compute a trend from the number of periods of sales order history and project this trend to the forecast. You should recalculate the trend monthly to detect changes in trends.

This method requires the number periods for the best fit plus the number of specified number of periods of sales order history. This method is useful to forecast demand for new products or products with consistent positive or negative trends that are not due to seasonal fluctuations.

Method 6

Least Square Regression (LSR)

This method derives an equation describing a straight-line relationship between the historical sales data and the passage of time. LSR fits a line to the selected range of data such that the sum of the squares of the differences between the actual sales data points and the regression line are minimized. The forecast is a projection of this straight line into the future.

This method requires sales data history for the period represented by the number of periods for the best fit plus the specified number of historical data periods. The minimum requirement is two historical data points. This method is useful to forecast demand when there is a linear trend in the data.

Method 7

Second Degree Approximation

This method uses the Second Degree Approximation formula to plot a curve based on the number of periods of sales history to project the forecast.

This method requires the number of periods for the best fit plus the number of periods of sales order history times three. This method is not useful to forecast demand for long-term.

Method 8

Flexible Method (Percent Over n Months Prior)

This method allows you to select the number of periods for the best fit block of sales order history starting n months prior and apply a percentage increase or decrease with which to modify it. This method is similar to Method 1, Percent Over Last Year, except that you can specify the number of periods that you use as the base.

Depending on what you select as n, this method requires periods best fit plus the number of periods of sales data indicated. This method is useful to forecast demand for a planned trend.

Method 9

Weighted Moving Average

The Weighted Moving Average formula is similar to Method 4, Moving Average formula, because it averages the previous month's sales history indicated to project the next month's sales history. However, with this formula you can assign weights for each of the prior periods.

This method requires the number of weighted periods selected plus periods of best fit data. Similar to Moving Average, this method lags demand trends, so it is not recommended for products with strong trends or seasonality. This method is useful to forecast demand for mature products with demand that is relatively level.

Method 10

Linear Smoothing

This method calculates a weighted average of past sales data. Using the number of periods of sales order history to use in the calculation (from 1 to 12) indicated in the processing option. The system uses a mathematical progression to weigh data in the range from the first (least weight) to the final (most weight). The system then projects this information to each period in the forecast.

This method requires the months best fit plus sales order history for the number of periods specified in the processing option.

Method 11

Exponential Smoothing

This method calculates a smoothed average, which becomes an estimate representing the general level of sales over the selected historical data periods.

This method requires sales data history for the time period represented by the number of periods for the best fit plus the number of historical data periods specified. The minimum requirement is two historical data periods. This method is useful to forecast demand when there is no linear trend in the data.

Method 12 **Exponential Smoothing with Trend and Seasonality**	This method calculates a trend, a seasonal index, and an exponentially smoothed average from the sales order history. The system then applies a projection of the trend to the forecast and adjusts for the seasonal index. This method requires the number of periods for the best fit plus two years of sales data and is useful for items that have both trend and seasonality in the forecast. You can enter the alpha and beta factor or have the system calculate them. Alpha and beta factors are the smoothing constant the system uses to calculate the smoothed average for the general level or magnitude of sales and the trend component of the forecast, respectively.

Demand Patterns

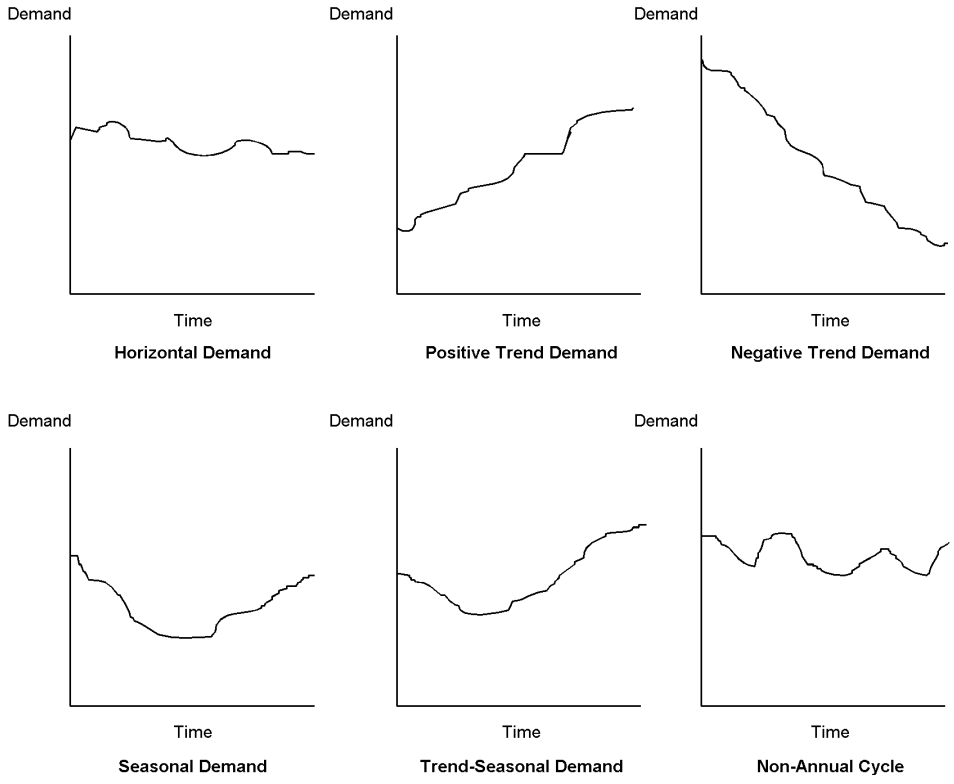
The Forecasting system uses sales order history to predict future demand. Forecast methods that are available in the J.D. Edwards Forecasting system are tailored for the demand patterns. You can forecast the independent demand of the following information for which you have past data:

- Samples
- Promotional items
- Customer orders
- Service parts
- Interplant demands

You can also forecast demand for the following manufacturing strategies using the manufacturing environments in which they are produced:

- Make to stock
- Assemble to order
- Make to order

Six Typical Demand Patterns



Forecast Accuracy

The following statistical laws govern the accuracy of a forecast:

- A long-term forecast is less accurate than a short-term forecast, because the farther into the future you project the forecast, the more variables can affect the forecast.
- A forecast for a product family tends to be more accurate than a forecast for individual members of the product family. Some errors cancel each other as the forecasts for individual items summarize into the group, creating a more accurate forecast.

Forecast Considerations

You should not rely exclusively on past data to forecast future demands. The following circumstances might affect your business and require you to review and modify your forecast:

- New products that have no past data
- Plans for future sales promotion
- Changes in national and international politics
- New laws and government regulations
- Weather changes and natural disasters

- Innovations from competition
- Economic changes

You can also use the following kinds of long-term trend analysis to influence the design of your forecasts:

- Market surveys
- Leading economic indicators

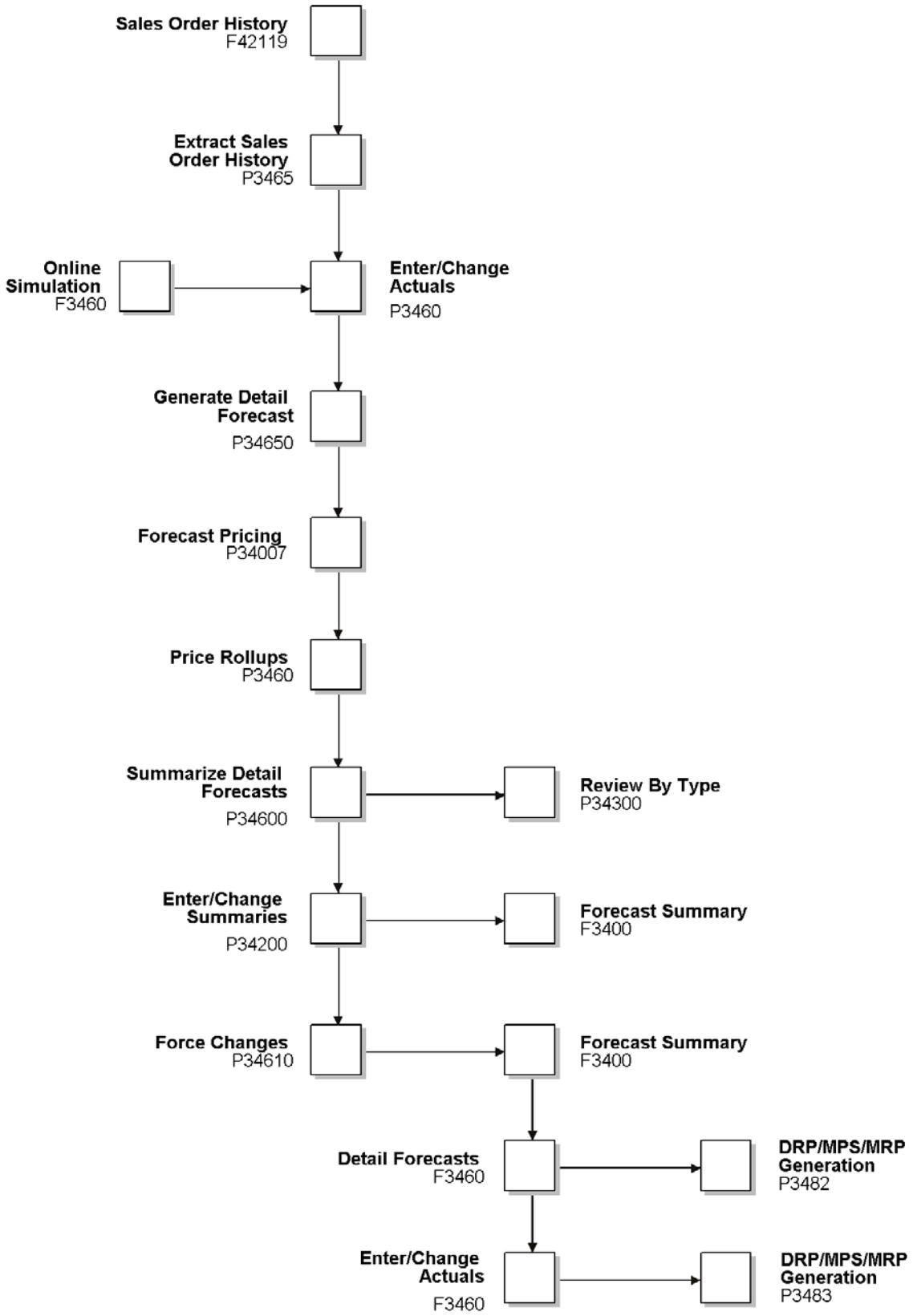
Forecasting Process

You use the Extract Sales Order History program to copy data from the Sales Order History table (F42119), the Sales Order Detail table (F4211), or both, into either the Forecast table (F3460) or the Forecast Summary table (F3400), depending on the kind of forecast that you plan to generate.

You can generate detail forecasts or summaries of detail forecasts based on data in the Forecast table. Data from your forecasts can then be revised.

The following graphic illustrates the sequences that you follow when you use the detail forecasting programs.

Detail Forecasts



Evaluating the Forecasts

You can select forecasting methods to generate as many as 12 forecasts for each product. Each forecasting method will probably create a slightly different projection. When thousands of products are forecast, it is impractical to make a subjective decision regarding which forecasts to use in your plans for each of the products.

The system automatically evaluates performance for each forecasting method that you select, and for each of the products forecast. You can choose between two performance criteria, mean absolute deviation (MAD) and percent of accuracy (POA). MAD is a measure of forecast error. POA is a measure of forecast bias. Both of these performance evaluation techniques require actual sales history data for a user specified period of time. This period of recent history is called a "holdout period" or "periods for the best fit" (PBF).

To measure the performance of a forecasting method, use the forecast formulae to simulate a forecast for the historical holdout period. Differences are present between actual sales data and the simulated forecast for the holdout period.

When multiple forecast methods are selected, this same process occurs for each method. Multiple forecasts are calculated for the holdout period, and compared to the known sales history for that same period of time. The forecasting method that produces the best match (best fit) between the forecast and the actual sales during the holdout period is the one recommended for use in your plans. This recommendation is specific to each product and might change from one forecast generation to the next.

Mean Absolute Deviation

Mean absolute deviation (MAD) is the mean (or average) of the absolute values (or magnitude) of the deviations (or errors) between actual and forecast data. MAD is a measure of the average magnitude of errors to expect, given a forecasting method and data history. Because absolute values are used in the calculation, positive errors do not out negative errors. Among the several forecasting methods, the one with the smallest MAD is typically the most reliable for that product for that holdout period. When the forecast is unbiased and errors are normally distributed, a simple mathematical relationship exists between MAD and two other common measures of distribution, standard deviation and mean squared error:

- MAD = (S | Actual - Forecast |) / n
- Standard Deviation, (s) @ 1.25 MAD
- Mean Squared Error @ -s2

The following tables show the calculation of MAD for two of the forecasting methods. This example assumes that the user has specified in the processing option that the holdout period length (PBF) is equal to 5 periods.

Method 1, Percent Over Last Year

History Used in the Calculation of MAD, Given PBF = 5												
Year	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**
1996								128	118	123	139	133
110 Percent Over Last Year Forecast for the Holdout Period												
Year	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**
1997								141	130	135	153	146
Actual Sales History for the Holdout Period												
Year	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**
1997								129	131	114	119	137
Absolute Value of Errors, Actual - Forecast												
Year	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**
								12	1	21	34	9
Mean Absolute Deviation = (12 + 1 + 21 + 34 + 9) / 5 = 15.4												

Method 4, Moving Average

History Used in the Calculation of MAD, Given PBF = 5, n = 4												
Year	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**
1997				125	122	137	140					

Moving Average Forecast for the Holdout Period, Given n = 4

(125 + 122 + 137 + 140) / 4 = 131 Aug. '97

(122 + 137 + 140 + 129) / 4 = 132 Sep. '97

(137 + 140 + 129 + 131) / 4 = 134.25 or 134 Oct. '97

(140 + 129 + 131 + 114) / 4 = 128.5 or 129 Nov. '97

(129 + 131 + 114 + 119) / 4 = 123.25 or 123 Dec. '97

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1997								131	132	134	129	123

Actual Sales History for the Holdout Period												
Year	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**
1997								129	131	114	119	137

Absolute Value of Errors, Actual - Forecast

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
								2	1	20	10	14

Mean Absolute Deviation = (2 + 1 + 20 + 10 + 14) / 5 = 9.4

Based on these two choices, the Moving Average method is recommended, since it has the smaller MAD, 9.4, for the given holdout period.

Features of the Forecasting System

You use the Forecasting system to:

- Generate forecasts
- Enter forecasts manually
- Maintain both manually entered forecasts and forecasts generated by the system
- Create unique forecasts by large customer
- Summarize the sales order history data in weekly or monthly time periods
- Generate forecasts based on any or all of 12 different formulas that address a variety of forecast situations you might encounter
- Calculate which of the 12 formulas provides the best fit forecast
- Define the hierarchy that the system uses to summarize sales order histories and detail forecasts
- Create multiple hierarchies of address book category codes and item category codes, which you can use to sort and view records in the detail forecast table
- Review and adjust both forecasts and sales order actuals at any level of the hierarchy
- Integrate the detail forecast records into DRP, MPS, and MRP generations
- Force changes made at any component level to both higher levels and lower levels
- Set a bypass flag to prevent changes generated by the force program being made to a level
- Store and display both original and adjusted quantities and amounts
- Attach descriptive text to a forecast at the detail and summary levels

Flexibility is a key feature of the J.D. Edwards Forecasting system. The most accurate forecasts take into account quantitative information, such as sales trends and past sales order history, as well as qualitative information, such as changes in trade laws, competition, and government. The system processes quantitative information and allows you to adjust it with qualitative information. When you aggregate, or summarize forecasts, the system uses changes that you make at any level of the forecast to automatically update all other levels.

You can perform simulations based on the initial forecast to compare different situations. After you accept a forecast, the system updates your manufacturing and distribution plan with any changes you have made.

The system writes zero or negative detail records. For example, if the quantities or amounts in Extract Sales Order History, Detail Forecast Generation, or Enter/Change Actuals are zero or negative, the system creates zero or negative records in the Forecast table (F3460).

Percent of Accuracy

Percent of accuracy (POA) is a measure of forecast bias. When forecasts are consistently too high, inventories accumulate and inventory costs rise. When forecasts are consistently too low, inventories are consumed and customer service declines. A forecast that is 10 units too low, then 8 units too high, and then 2 units too high would be an unbiased forecast. The positive error of 10 is canceled by the negative errors of 8 and 2.

Error = Actual - Forecast

When a product can be stored in inventory and when the forecast is unbiased, a small amount of safety stock can be used to buffer the errors. In this situation, it is not so important to eliminate forecast errors as it is to generate unbiased forecasts. However, in service industries, the situation above would be interpreted as three errors. The service would be understaffed in the first period, and then overstaffed for the next two periods. In service industries, the magnitude of forecast errors is usually more critical than is forecast bias.

POA = (S Actual sales during holdout period / S Forecast sales during holdout period) *100%

Note that the summation over the holdout period allows positive errors to cancel negative errors. When the total of actual sales exceeds the total of forecast sales, the ratio is greater than 100 percent. Of course, it is impossible to be more than 100 percent accurate. When a forecast is unbiased, the POA ratio is 100 percent. Therefore, it is more desirable to be 95 percent accurate than to be 110 percent accurate. The POA criteria selects the forecasting method that has a POA ratio closest to 100 percent.

The following tables show the calculation of POA for two of the forecasting methods. This example assumes that the user has specified in the processing option that the holdout period length (PBF) is equal to 5 periods.

Method 1, Percent Over Last Year

History Used in the Calculation of POA, Given PBF = 5

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1996								128	118	123	139	133

110 Percent Over Last Year Forecast for the Holdout Period

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1997								141	130	135	153	146

Actual Sales History for the Holdout Period

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1997								129	131	114	119	137

Sum of Actuals = (129 + 131 + 114 + 119 + 137) = 630

Sum of Forecasts = (141 + 130 + 135 + 153 + 146) = 705

POA ratio = (630 / 705) * 100 = 89.36%

Method 4, Moving Average, n = 4

History Used in the Calculation of MAD, Given PBF = 5, n = 4

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1997				125	122	137	140					

Moving Average Forecast for the Holdout Period, Given n = 4

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1997								131	132	134	129	123

Actual Sales History for the Holdout Period

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1997								129	131	114	119	137

Sum of Actuals = (129 + 131 + 114 + 119 + 137) = 630

Sum of Forecasts = (131 + 132 + 134 + 129 + 123) = 649

POA ratio = (630 / 649) * 100 = 97.07%

Based on these two choices, the moving average method is recommended, since it has a POA closest to 100% for the given holdout period.

Tables Used by Forecasting

Business Unit Master (F0006)	Identifies branch, plant, warehouse, or business unit information, such as company, description, and assigned category codes.
Address Book Master (F0101)	Stores all address information pertaining to customers, vendors, employees, prospects, and other contacts.
Forecast Summary (F3400)	Contains the summary forecasts generated by the system and the summarized sales order history created by the Extract Sales Order History program.
Forecast Summary Work (F34006)	Associates the summary records from the Forecast Summary table (F3400) with the detail records in the Forecast table (F3460).
Forecast Prices (F34007)	Stores price information for item, branch, customer, and combinations for forecast types.
Forecast (F3460)	Contains the detail forecasts generated by the system and the sales order history created by the Extract Sales Actuals program.
Category Code Key Position (F4091)	Stores the summary constants that you have set up for each product hierarchy.
Item Master (F4101)	Stores basic information about each defined inventory item, such as item numbers, description, category codes, and units of measure.
Item Branch (F4102)	Defines and maintains warehouse or plant-level information, such as costs, quantities, physical locations, and category codes for branch levels.
Sales Order Detail (F4211)	Provides sales order demand by the requested date. The system uses this table to update the Sales Order History table (F42119) for forecast calculations.
Sales Order History (F42119)	Contains past sales data, which provides the basis for the forecast calculations.

See Also

- *Working with Detail Forecasts in the Forecasting Guide*

Understanding Parallel Processing

Parallel processing is a technique that distributes work that an application performs across multiple processors within a CPU. Parallel processing reduces the time that a system requires to complete the work. For example, if you have excessive data volume, such as large bills of material, parallel processing may reduce processing time. The following instances determine if your system would benefit from parallel processing:

- Server with multiple processors
- Large volume of data at any level of MRP

A method of parallel processing is to create an application that divides data into separate, independent paths. The paths process data simultaneously on multiple processors. The benefit of this method is that the application automatically divides data among processors and also eliminates data administration. The MRP/MPS Requirements Planning program (R3482) and the Master Planning Schedule-Multiple Plant program (R3483) use this method of parallel processing.

When you run the parallel processing versions of R3482 and R3483, you plan items concurrently within the same low level code, since the items do not depend on each other. The system processes items with a low level code that equal 1. The system processes all items at the current level before it can process any items at the next level, current level + 1. The system repeats this process until it has processed all items. Also, if a server has multiple processors, you can plan multiple items concurrently with the same low level codes.

Parallel processing uses OneWorld Xe's subsystem capabilities to run multiple copies of a batch program. The system provides a unique subsystem version of a Universal Batch Engine (UBE), which permits you to specify the number of available processors on your server. When the system runs the batch program, preprocessing fills the subsystem table and begins the subsystem jobs. The jobs run the same version of the application and access the same processing option values. Each record in the subsystem table contains data that the system passes to a report. Each subsystem job processes records from the same table one at a time. After the system processes all records, the system terminates the subsystem jobs.

The system has several applications that parallel processing supports. To use the parallel processing versions, you must perform the following tasks:

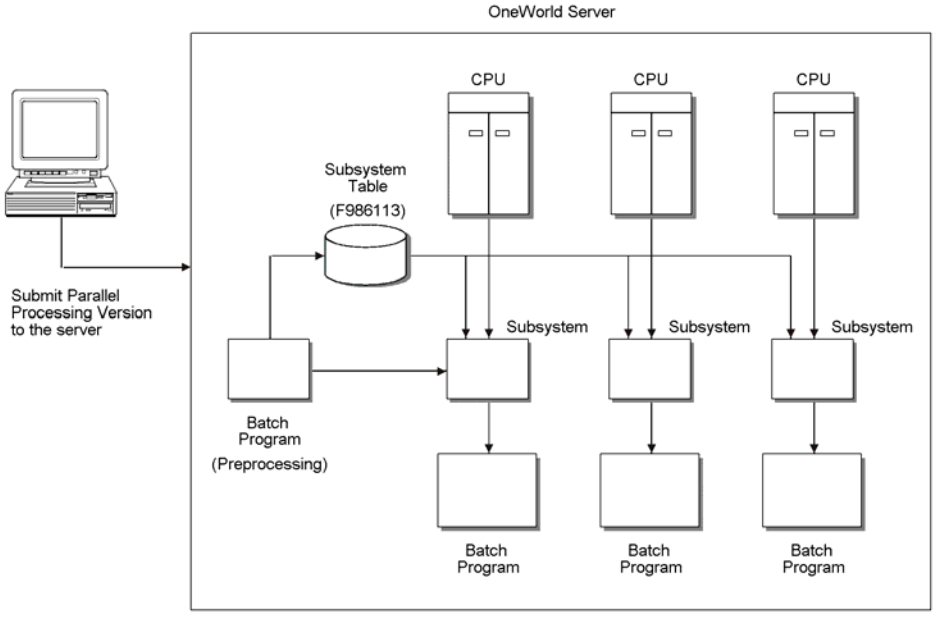
- Indicate the maximum number of the same subsystem jobs that the system can process at the same time. Add or modify the value, UBESubsystemLimit=N, in the UBE section of the jde.ini file. N represents the maximum number of similar subsystem jobs.
- Set up multi-threaded job queues

R3482 and R3483 have a processing option, Number of Subsystem Jobs, on the Parallel tab that indicates how many concurrent jobs can process the MRP data. You must use subsystem parallel versions that are specifically designed for parallel processing.

Caution:

J.D. Edwards recommends that you do not run more than one version of MRP at a time.

The following graphic illustrates parallel processing:



See Also

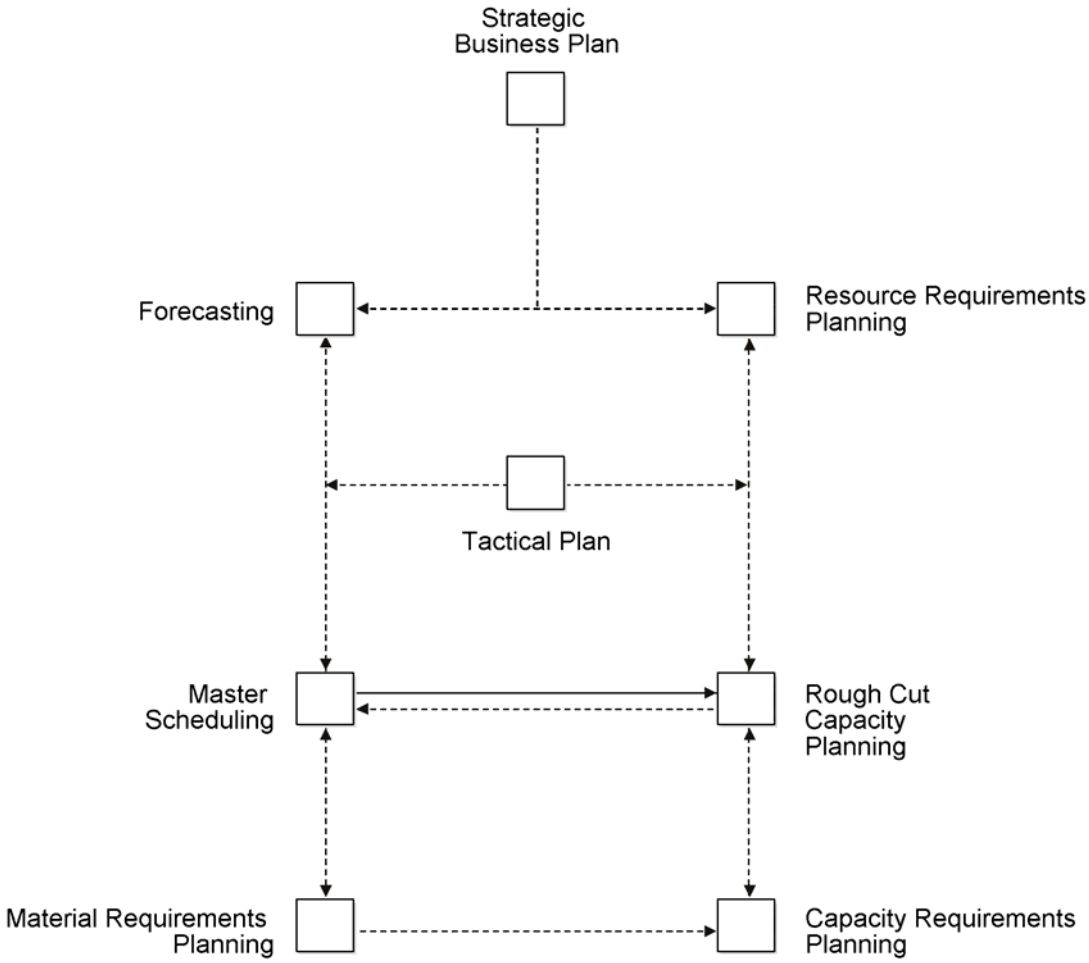
- *Processing Options for DRP/MPS/MRP*
- *Processing Options for Multifacility DRP/MPS/MRP*
- *Working with OneWorld Subsystems* in the *System Administration Guide* for more information about parallel processing

Capacity Planning

Use Capacity Planning to ensure that sufficient capacity is available to accomplish the planned production schedule generated by Master Production Schedule (MPS) or Material Requirements Planning (MRP). If sufficient capacity is not available, then you must alter the plan or the capacity.

J.D. Edwards Capacity Planning comprises the following systems:

- Resource Requirements Planning (RRP)
- Rough Cut Capacity Planning (RCCP)
- Capacity Requirements Planning (CRP)



RCCP identifies capacity constraints at critical work centers.

CRP matches your available personnel and equipment resources to your resource requirements generated by MRP. CRP indicates whether you need to revise the material requirements plan or increase resources.

Work center capacity is based on available hours to produce products within certain time frames. MPS, MRP, and Shop Floor Management provide the actual hours to produce products, based on the quantity required.

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

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

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

You generate a resource requirements plan after you generate your long-term forecast but before you run the Master Scheduling program. The Resource Requirements Planning (RRP) system uses the data from a forecast of future sales to estimate the time and resources that are required to meet the production plan.

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

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

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

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

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

Topics

- ❑ Reviewing work centers
- ❑ Determining available capacity
- ❑ Generating resource profiles
- ❑ Generating resource requirements plans
- ❑ Reviewing resource requirements plans
- ❑ Validating master schedules
- ❑ Validating material requirements plans

Reviewing Work Centers

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

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

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

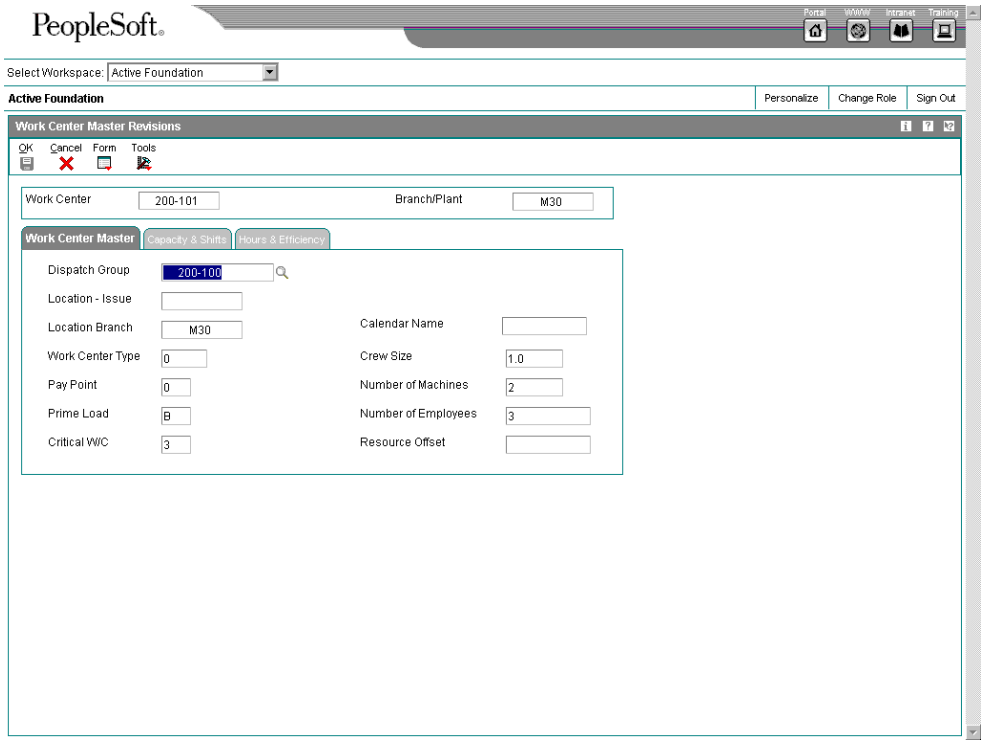
Before You Begin

- ❑ Set up your stock and nonstock items. See *Entering Item Master Information* in the *Inventory Management Guide*.
- ❑ Set up your work centers and dispatch groups as business units. See *Working with Business Units* in the *General Accounting Guide.*

► To review work centers

From the Periodic Resource/Capacity Planning menu (G3321), choose Enter/Change Work Centers.

1. On Work With Work Centers, locate the work center.
2. Choose Work Center and click Select.



3. On Work Center Master Revisions, review the following fields:

    - Work Center
    - Dispatch Group
    - Location Branch
    - Work Center Type
    - Prime Load
    - Critical W/C
    - Resource Offset

4. Click the Capacity & Shifts tab and review the following fields:

    - Standard Capacity
    - Branch
    - Capacity UOM

    This is the default unit of measure on Review Work Center Load.

    - Minimum Capacity

- Maximum Capacity

5. Click the Hours & Efficiency tab and review the following fields:

    - Queue Hours
    - Move Hours
    - Replen. Hrs.
    - Efficiency
    - Utilization

Determining Available Capacity

You must determine how much production capacity your work centers have. You determine a work center's available capacity on a given day by entering resource units.

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

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

Topics

- Generate resource units automatically
- Revise resource units manually (optional)

Before You Begin

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

Generating Resource Units Automatically

From the Periodic Resource/Capacity Planning menu (G3321), choose Refresh Resource Units.

Run the Refresh Resource Units program to automatically recalculate the work center hours. You can view the results in the Work Center Resource Units program, or on the Work Center Resource Unit Revision form. You can also change values on the Work Center Resource Unit Revision form.

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

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

- Hours per day in the Work Center Master table (F3006)
- Shop floor calendar
- Manufacturing Constants table

Warning:

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

Resource Unit Calculations

The program uses the following resource unit calculations:

Machine-related hours
(prime load code = C or M)
Number of machines * work hours per day

Labor-related hours
(prime load code = L or B)
Number of employees * work hours per day

Before You Begin

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

Processing Options for Work Center Resource Units Generation (R3007G)

Defaults Tab

These processing options define default values.

From Date

Use this processing option to specify the beginning date that the system uses when generating resource units. Enter the beginning date or select a date from the calendar. The system requires this processing option before you can run the generation.

Thru Date

Use this processing option to specify the ending date that the system uses when generating resource units. Enter the ending date or select a date from the calendar. The system requires this processing option before you can run the generation.

Branch/Plant

Use this processing option to specify the branch/plant updated by the system in the Work Center Resource Units table when you generate resource units. Enter the branch/plant or select a branch/plant from the Business Unit Master Search form. This processing option is required before you can run the generation.

Process Tab

These processing options define processing criteria.

Shift Code

Blank = All Shifts

A user defined code (06/SH) that identifies the type of shift. For example, day, night, or graveyard.

These processing options specify the shift codes to be included in the resource unit generation. You can enter up to six different shift codes. Enter the code or select it from the Select User Define Code form. If you leave all shift codes blank, the system processes all valid shifts for the requested branch/plant.

Shift 2 Code

A user defined code (06/SH) that identifies the type of shift. For example, day, night, or graveyard.

These processing options specify the shift codes to be included in the

resource unit generation. You can enter up to six different shift codes. Enter the code or select it from the Select User Define Code form. If you leave all shift codes blank, the system processes all valid shifts for the requested branch/plant.

Shift 3 Code

A user defined code (06/SH) that identifies the type of shift. For example, day, night, or graveyard.
These processing options specify the shift codes to be included in the resource unit generation. You can enter up to six different shift codes. Enter the code or select it from the Select User Define Code form. If you leave all shift codes blank, the system processes all valid shifts for the requested branch/plant.

Shift 4 Code

A user defined code (06/SH) that identifies the type of shift. For example, day, night, or graveyard.
These processing options specify the shift codes to be included in the resource unit generation. You can enter up to six different shift codes. Enter the code or select it from the Select User Define Code form. If you leave all shift codes blank, the system processes all valid shifts for the requested branch/plant.

Shift 5 Code

A user defined code (06/SH) that identifies the type of shift. For example, day, night, or graveyard.
These processing options specify the shift codes to be included in the resource unit generation. You can enter up to six different shift codes. Enter the code or select it from the Select User Define Code form. If you leave all

shift codes blank, the system processes all valid shifts for the requested branch/plant.

Shift 6 Code

A user defined code (06/SH) that identifies the type of shift. For example, day, night, or graveyard.

These processing options specify the shift codes to be included in the resource unit generation. You can enter up to six different shift codes. Enter the code or select it from the Select User Define Code form. If you leave all shift codes blank, the system processes all valid shifts for the requested branch/plant.

Revising Resource Units Manually

You can revise resource units manually if you need to make adjustments to them. For example, you might need to make adjustments to account for machine downtime or employee vacations. You can change the values on the Enter/Change Resource Units form to account for scheduled or unscheduled downtime, additional shifts, or vacation time.

Warning:

Each time you run Refresh Resource Units, the program recalculates the form values and overwrites your manual changes, based on information in the Work Center Master table (F3006), the Shop Floor Calendar program, and the Manufacturing Constants table (F3009).

► To revise resource units manually

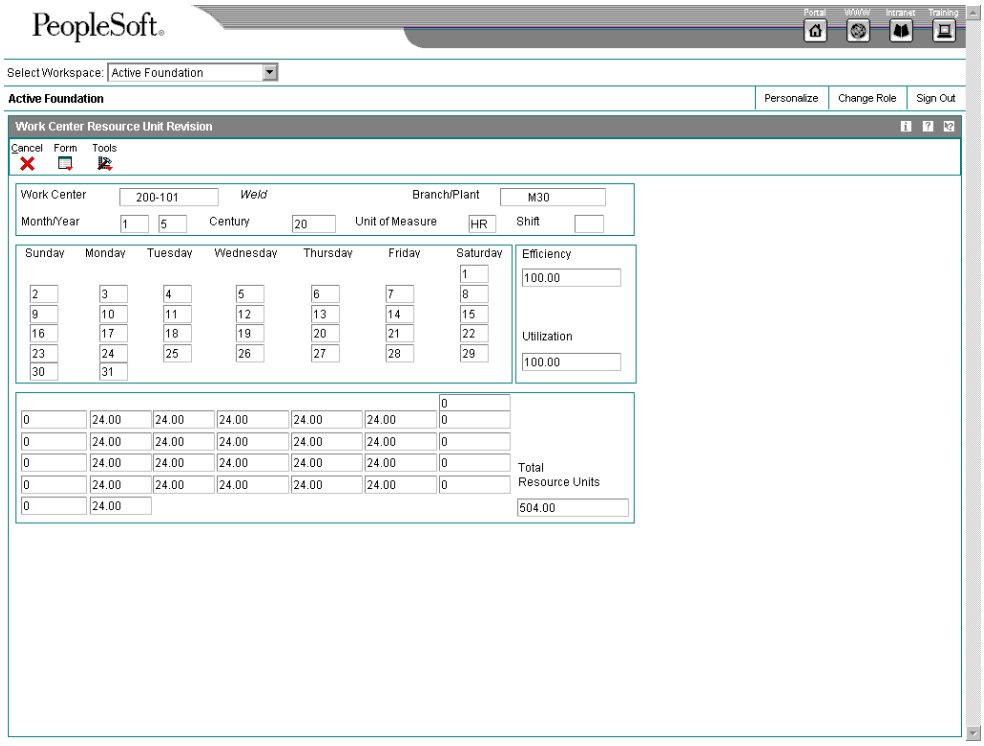
From the Periodic Resource/Capacity Planning menu (G3321), choose Enter/Change Resource Units.

1. On Work with Resource Units, complete the following fields:
    - Work Center
    - Branch/Plant
2. Complete the following optional fields and click Find:
    - Month
    - Year

3. Review the following fields:

    - UM
    - Work Center Efficiency
    - Work Center Utilization

4. Choose the record for which you want to revise resource units and click Select.



5. On Work Center Resource Unit Revision, complete the following field for each day in the shop floor calendar and click OK:

    - Total Resource Units

      Enter the number of units available in that work center that day, based on the unit of measure. For example, if the unit of measure is hour (HR), enter the number of hours available in that work center that day.

Processing Options for Work Center Resource Units (P3007)

Defaults
1. Enter the Default Unit of Measure for Work Center Resource Units. If left blank, HR will be used as the default Unit of Measure.
Unit of Measure as Input
Work Day Calender (P00071)

Generating Resource Profiles

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

You can have the system automatically generate a resource profile, or you can manually enter the profile.

Topics

- Generate resource profiles automatically
- Define resource profiles manually

Generating Resource Profiles Automatically

From the Periodic Resource/Capacity Planning menu (G3321), choose Generate Resource Profile.

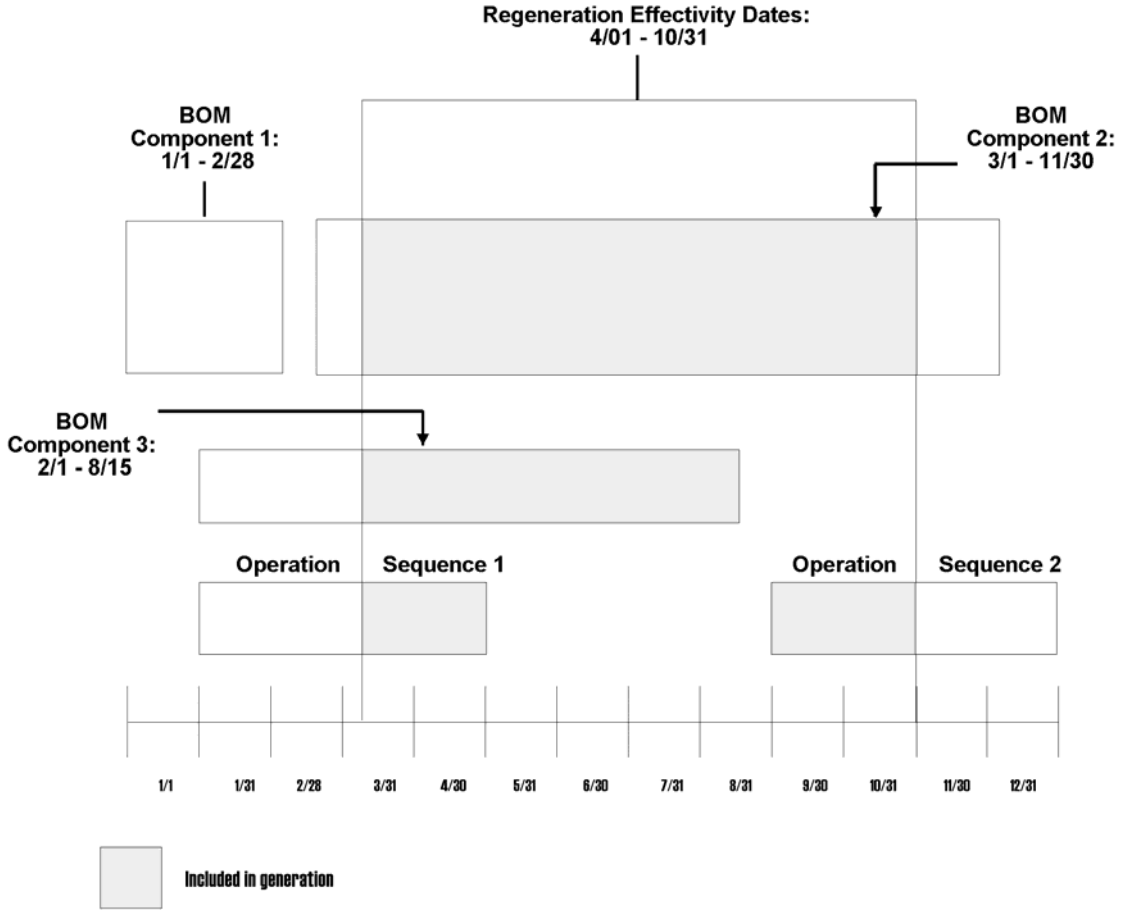
If you have defined bills of material (BOMs) and routings for an end item and all of its subassemblies, you can run Generate Resource Profile to automatically generate the resource profile. The program calculates the load on a work center by extending the hours in the routing by the forecasted quantities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

The Generate Resource Profile program creates units of measure only in hours (HR). Enter the resource profile manually if you want to use other units of measure.

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

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

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



Before You Begin

Enter all applicable bills of material, routings, and work centers. See the following topics in the *Product Data Management Guide:*

- *Working with Bills of Material*
- *Working with Routings*
- *Working with Work Centers*

Processing Options for Resource Profile Generation (R3365)

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

Defining Resource Profiles Manually

You manually enter the profile if you have not defined bills of material and routings for an end item. You can also use the manual method for prototype items and new products.

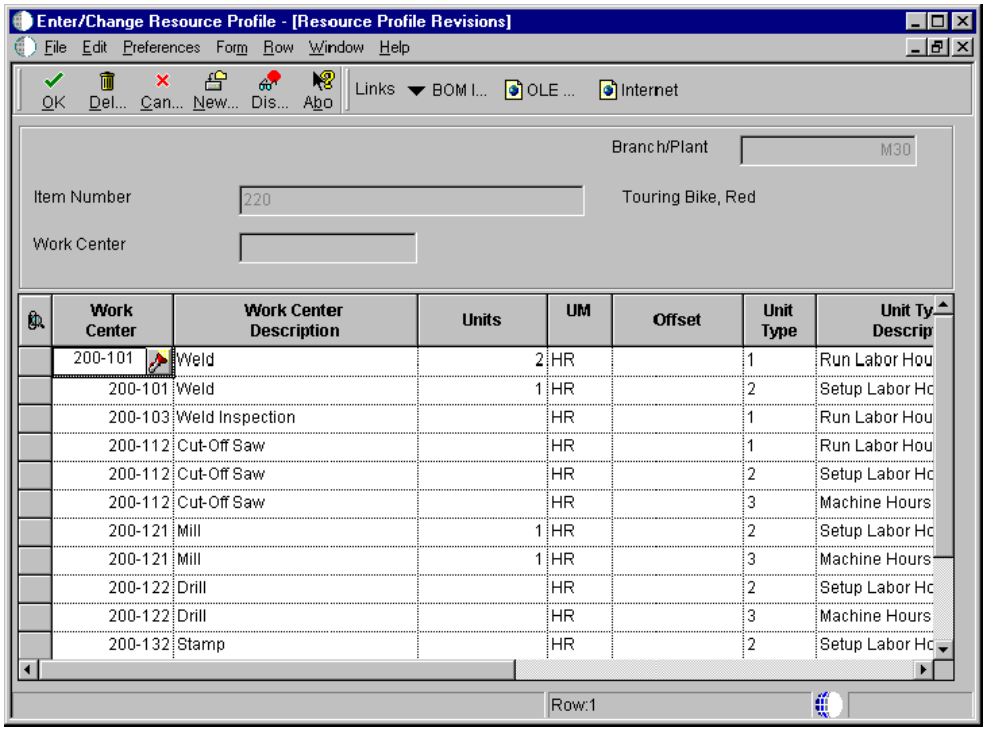
Before You Begin

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

► To define a resource profile manually

From the Periodic Resource/Capacity Planning menu (G3321), choose Enter/Change Resource Profile.

1. On Work With Resource Profile Revisions, complete the following fields:
   - Item Number
   - Branch/Plant
2. Complete the following optional fields and click Find:
   - Skip to Work Center
   - Unit Type
3. Choose the record for which you want to define a resource profile and click Select, or click Add to enter a new resource profile.



4. On Resource Profile Revisions, complete the following fields and click OK:
   - Effective From
   - Effective Thru

- Unit Type
- Time Basis

Generating Resource Requirements Plans

From the Periodic Resource/Capacity Planning menu (G3321), choose Resource Requirements Planning.

After you have entered resource units and resource profiles, you run the program that generates the resource requirements plan. The plan contains long-range estimates of the capacity needs at your work centers. These needs might include:

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

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

The types of data that you can create include:

- Over-capacity or under-capacity messages
- Period summaries about work centers
- New load profile information based on the type of work center load:
  - Rated profile is the available units figure from the Resource Units table (F3007)
  - Loaded profile is the forecasted load derived from the master planned items' forecasts and their resource profiles
  - Percent resource used is the loaded profile divided by the rated profile
  - Resource available is the rated profile minus the loaded profile
  - Accumulated resources available is a running total of the resources available

When you set up the versions for planning your resource requirements, you need to determine data selections for the following:

Work centers to process You can make one of the following work choices:

N Process only noncritical work centers

1 Process critical work centers in calculating resource requirement plans only

2 Process critical work centers in calculating capacity requirements plans only

3 Process critical work centers in calculating resource requirements plans and capacity requirements plans

4 Not a capacity work center (will not be processed in the Capacity Requirements Planning system)

Branch/plant and dispatch group	You can select the following for planning facilities and dispatch groups: A specific planning facility or the dispatch groups or both A group of planning facilities or the dispatch groups using the RANGE or LIST values or both

Before You Begin

- Verify that resource units exist for all work centers in your facility. See *Determining Available Capacity.*
- Verify that resource profiles exist for all master-scheduled items. See *Generating Resource Profiles.*
- Verify that the resource profile is set up with the appropriate units of measure. You can use a maximum of five units of measure. See *Generating Resource Profiles.*
- Create a detail forecast for the master-scheduled items using the Enter/Change Forecasts program. See *Working with Detail Forecasts* in the *Forecasting Guide.*
- Determine which forecast types you want to use in the generation. You can use a maximum of five. See *Setting Up Summary Forecasts* in the *Forecasting Guide.*
- Set up the shop floor calendar for all summary time periods for which you want to generate resource requirements plans. See *Setting Up Manufacturing Information* in the *Shop Floor Management Guide.*

See Also

- *Reviewing Resource Requirements Plans* for information on the results of the output from generating Resource Requirements Plans

Processing Options for Resource Requirements Planning Regeneration (R3380)

Bucket Information Tab

These processing options allow you to specify the regeneration start date, the planning horizon periods, and the past due periods in a planning process.

---

1. Regeneration Start Date

Use this processing option to specify the date that the program uses to start the planning process. This date is also the beginning of the planning horizon. If you leave this option blank, the system uses the system date.

2. Planning Horizon Periods

Number of Planning Weeks

Use this processing option to specify the number of weeks that the system indicates in a planning period. For example, when the system displays the Time Series program (P3413), the system also accesses data for the number of planning weeks.

Number of Planning Months

Use this processing option to specify the number of months that the system indicates in a planning period. For example, when the systems displays the Time Series program (P3413), the system also accesses monthly data for the number of planning months.

3. Past Due Periods

0 (Default)

1

2

Use this processing option to display the number of past due periods that the system generates for a loaded profile. These values represent the number of past due periods for the program's generation date. Valid values are:

0 0 periods (default)

1 one past due period

2 two past due periods

Process Tab

These processing options allow you to specify the branch that a system uses for the CRP/RCCP Planning Regeneration program (R3382) and the percentages for underrated and overrated capacity. Additionally, you determine whether you want work centers to be rolled up by dispatch group in the planning.

1. Branch

Use this processing option to specify the branch that the system uses for the CRP/RCCP Planning Regeneration program (R3382).

2. Under Rated Capacity Percent

Use this processing option to specify the percent under the rated capacity that the system uses to determine whether a work center is underloaded. The system displays messages with a status of U (under) for capacity loads that are less than the identified percentage under the rated value.

For example, if the rated capacity is 100 units and the underrated capacity is set to 5%, then the system still considers a capacity load of 95 units as a valid load at a work center. Similarly, the system would consider a capacity load of 94 units as an underload.

3. Over Rated Capacity Percent

Use this processing option to specify the percent over the rated capacity that the system uses to determine whether a work center is overloaded. The system displays messages with a status of O (over) for the capacity load that is greater than the identified percentage over the rated value.

For example, if the rated capacity is 100 units and the overrated capacity is set to 5%, then the system would still consider a capacity load of 105 as a valid load at a work center. Similarly, the system would consider a capacity load of 106 units as an overload.

4. Roll Up To Dispatch Group

Blank = Will Not Roll Up to Dispatch Group

1 = Will Roll Up to Dispatch Group

Use this processing option to specify whether multiple work centers within a dispatch group roll up to that dispatch group for review. Valid values are:

Blank The system does not roll up work centers to a dispatch group.

1 The system rolls up work centers to a dispatch group.

Forecast Types Tab

These processing options allow you to specify the forecast type that the system processes when it runs the Resource Requirement Planning program (R3380). You can enter up to five forecast types in the system. Forecast types are user-defined and stored in the Detail Forecast table (F3460).

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1. Forecast Types Used (up to 5)

Forecast Type 1

Use this processing option to specify the forecast type that the system processes when you run the Resource Requirements Planning program (R3380).

Forecast types are user-defined and are stored in the Detail Forecast table

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(F3460).

Forecast Type 2

Use this processing option to specify the forecast type that the system processes when you run the Resource Requirements Planning program (R3380). Forecast types are user-defined and are stored in the Detail Forecast table (F3460).

Forecast Type 3

Use this processing option to specify the forecast type that the system processes when you run the Resource Requirements Planning program (R3380). Forecast types are user defined and are stored in the Detail Forecast Table (F3460).

Forecast Type 4

Use this processing option to specify the forecast type that the system processes when you run the Resource Requirements Planning program (R3380). Forecast types are user-defined and are stored in the Detail Forecast table (F3460).

Forecast Type 5

Use this processing option to specify the forecast type that the system processes when you run the Resource Requirements Planning program (R3380). Forecast types are user-defined and are stored in the Detail Forecast table (F3460).

Unit of Measure Tab

These processing options allow you to specify the units of measure that the system processes when you run the Resource Requirements Planning program (R3380). The system can process up to five units of measure at a time.

1.Units of Measure Used (up to 5)

Unit of Measure 1

Use this processing option to specify the unit of measure that the system processes when you run the Resource Requirements Planning program (R3380).

Unit of Measure 2

Use this processing option to specify the unit of measure that the system processes you run the Resource Requirements Planning program (R3380).

Unit of Measure 3

Use this processing option to specify the unit of measure that the system processes when you run the Resource Requirements Planning program (R3380).

Unit of Measure 4

Use this processing option to specify the unit of measure that the system processes when you run the Resource Requirements Planning program (R3380).

Unit of Measure 5

Use this processing option to specify the unit of measure that the system processes when you run the Resource Requirements Planning (R3380).

Reviewing Resource Requirements Plans

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

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

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

Topics

- Review dispatch groups for RRP
- Review work center load for RRP
- Review period summaries
- Review message detail
- Validate resource requirements plans

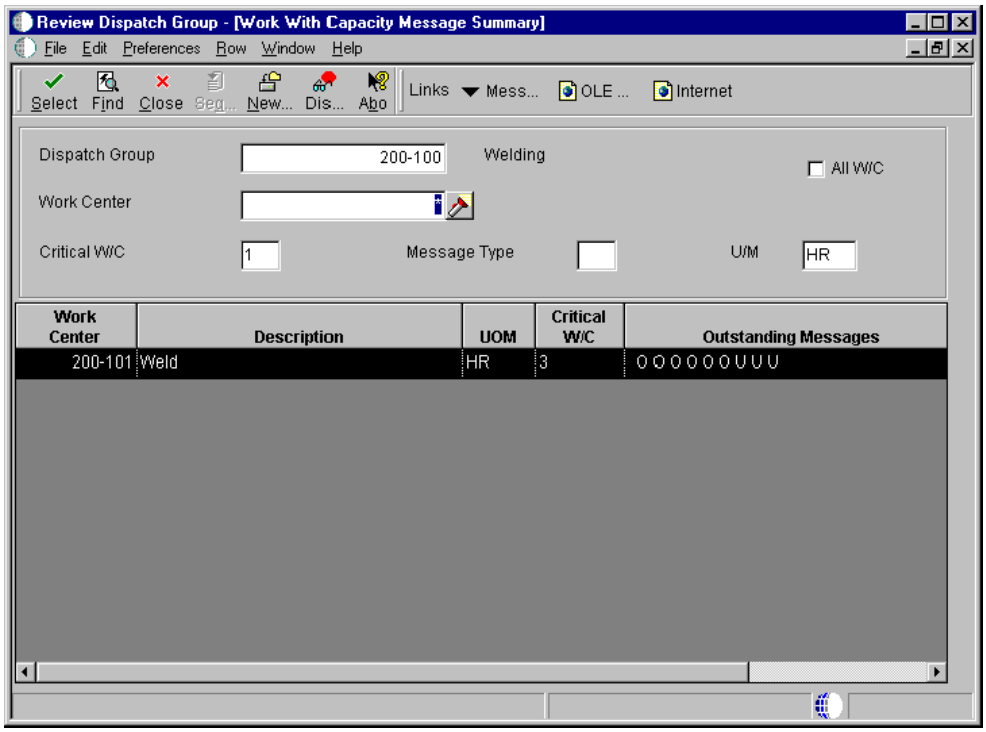
Reviewing Dispatch Groups for RRP

If several work centers are organized as a dispatch group, you can review the group to determine how capacity affects all of the work centers in the group. Dispatch groups enable you to organize work centers according to common functions, similar operations, or steps in a routing.

When you review dispatch groups, you can also review messages about all the work centers in the group and use that information to redistribute the load within the group.

► To review dispatch groups

From the Daily Resource Requirements Planning menu (G3311), choose Review Dispatch Group.



1. On Work With Capacity Message Summary, complete the following field:
    - Dispatch Group
2. Complete the following optional fields and click Find:
    - Critical W/C
    - Message Type
    - U/M
3. Review the following field:
    - Outstanding Messages

Processing Options for Capacity Message Summary (P3301)

Defaults
1. Enter the Critical Work Center Code to be displayed or blank for all Work Centers.
2. Enter the Capacity Mode:
   '1' = Resource Requirements
   '2' = Rough Cut Capacity
   '3' = Capacity Requirements
3. Enter the default Unit of Measure.
Versions
Enter the version for each program. If left blank, version ZJDE0001 will be used.
Work Center Revision (P3006)

Reviewing Work Center Load for RRP

The RRP program provides a numerical breakdown, by planning period, of the capacity load placed on a work center. Use this information to determine whether to adjust capacity or the forecast.

The code in the Prime Load field on Work Center Master Revisions determines the type of load. For example, if you enter machine and setup hours as the prime load code, the numbers that appear differ from those that appear if you enter machine hours only.

Calculations for the types of load are:

Rated profile	The amount of capacity available for a work center.
Loaded profile	The capacity that is required to meet the forecast. Loaded profile = (forecast quantity * labor or machine hours) / (efficiency * utilization) * time basis code
Percent resource used	The loaded profile divided by the rated profile.
Resource available	The rated profile minus the loaded profile.
Accumulated resources available	A running total of resources available.

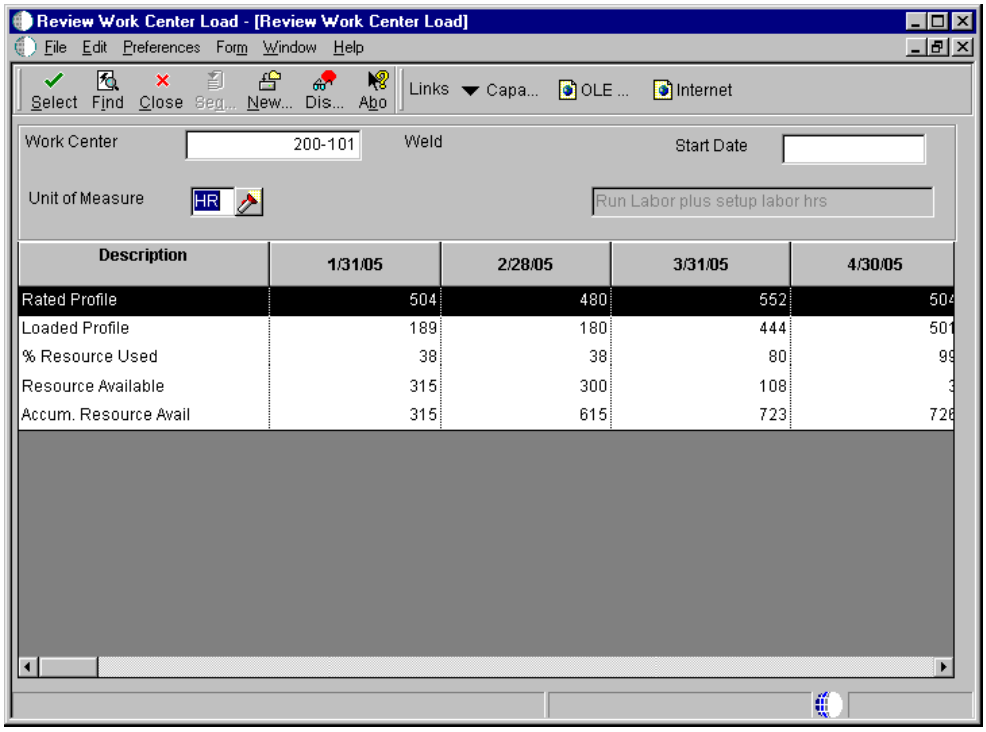
When the system calculates the demand it is offset by the Resource Offset value from the Resource Profile (F3303) table. The Resource Offset value determines the number of days that the actual use of a work center resource should be offset from the forecasted need.

Before You Begin

- Generate the RRP with all your current resource units accurately set up.

▶ To review work center load for RRP

From the Daily Resource Requirements Planning menu (G3311), choose Review Work Center Load.



1. On Review Work Center Load, complete the following field and click Find:
   - Work Center
2. Complete the following optional fields and click Find:
   - Start Date
   - Unit of Measure
3. Review the following field:
   - Description

Processing Options for Capacity Load (P3313)

Defaults
1. Enter the Capacity Mode:
   '1' = Resource Requirements
   '2' = Rough Cut Capacity
   '3' = Capacity Requirements
2. Enter the User Defined Code for the list of row descriptions to appear.
3. Enter the default Unit of Measure.

4. Enter the version of the Dispatch List program to call. The default is ZJDE0001.
Versions
Enter the version for each program. If left blank, version ZJDE0001 will be used.
Operation Dispatch Inquiry (P31220)

Reviewing Period Summaries

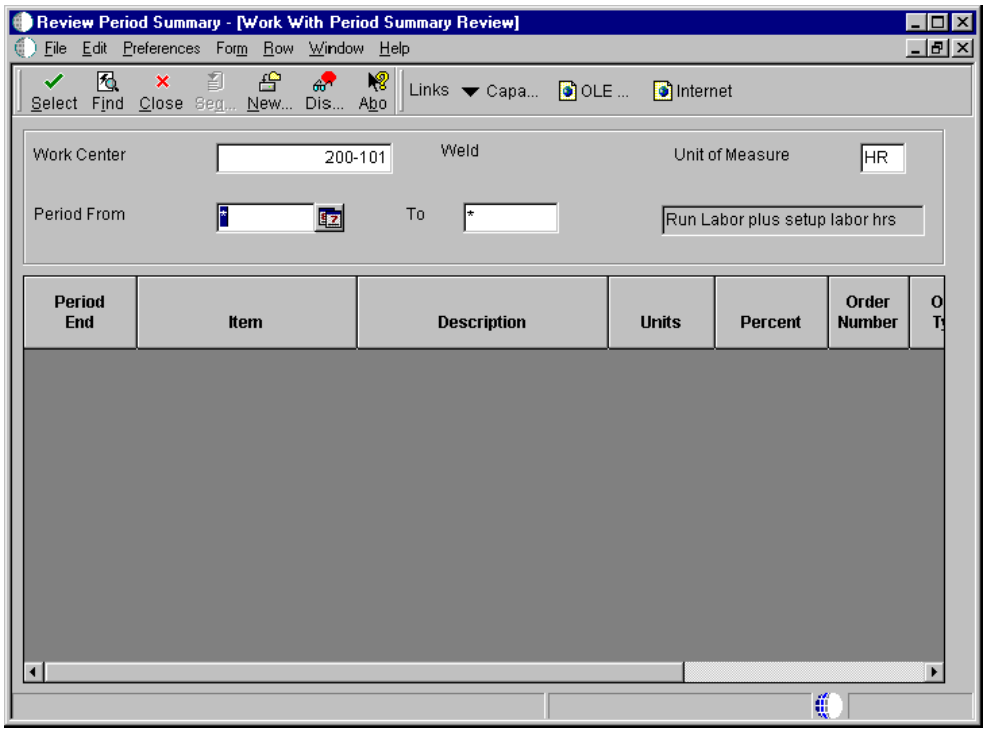
In addition to reviewing the capacity load of a work center, you can also evaluate the load that is placed on a work center. Evaluate the load by period and by item. You can review:

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

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

► To review period summaries

From the Daily Resource Requirements Planning menu (G3311), choose Review Period Summary.



1. On Work With Period Summary Review, complete the following field:

   - Work Center

2. Complete the following optional fields and click Find:

    - Unit of Measure
    - Period From
    - To

3. Review the following fields:

    - Period From
    - Item
    - Units
    - Percent
    - Order Number

Processing Options for Period Summary (P3312)

Defaults
1. Enter the Capacity Mode:
   '1' = Resource Requirements
   '2' = Rough Cut Capacity
   '3' = Capacity Requirements

2. Enter the default Unit of Measure.
3. Enter the version of the Dispatch List to call. The default is ZJDE0001.
Versions
Enter the version for each program. If left blank, version ZJDE0001 will be used.
1. Work Center Revision (P3006)
2. Forecast Revision (P3460)
3. MRP/MPS Message Revision (P3411)
4. Mfg Scheduling Workbench (P31225)

Reviewing Message Detail

Each time that you generate a resource requirements plan, the system creates messages to identify work centers whose loads conflict with planned capacity. Review Message Detail indicates whether you have overload or underload conditions. Messages for each work center appear alphabetically by message type.

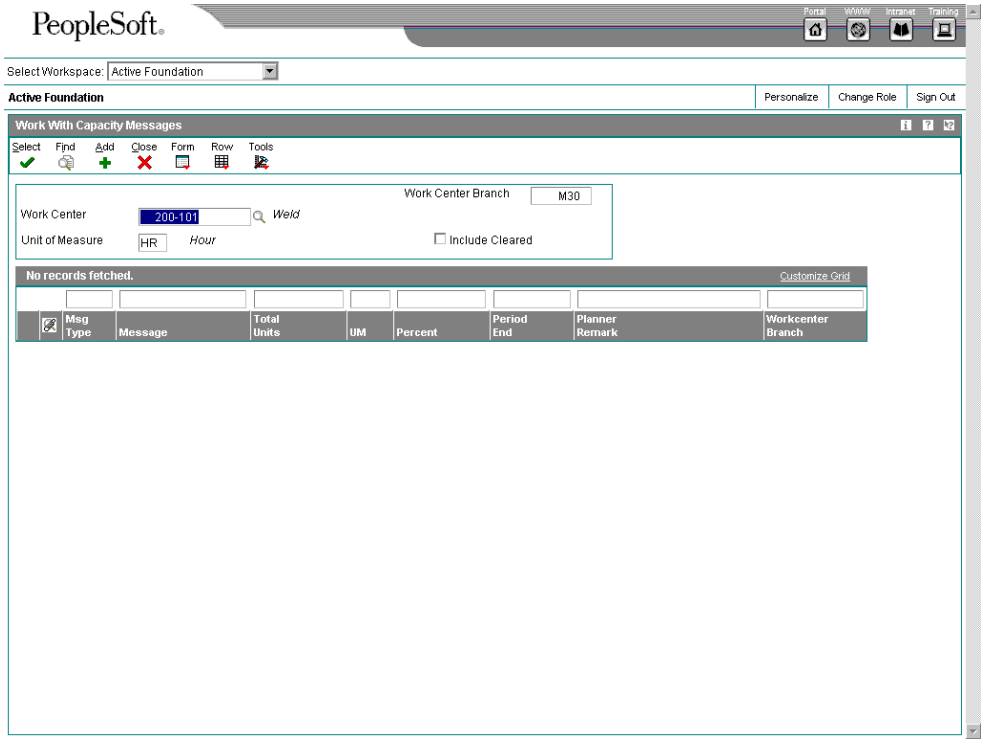
Use Review Message Detail to clear, hold, or delete messages. You cannot process capacity messages. You can add remarks for each message to record the actions you take. In addition, you can access related forms to confirm or change dates, amounts, and manufacturing data for key plants for the work center.

You can generate a plan more than once. When you regenerate a resource requirements plan, the system deletes all messages except the following:

- Messages that you entered manually
- Messages that you placed on hold

► To review message detail

From the Daily Resource Requirements Planning menu (G3311), choose Review Message Detail.



1. On Work With Capacity Messages, complete the following field and click Find:

   - Work Center

2. Review the following fields:

   - Msg Type
   - Messages
   - Total Units
   - UM
   - Percent
   - Planner Remark

3. To clear a message, select it and choose Clear from the Row menu.

   When you clear a message, it no longer appears on the Review Message Detail form.

4. To view cleared messages, check the Include Cleared box and click Find.

5. To hold or release a message, select it and choose Hold/Release from the Row menu.

   Messages on hold are highlighted. The system retains held messages until you manually release, clear, or delete them.

6. To delete a message, select it and choose Revisions from the Row menu.
7. On Capacity Message Revisions, choose the row with the message and click Delete.

Processing Options for Capacity Planning Message Revisions (P3311)

Defaults
1. Enter the Capacity Mode:
   '1' = Resource Requirements
   '2' = Rough Cut Capacity
   '3' = Capacity Requirements
2. Enter the default Unit of Measure.
3. Enter the default version of Work Center Revision (P3006)

Validating Resource Requirements Plans

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

1. Complete the steps for reviewing the resource requirements plan.

   See *Reviewing Resource Requirements Plans.*

2. Revise the forecast.

   See *Working with Summarized Detail Forecasts* in the *Forecasting Guide.*

3. Complete the steps for regenerating the resource requirements plan.

   See *Generating Resource Requirements Plans.*

4. Repeat the steps until all loads at each work center are appropriate.

Validating Master Schedules

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

In J.D. Edwards software, the same batch program generates capacity planning information for both RCCP and Capacity Requirements Planning (CRP). The only difference is in the work centers that you identify in the data selection. The system uses firm and planned MPS work orders and routing instructions for inputs to RCCP.

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

The system generates the following outputs from RCCP:

- Over-capacity and under-capacity messages

- Work center load
- Period summary

The pacing resource for critical work centers is either labor or machine, depending on which one would increase the work center's capacity. A work center is paced by labor if adding employees to the work center increases capacity. A work center is paced by machine if adding machines increases capacity. Use the Prime Load Code on Work Center Master Revisions to define the pacing resource.

The following terms are important for understanding master schedules:

Resource units The resource units indicate the units that are associated with a work center for each workday on the Work Day Calendar. The system displays resource units as hours, units, monetary amounts, floor space, and so on. This information is associated with a work center for each workday on the Work Day Calendar. The system uses this information to backschedule work orders in the Shop Floor Management system and to calculate available hours for capacity planning. You can manually enter or revise resource unit information for each work center and for each workday using the Enter/Change Resource Units program.

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

Topics

- ❑ Generating rough cut capacity plans
- ❑ Reviewing work center load for RCCP
- ❑ Reviewing period summaries for RCCP
- ❑ Reviewing work schedules for production status
- ❑ Reviewing rate schedule and work center loads

Generating Rough Cut Capacity Plans

From the Periodic Rough Cut Capacity Planning menu (G3321), choose Rough Cut Capacity Plan.

Use the rough cut capacity plan (RCCP) to compare prospective MPS resource requirements to the capacity available in critical work centers. RCCP indicates whether you should revise the master schedule to create feasible workloads or improve the use of limited resources.

When you generate the RCCP, the system:

- Identifies critical work centers
- Identifies the pacing resource for critical work centers
- Calculates the rated capacity for critical work centers
- Calculates the MPS load for critical work centers

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

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

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

For reference, the inverse operation (actual hours / standard hours) is called realization.

Utilization is calculated by finding the number of hours in a day that the work center is actually available for working compared to standard. 100 percent utilization is an unrealistic goal because preventive maintenance, employee breaks, and other factors typically affect utilization.

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

Planned orders * pacing hours from the routing table

Firm orders * pacing hours from the routing instruction table

The code in the Prime Load field in the Work Center Master table (F30006) determines the type of pacing at the work center.

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

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

Work order quantity * number of pacing hours on routing/time basis code

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

Before You Begin

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

Processing Options for CRP/RCCP Regeneration (R3382)

Process Tab

These processing options allow you to specify the variable information that the system uses to regenerate the CRP/RCCP.

1. Under Rated Capacity Percent

Use this processing option to specify the percent under the rated capacity that the system still considers as an underloaded work center. The system displays messages with a status of U (under) for a capacity load that is less than the identified percentage under the rated value.

2. Over Rated Capacity Percent

Use this processing option to specify the percent over the rated capacity that the system displays as overrated and as an overloaded work center. The system displays messages with an O status (over) for capacity loads that are greater than the identified percentage over the rated value.

3. Branch

Use this processing option to specify the branch that the system uses for the CRP/RCCP Planning Regeneration program (R3382).

4. Supply/Demand Inclusion Rule

Use this processing option to specify which supply and demand inclusion rule that the system uses for the generation of an item. Supply and demand inclusion rules define the criteria that the system uses to select active orders for processing.

5. Capacity Mode

2 = Rough Cut Capacity

3 = Capacity Requirements

Use this processing option to specify which capacity mode the system uses.

Valid values are:

2 The system uses rough cut capacity planning.

3 The system uses capacity requirements planning.

6. Unit of Measure

Use this processing option to specify the unit of measure that the system uses for backscheduling the capacity load. The default unit of measure is HR (hour).

7. Roll Up to Dispatch Group

Blank (Default)

1

Use this processing option to specify whether the system rolls up multiple work centers to a dispatch group for review. Valid values are:

Blank Work centers do not roll up to a dispatch group.

1 Work centers roll up to a dispatch group.

See Also

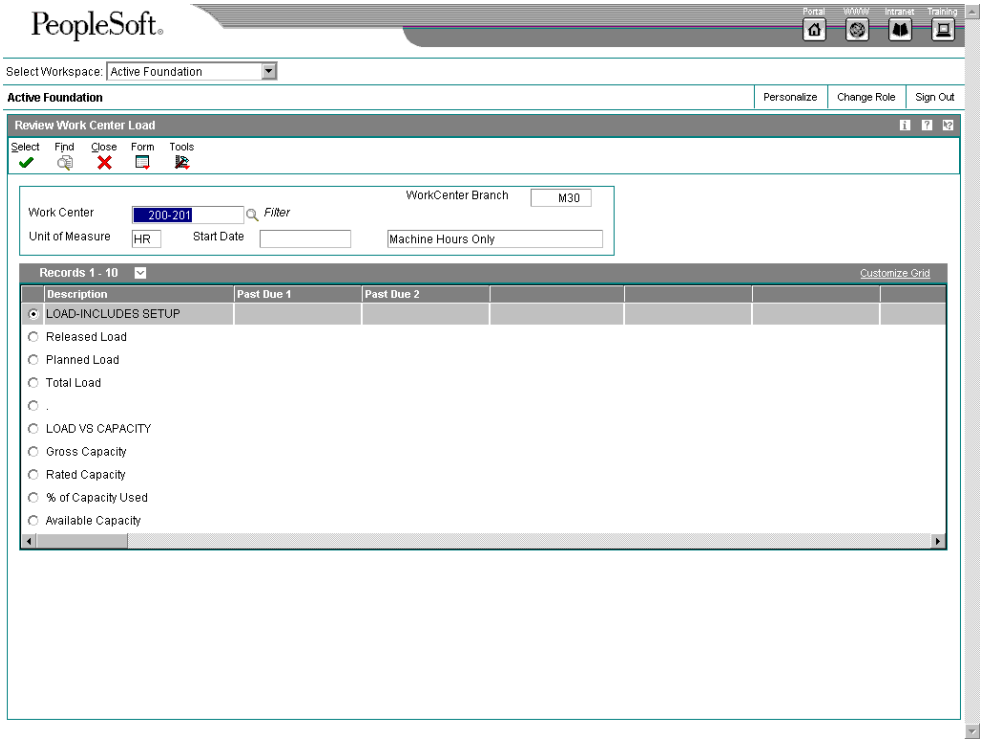
- *Revising Resource Units Manually*
- *Reviewing Period Summaries*
- *Reviewing Detail Messages*
- *Reviewing Work Schedules for Production Status*
- *Reviewing Rate Schedule and Work Center Loads*

Reviewing Work Center Load for RCCP

Use Review Work Center Load to review the load and capacity information for the work center that you select. The load and capacity information depends on the Prime Load code that you entered for the work center on Work Center Revisions.

▶ To review work center load for RCCP

From the Daily Rough Cut Capacity Planning menu (G3312), choose Review Work Center Load.



1. On Review Work Center Load, complete the following field and click Find:
    - Work Center
2. Review the following fields:
    - Start Date
    - Unit of Measure
    - Description

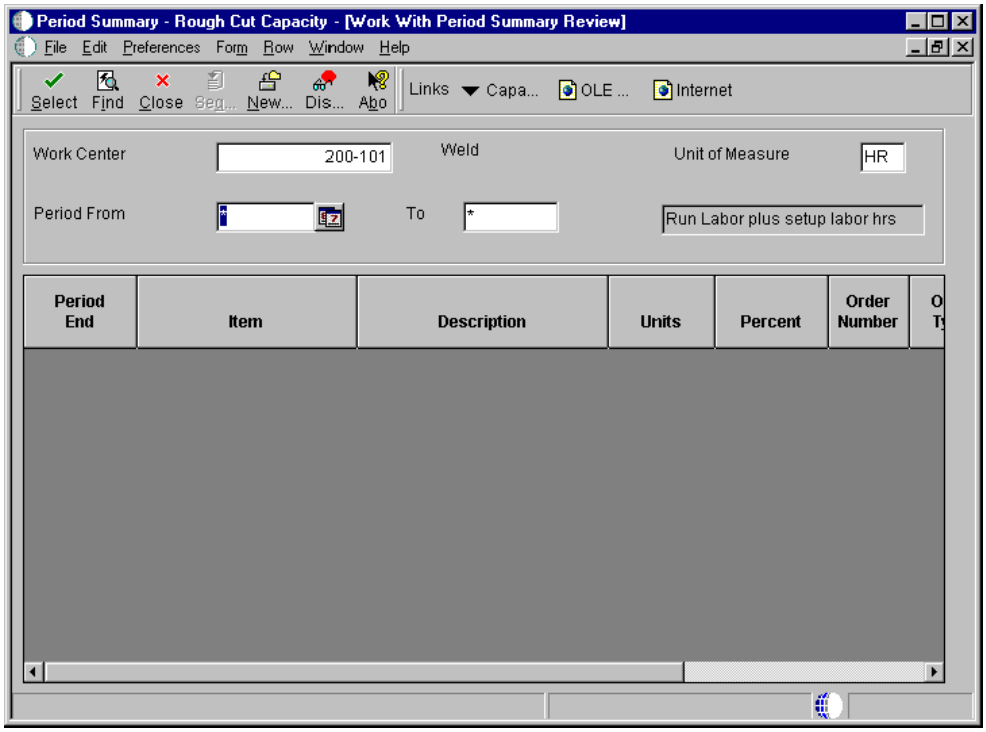
Reviewing Period Summaries for RCCP

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

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

▶ To review period summaries for RCCP

From the Daily Rough Cut Capacity Planning menu (G3312), choose Period Summary - Rough Cut Capacity.



1. On Work With Period Summary Review, complete the following fields and click Find:
    - Work Center
    - Unit of Measure
    - Period From
    - To
2. Review the following fields:
    - Period End

- Item
- Units
- Percent
- Order Number

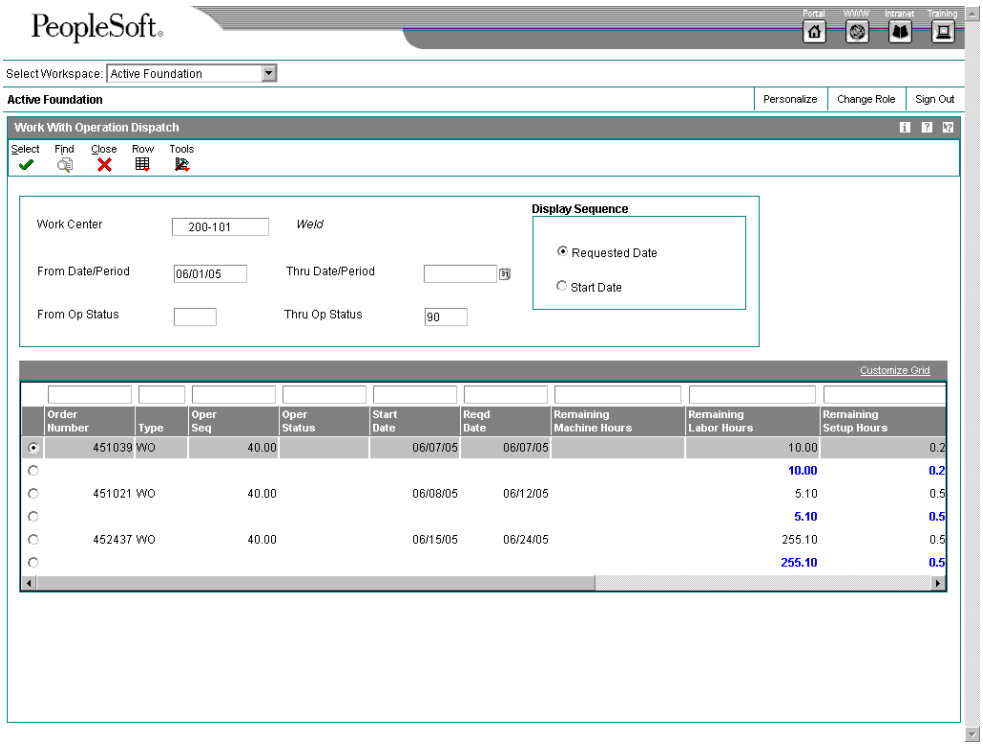
Reviewing Work Schedules for Production Status

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

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

► To review work schedules for production status

From the Daily Rough Cut Capacity Planning menu (G3312), choose Operation Dispatch Inquiry.



On Work With Operation Dispatch, complete the following fields and click Find:

- Work Center
- Thru Op Status

Processing Options for Operation Dispatch Inquiry (P31220)

Defaults
1. Enter the Default OPERATION Status Information to preload to the screen at initial inquiry. If left blank, no value will be preloaded:
From Status
Thru Status
2. Enter the Default Number of Days:
Prior to todays date for the From Date
After todays date for the Thru Date
Versions
Enter the version of Work Order Parts Inquiry to execute. If left blank, 'ZJDE0001' will be used:
Work Order Parts Inquiry Version
Process
1. Enter '1' to subtract Quantity Cancelled/Scrapped from the Remaining Quantity. If left blank, the remaining quantity value will include cancelled/scrapped quantity.

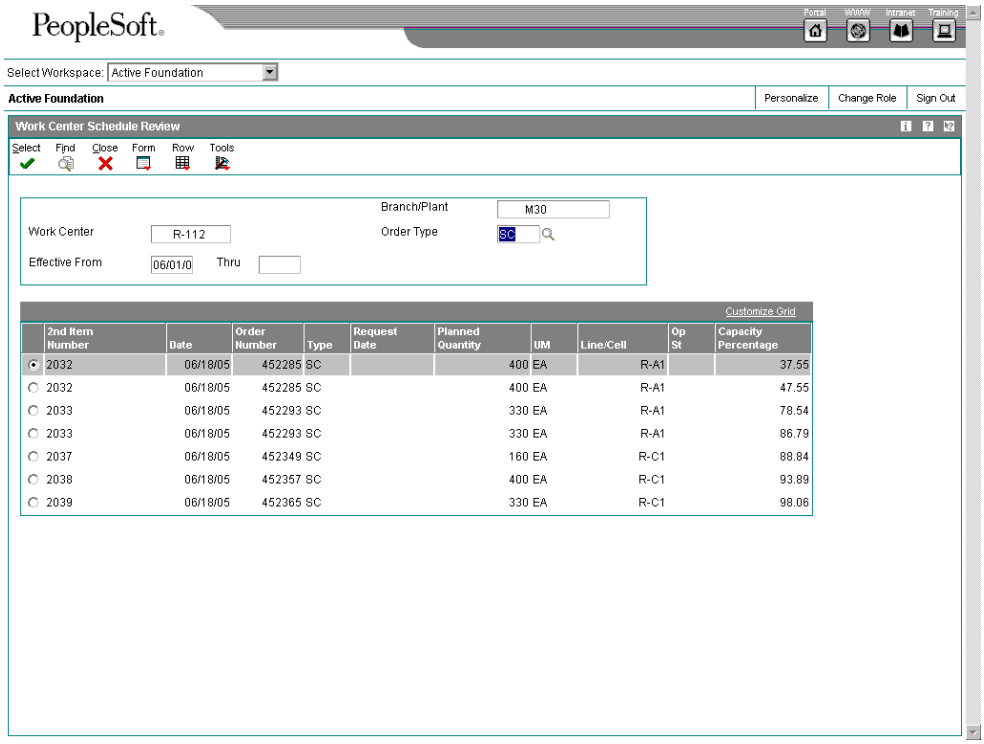
Reviewing Rate Schedule and Work Center Loads

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

Schedule Review is used primarily for rate-based items and is an alternative for viewing the load on a work center. A processing option allows you to include loads generated by a work order, before or after rate loads.

► To review rate schedule and work center loads

From the Daily Processing - Repetitive menu (G3115), choose Work Center Schedule Review.



1. On Work Center Schedule Review, complete the following fields to locate your work center schedule:
    - Branch/Plant
    - Work Center
2. To narrow your search, complete the following optional fields and click Find:
    - Order Type
    - Effective From
    - Thru

Processing Options for Work Center Schedule Review (P31224)

Defaults
1. Document Type

   A specific document type
   Blank = No default
Disp Options
1. Subfile Dates

   1 = Monthly
   2 = Weekly
   3 = Daily
WO Processing

1. Include Work Order Generated Loads

   1 = Before Rate loads
   2 = After Rate loads
   Blank = No Work Order loads
2. From Operation Status

   Include as an active operation
   Blank = No specific status to include
3. To Operation Status

   Include as an active operation
   Blank = No specific status to include

Versions
Exit Versions

   A specific version
   Blank = ZJDE0001
1. Rate Revisions (P3109)

Validating Material Requirements Plans

After you generate the material requirements plan, you can validate it to ensure that you have sufficient work center capacity. Use Capacity Requirements Planning (CRP) to determine whether the material plan can be executed with the available resources.

You also use CRP to:

- Analyze all active work centers
- Identify the pacing resource for work centers, which is either labor or machine, depending on which would increase a work center's capacity
- Calculate the rated capacity for work centers
- Calculate the MRP load for work centers

In J.D. Edwards software, the same batch program generates capacity planning information for both CRP and Rough Cut Capacity Planning (RCCP). You can vary the settings in the processing options to accommodate the different requirements for CRP.

The primary differences between CRP and RCCP are:

- CRP analyzes all active work centers instead of only the critical work centers
- CRP offers more alternatives to level an overloaded time frame

The system uses the following inputs to CRP:

- Firm MRP work orders and routing instructions
- Planned MRP work orders and routings
- Interplant demands

The system generates the following outputs from CRP:

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

The programs that you use to validate the material requirements plan are the same programs that you use to validate the master schedule for DRP, MPS, and RCCP.

Topics

- Generating capacity requirements plans
- Reviewing capacity requirements plans

Before You Begin

- CRP follows the same level of operational planning as MRP. You should synchronize the following information for both MRP and CRP:
  - The planning horizon
  - The work order document types
  - The statuses in the supply and demand inclusion rules

See Also

- *Validating Master Schedules* for detailed information on generating and reviewing the RCCP

Generating Capacity Requirements Plans

From the Periodic Resource/Capacity Planning menu (G3321), choose Capacity Requirements Plan.

Use the Capacity Requirements Plan program to compare prospective MRP resource requirements to the capacity available in work centers. CRP indicates whether you should revise the material requirements plan to create feasible work loads or improve the use of limited resources.

Before You Begin

- Report hours and quantities for operations that are complete or partially complete to ensure that the figures for Released Load are correct. See Understanding Hours and Quantities in the Shop Floor Management Guide.
- Verify that resource units exist for all work centers in your generation. See *Setting Up Manufacturing Information* in the *Shop Floor Management Guide*.
- Set up supply and demand inclusion rules. See *Setting Up Supply and Demand Inclusion Rules*.
- Run MRP generation. See *Generating Material Requirements Plans.*

See Also

- *Generating Rough Cut Capacity Plans*
- *Revising Resource Units Manually* if you want to generate the information manually instead of by batch processing

Reviewing Capacity Requirements Plans

When you generate a capacity requirements plan, the system creates a time series that shows the load during each planning period for a work center. If you have organized several work centers as a dispatch group according to common functions, similar operations, or steps

in routing, you can view the group to see how capacity affects all of the work centers in the group.

You can review summaries of each period to determine the load that is placed on a work center by each item or order. You can also review messages for each work center and delete, clear, or hold messages. If the system encounters over-capacity or under-capacity conditions, you can review the plan and identify the periods or work centers in which the conditions occur. It might be necessary to adjust the forecast or capacity and generate the capacity requirements plan again.

To review the capacity requirements plan, you use different versions of the same programs that you used to review the resource requirements plan.

Topics

- Review dispatch groups for CRP
- Review work center load for CRP
- Review period summaries for CRP
- Review MRP work schedules on the dispatch list
- Review MRP rate schedule and work order loads
- Validate the capacity requirements plan

Reviewing Dispatch Groups for CRP

From the Daily Capacity Requirements Planning menu (G3313), choose Review Dispatch Group.

If several work centers are organized as a dispatch group, you can view the group to determine how capacity affects all of the work centers in the group. Dispatch groups enable you to organize work centers according to common functions, similar operations, or routing steps.

When you review dispatch groups, you can also review messages about all the work centers in the group and use that information to redistribute the load within the group.

When you review dispatch groups for CRP, you use the same program as when you review dispatch groups for Resource Requirements Planning. You can vary the settings in the processing options to accommodate the different requirements for CRP.

See Also

- *Reviewing Dispatch Groups for RRP*

Reviewing Work Center Load for CRP

From the Daily Capacity Requirements Planning menu (G3313), choose Review Work Center Load.

You can review the capacity load at each work center. Use this information to determine whether to adjust capacity or the forecast. The spreadsheet provides a numerical breakdown, by planning period, of the load placed on a work center.

Review Work Center Load for CRP uses the same program as Review Work Center Load for Resource Requirements Planning. You can vary the settings in the processing options to accommodate the different requirements for CRP.

Before You Begin

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

See Also

- *Reviewing Work Center Load for RRP*

Reviewing Period Summaries for CRP

From the Daily Capacity Requirements Planning menu (G3313), choose Period Summary - Capacity Requirements.

In addition to reviewing the capacity load of a work center, you can evaluate the load placed on a work center by item. You can review:

- The items that are scheduled for a work center
- The number of units of an item that make up the load
- The percent of the total load on the work center that is for a specific item's forecast

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

When you review period summaries for CRP, you use the same program as when you review period summaries for Resource Requirements Planning. You can vary the settings in the processing options to accommodate the different requirements for CRP.

To evaluate the load placed on a work center by item, you can review the Period Summary Report.

See Also

- *Reviewing Period Summaries*

Reviewing MRP Work Schedules on the Dispatch List

From the Daily Capacity Requirements Planning menu (G3313), choose Dispatch List.

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

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

If a work center is overloaded, you might consider the following alternatives to distribute material and labor requirements to make the work center load as even as possible:

- Offering overtime
- Changing higher-level demand level by level
- Providing alternating routings
- Adding shifts

- Using resources from other work centers
- Outsourcing

The Dispatch List for MRP uses the same program as the Dispatch List for DRP/MPS. You can vary the settings in the processing options to accommodate the different requirements for MRP.

See Also

- *Reviewing Work Schedules for Production Status* for the processing options for this program

Reviewing MRP Rate Schedule and Work Order Loads

From the Daily Processing - Repetitive menu (G3115), choose Work Center Schedule Review.

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

Schedule Review is used primarily for rate-based items and is an alternative for viewing the load on a work center. A processing option allows you to include loads generated by a work order, before or after rate loads.

When you review schedules for MRP you use the same program as when you review schedules for DRP and MPS. You can vary the settings in the processing options to accommodate the different requirements for MRP.

See Also

- *Reviewing Rate Schedule and Work Center Loads*

Validating the Capacity Requirements Plan

Validating the capacity requirements plan consists of identifying the overloaded work centers, making adjustments in forecast or resources, and generating the plan again to see if the adjustments that you made have evenly distributed the loads on the work centers.

1. Complete the steps for reviewing the capacity requirements plan.

   See *Reviewing Capacity Requirements Plans.*

2. Revise the forecast.

   See *Revising Sales Order History* in the *Forecasting Guide.*

3. Complete the steps for regenerating the capacity requirements plan.

   See *Generating Capacity Requirements Plans.*

4. Repeat the steps until all loads at each work center are appropriate.

Master Production Scheduling

A master schedule is a statement of what the company expects to produce based on the tactical plan and budget constraints. A master-scheduled item is critical in its impact on lower-level components or resources, such as skilled labor, key machines, or revenues. Single-level scheduling implies master scheduling at the item level of an end deliverable . Multilevel master schedules explode planned orders down to component items.

The master scheduling process consists of:

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

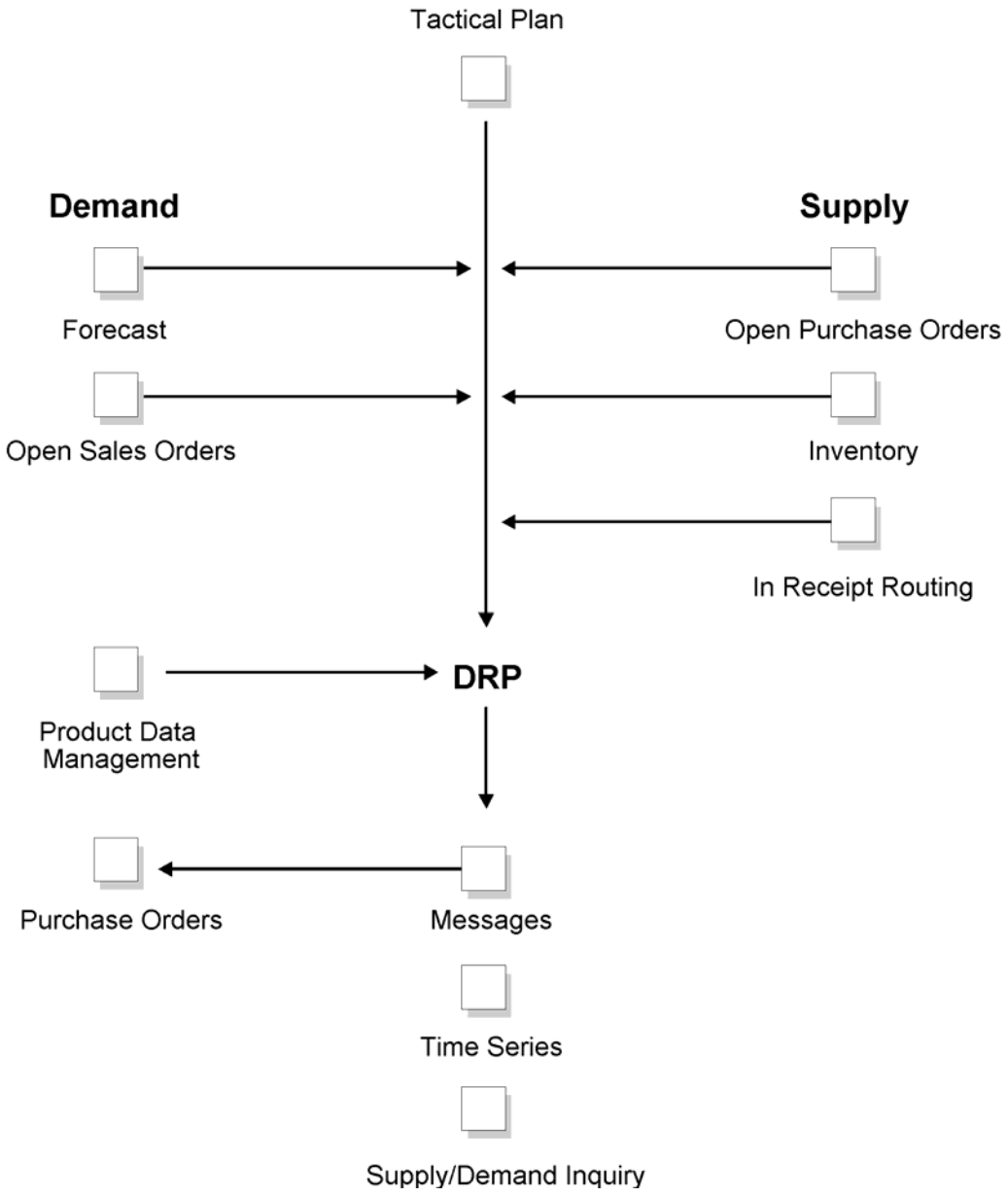
You can generate a master schedule for all items or for a net change generation, which includes only items that have been affected by transactions since the last generation. After you generate the master schedule, you can review and respond to messages.

Topics

- ❑ Understanding time fences and the time series
- ❑ Generating single-level master schedules
- ❑ Reviewing the time series
- ❑ Working with DRP/MPS output
- ❑ Understanding forecast consumption
- ❑ Validating master schedules
- ❑ Processing orders
- ❑ Working with multilevel master schedules

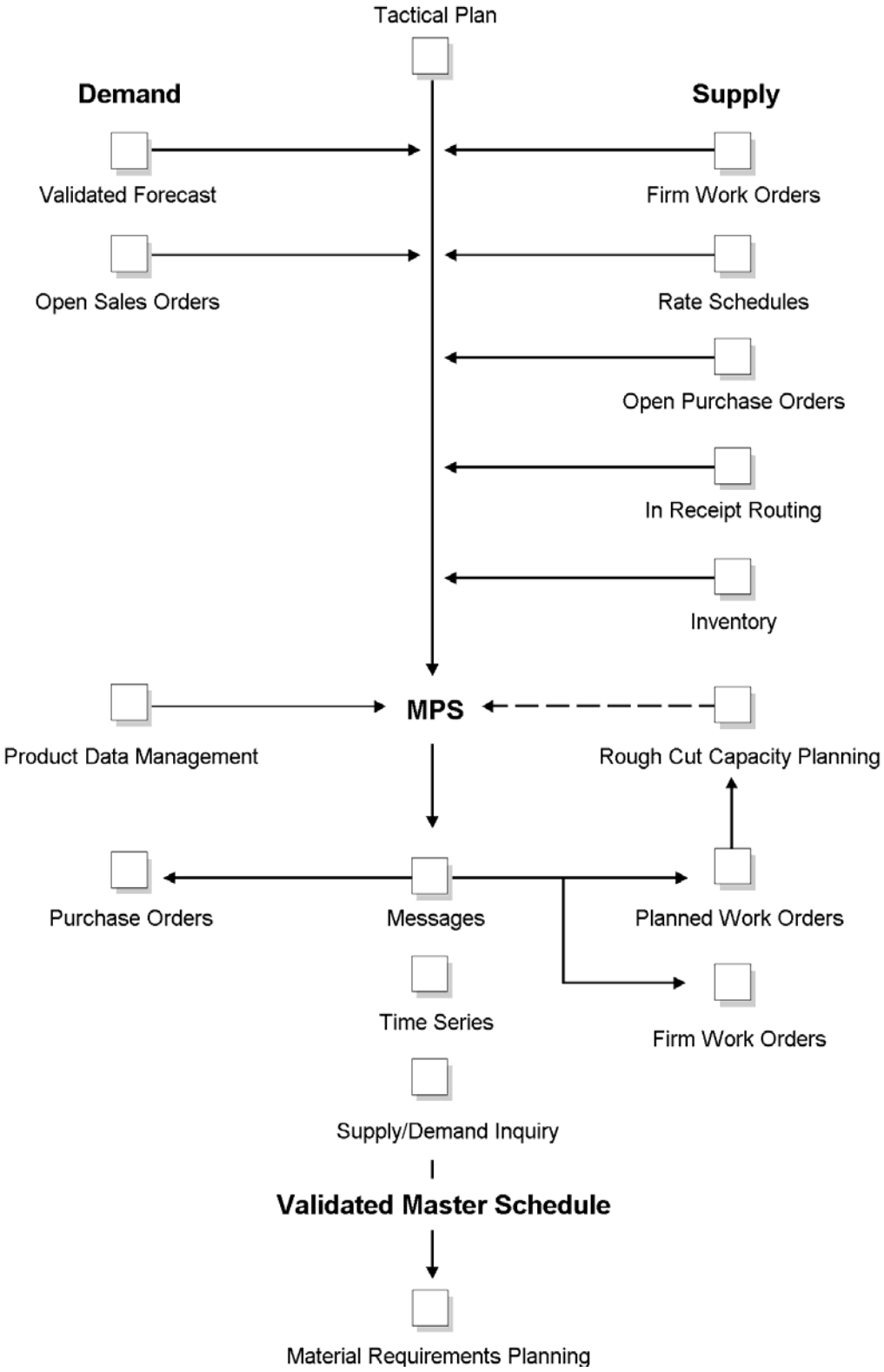
DRP and Purchased Items

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



MPS and Manufactured Items

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


Tactical Plan
Demand
Supply
Validated Forecast
Firm Work Orders
Open Sales Orders
Rate Schedules
Open Purchase Orders
In Receipt Routing
Inventory
MPS
Product Data Management
Rough Cut Capacity Planning
Purchase Orders
Messages
Planned Work Orders
Time Series
Firm Work Orders
Supply/Demand Inquiry
Validated Master Schedule
Material Requirements Planning

Time Fences and the Time Series

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

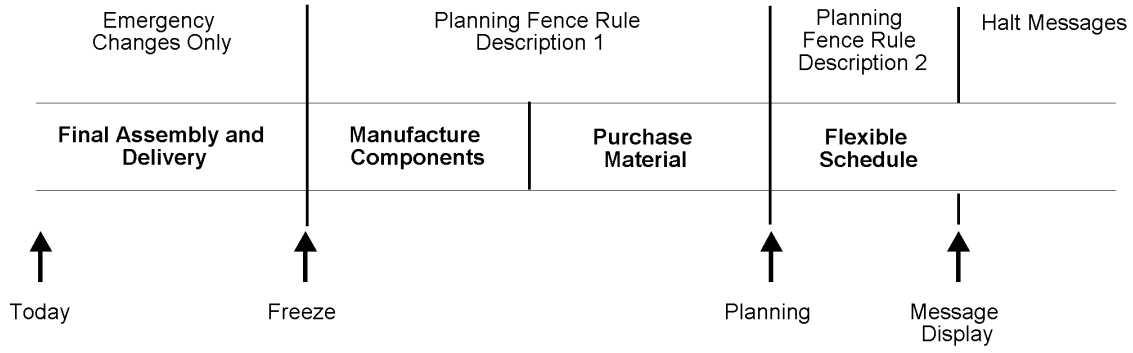
- Freeze
- Planning
- Message Display

Freeze Fence (F) The number of days from the generation start date within which the system should not display order messages. For example, if the generation start date is 01/03/05, and the freeze time fence is 3 days, the planning system does not display messages with dates prior to or equal to 01/06/05.

Planning Fence (P) The number of days that the system uses in conjunction with the time fence rule to determine how the forecast is used. Enter the number of days after the generation start date when the time fence rule changes from the first rule to the second rule. For example, if the time fence rule is S (customer demand before the time fence, forecast after the time fence), the generation start date is 01/03/05, and the planning time fence is 3 days, the system plans according to customer demand through 01/06/05. Beginning on 01/07/05, the system plans according to the forecast.

Message Display Fence (D) The number of days after the generation start date within which the system should display order messages. For example, if the generation start date is 01/01/05, and the message fence is 30 days, the system displays messages with dates less than or equal to 01/31/05. The system does not display messages with dates of 02/01/05 or later. However, the planning horizon for orders continues past this date and is reflected in available to promise totals.

Time fences are a critical input to the master schedule. The time series is the primary output of the master schedule.



You specify on the Manufacturing Data tab of the Additional System Information form the number of days after the generation start date to be included in each time fence period. Note the following about time fences:

- The system does not count the generation start date; that is, the day after the generation start date is day 1.

- For manufactured items, the system counts working days, as defined in the Shop Floor Calendar.
- For purchased items, the system counts calendar days.

What Are Time Fence Rules?

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

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

Rule C	Description 1 Customer demand Description 2 Whichever is greater, forecast or customer demand
Rule F	Description 1 Forecast Description 2 Forecast plus customer demand
Rule G	Description 1 Whichever is greater, forecast or customer demand Description 2 Forecast Rule G is the default.
Rule H	Description 1 Whichever is greater, forecast or customer demand When you use planning fence rule H, J.D. Edwards recommends that you set the Planning Fence field on the Additional System Information form on the Plant Manufacturing Data tab to 999.
Rule S	Description 1 Customer Demand Description 2 Forecast

Rule 1	Description 1 Zero Description 2 Forecast
Rule 3	Description 1 Zero Description 2 Forecast plus customer demand

What Are the Time Series Calculations?

The time series represents the proposed master schedule. Review the time series to decide whether to accept or override the planning that the system suggests.

The Manufacturing and Distribution Planning systems provide three different time series calculations, as follows:

- Ending available
- Available to promise
- Cumulative available to promise

See Also

- *Forecast Consumption Calculation*

Example: Ending Available Calculation

Ending Available (EA) is the amount of product available at the end of a time bucket after the system calculates the effect of all supplies and all demands for the time bucket. The system uses the planning time fence rule and the following calculation to calculate the ending available amount:

- Add within the time bucket:
  - Beginning Available (+BA)

    For the first time period, +BA = quantity on hand - safety stock

    For remaining time periods, +BA = ending available from the previous time period (=EA)
- Subtract according to the planning time fence rule:
  - Forecast (-FCST)
  - Customer demand (sales orders and interplant demand)
- The remainder is the ending available (EA)

The following table shows how the system calculates the amount of product available at the end of a time period. Assume that the lot size = lot for lot, safety stock = 20, time fence rule for planning = C, and leadtime = 1. The planning fence is between periods four and five.

	Period							
On Hand = 80	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
+BA	60	40	25	25	0	0	0	0
-FCST	20	20	20	20	20	20	20	20
-SO	20	15		40			45	
=EA	40	25	25	0	0	0	0	0
+DRP				15	20	20	45	20
(order start)			15	20	20	45	20	

Example: Available to Promise Calculation

Available to promise (ATP) is the uncommitted portion of a company's inventory or planned acquisitions. You use this amount to accurately promise customer orders. As long as manufacturing produces according to the MPS and sales makes commitments according to the ATP information, this method increases customer service and reduces inventory carrying cost.

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

The system calculates the ATP quantity as follows:

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

  The system does not display negative ATP for following periods. However, the system reduces the cumulative available to promise (CATP) by the negative amount.

Example: Cumulative Available to Promise Calculation

Cumulative available to promise (CATP) is a running total of the ATP.

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

The system calculates CATP as follows:

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

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

The following table shows how the system calculates CATP. Assume that the lot size = fixed 60, safety stock = 0, time fence rule for planning = C, and leadtime = 1. The planning fence is between periods four and five.

	Period							
t	1	2	3	4	5	6	7	8
+BA	80	50	25	55	45	25	50	30
-FCST	20	20	20	20	20	20	20	20
-SO	30	25	30	10		35		
=EA	50	25	55	45	25	50	30	10
+DRP			60			60		
ATP	25		20			25		
CATP	25	25	45	45	45	70	70	70

Generating Single-Level Master Schedules

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

You can set the Generation Mode processing option to use net change processing to have Regeneration and Net Change versions. With net change processing, the system includes only those items that have changed since the last generation. Use the Net Change Review program to determine which items to include in the net change generation.

Topics

- Generate a master schedule for all items
- Review items for net change
- Generate a master schedule for selected items

Before You Begin

- Generate a forecast for independent demand items. See *Creating Detail Forecasts* in the *Forecasting Guide*.
- Generate a resource requirements plan. See *Generating Resource Requirements Plans.*

Generating a Master Schedule for All Items

From the Single Site Periodic Planning Operations menu (G3422), choose DRP or MPS Regeneration.

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

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

You can also generate a master schedule for items using forecast consumption planning rule H. Forecast consumption occurs when forecasted demand is reduced by actual sales orders received or shipped, up to the forecasted quantity. By consuming the forecast, you can revise your production schedules to reflect the most up-to-date information. Before the program generates a schedule, it deletes the message and time series tables for the selected items.

You can use MPS/DRP/MRP parallel processing once the standard tasks have been completed in system setup. In the parallel processing method, the system plans more than one item simultaneously by utilizing multiple processors. This method takes place when a system executes a batch program on a server that has more than one processor. The parallel processing method achieves significant performance gains, which are limited only by the number of processors that are available on your server.

The system creates a separate subsystem version to use parallel processing. In this version, the system uses a processing option that indicates the number of configured processors. The system uses these processors to execute the subsystem version.

When you set up your versions to generate a master schedule, you should consider the following information:

Data selection	Base your data selections on branch/plant, category codes (usually Master Planning Family), and planning code. Any selection from based-on table fields can be processed.
Data sequence	Copy the data sequence from the report example. Do not change this sequence or unpredictable results might occur.

See Also

- *Understanding Forecast Consumption* for additional information on generating a master schedule using planning rule H
- *Understanding Parallel Processing* for additional information on how parallel processing works

Processing Options for DRP/MPS/MRP (R3482)

Horizon Tab

These processing options specify dates and time periods the program uses when creating the plan.

---

1. Generation Start Date

Use this processing option to specify the date the program uses to start the

planning process. This date is also the beginning of the planning horizon.

---

2. Past Due Periods

0 (default)

1

2

The program includes supply and demand from this number of periods prior to the Generation Start Date.

Valid values are:

0 0 periods (default)

1 1 period

2 2 periods

3. Planning Horizon Periods

Number of planning days

Use this processing option to specify the number of days to be included in the plan. For example, when you view the time series, you see daily data for the number of planning days, then weekly data for the number of planning weeks, then monthly data for the number of planning months.

Number of planning weeks

Use this processing option to specify the number of weeks to be included in the plan. For example, when you view the time series, you see daily data for the number of planning days, then weekly data for the number of planning weeks, then monthly data for the number of planning months.

Number of planning months

Use this processing option to specify the number of months to be included in the plan. For example, when you view the time series, you see daily data for the number of planning days, then weekly data for the number of planning weeks, then monthly data for the number of planning months.

Parameters Tab

Use these processing options to define processing criteria. Please note the following about your choice of generation type.

Generation Type 1 = single-level MPS/DRP. This generation type can be used either in a distribution environment for purchased parts with no parent/component relationship, or in a manufacturing environment with parent/component relationships.

- The program produces a time series for each item specified in the data selection with a Planning Code of 1 on the Plant Manufacturing Data tab or the Additional System Information form, whether the item is manufactured or purchased.
- For manufactured items, no demand is exploded down to the components. Use generation type 1 if you want to process only the master scheduled end items first. Thus you can stabilize the schedule before placing demand on the components.
- No pegging records are created.

Generation Type 2 = planning bill. Use this generation type to plan for items that have a planning bill of material. A planning bill has a "pseudo" parent item that is never actually manufactured, but rather used to represent the average composition of a group of products.

This generation type explodes a parent forecast to its components by multiplying the parent's forecast by the Feature Planned Percent (from the bill of material) for each component. The program then creates a new forecast for the components. For example, a pseudo parent item bike might have a forecast of 1,000. The program distributes that forecast into a forecast of 100 mountain bikes, 500 touring bikes, and 400 commuter bikes.

The following must be set up correctly to use this generation type:

- The pseudo parent item must have a Planning Code of 4 on Plant Manufacturing Data
- The components must have a Planning Code of 5
- The Feature Planned Percents must be set up correctly
- You must specify in processing options the forecast type to read from the parent, and to create for the components

Generation Type 3 = multi-level MPS. This generation type is an alternative to generation type 1, and performs a complete top-to-bottom processing of master scheduled items. The program explodes demand for all parent items you specify in the data selection down to the components. You must specify all items to be processed in the data selection, not just the parent items. The program also creates pegging records.

Generation Type 4 = MRP with or without MPS. This generation type has the same functionality as generation type 3. If you have done a complete generation and stabilized your master schedule, you can limit data selection to MRP items (with Planning Codes of 2 or 3),

thereby reducing processing time. This is possible because demand from the master scheduled items is still stored in the MPS/MRP/DRP Lower Level Requirements (Pegging) table.

Generation Type 5 = MRP with frozen MPS. This generation type freezes the master schedule after it has been stabilized. Before running this generation type, you should make all necessary adjustments to master scheduled items and release orders to cover the demand. This generation type freezes the entire planning horizon similar to the way the freeze fence freezes a part of the horizon. Running this generation type has the following results:

- No new orders will be planned.
- No messages for existing orders will be created.
- The Adjusted Ending Available quantity is allowed to go negative.
- Demand is only exploded down to components from existing work orders. There is no -PWO demand from parent items, only -FWO demand.

---

1. Generation Mode

1 = net change

2 = gross regeneration

A gross regeneration includes every item specified in the data selection. A

net change includes only those items in the data selection that have changed

since the last time you ran the program.

Valid values are:

1 net change

2 gross regeneration

2. Generation Type

1 = single level MPS/DRP

2 = planning bill

3 = multi-level MPS

4 = MRP with or without MPS

5 = MRP with frozen MPS

6 = Initialize Order Promising Engine

Please see the help for the Parameters tab for detailed information.

Valid values are:

1 single-level MPS/DRP

2 planning bill

3 multi-level MPS

4 MRP with or without MPS

5 MRP with frozen MPS

3. UDC Type

Use this processing option to specify the UDC table (system 34) that contains the list of quantity types to be calculated and written to the Time Series table (F3413). Default = QT.

4. Version of Supply/Demand Inclusion Rules

Use this processing option to define which version of supply/demand inclusion rules the program reads. These rules define the criteria used to select items for processing.

On-Hand Data Tab

These processing options define how the program calculates on-hand inventory.

---

1. Include Lot Expiration Dates

blank = do not include

1 = include

Use this processing option to specify whether the system considers lot expiration dates when calculating on-hand inventory. For example, if you have

200 on-hand with an expiration date of August 31, 2005, and you need 200 on September 1, 2005, the program does not recognize the expired lot and creates a message to order or manufacture more of the item to satisfy demand.

Valid values are:

blank do not consider lot expiration dates when calculating on-hand inventory

1 consider lot expiration dates when calculating on-hand inventory

2. Safety Stock Decrease

blank = do not decrease

1 = decrease

Use this processing option to specify whether to plan based on a beginning available quantity from which the safety stock quantity has been subtracted.

Valid values are:

blank do not decrease

1 decrease

3. Receipt Routing Quantities

Quantity in Transit

blank = do not include in on-hand inventory

1 = include in on-hand inventory

In a manufacturing environment, sometimes it is necessary to establish where stock is, in order to determine whether or not it is available for immediate use. Enter 1 if you want quantities in transit to be included in the Beginning Available calculation on the time series. Otherwise, the program includes these quantities in the In Receipt (+IR) line of the time series. The

quantities are still considered available by this program. The difference is only in how you view the quantities in the time series.

Valid values are:

blank do not include in on-hand inventory

1 include in on-hand inventory

Quantity in Inspection

blank = do not include in on-hand inventory

1 = include in on-hand inventory

In a manufacturing environment, sometimes it is necessary to establish where stock is, in order to determine whether or not it is available for immediate use. Enter 1 if you want quantities in inspection to be included in the Beginning Available calculation. Otherwise, the program includes these quantities in the In Receipt (+IR) line of the time series. The quantities are still considered available by this program, however. The difference is only in how you view the quantities in the time series.

Valid values are:

blank do not include in on-hand inventory

1 include in on-hand inventory

User Defined Quantity 1

blank = do not include in on-hand inventory

1 = include in on-hand inventory

In a manufacturing environment, sometimes it is necessary to establish where stock is, in order to determine whether or not it is available for immediate use. Enter 1 if you want these user defined quantities (defined on Receipt

Routings Revisions in the Update Operation 1 field) to be included in the Beginning Available calculation. Otherwise, the program includes these quantities in the In Receipt (+IR) line of the time series. The quantities are still considered available by this program, however. The difference is only in how you view the quantities in the time series.

Valid values are:

blank do not include in on-hand inventory

1 include in on-hand inventory

User Defined Quantity 2

blank = do not include in on-hand inventory

1 = include in on-hand inventory

In a manufacturing environment, sometimes it is necessary to establish where stock is, in order to determine whether or not it is available for immediate use. Enter 1 if you want these user defined quantities (defined on Receipt Routings Revisions in the Update Operation 2 field) to be included in the Beginning Available calculation. Otherwise, the program includes these quantities in the In Receipt (+IR) line of the time series. The quantities are still considered available by this program, however. The difference is only in how you view the quantities in the time series.

Valid values are:

blank do not include in on-hand inventory

1 include in on-hand inventory

4. Lot Hold Codes (up to 5)

blank = inlclude no held lots in calculation of on-hand inventory

*** = include all held lots in calculation of on-hand inventory**

Use this processing option to specify the lots to be included in the calculation of on-hand inventory. You can enter a maximum of 5 lot hold codes (41/L).

blank include no held lots in calculation of on-hand inventory

* include all held lots in calculation of on-hand inventory

Forecasting Tab

These processing options serve two purposes:

- To determine what forecast types the program reads as demand
- To initiate special logic for forecast consumption

1. Forecast Types Used (up to 5)

Forecasts are a source of demand. You can create forecasts using 12 different forecast types (34/DF) within the Forecasting system. One is considered the Best Fit (BF) type compared to an item's history of demand. Use this processing option to define which forecast quantities created by which forecast type are included in the planning process. Enter multiple values with no spaces, for example: 0102BF.

2. MPS Forecast Type For Planning Bills

When you run generation type 2 (for planning bills), forecast for the parent is exploded down to create forecasts for the components. Use this processing option to specify the forecast type (34/DF) you want to create for the components. You must also enter this forecast type in the Forecast Types Used processing option.

3. Forecast Consumption Logic

blank = do not use forecast consumption

1 = use forecast consumption

If you use forecast consumption, any sales order due in the same period as the forecast is included as part of the forecast for that period. It is not an additional source of demand.

To use forecast consumption, an item's Planning Fence Rule must be H and the Planning Fence must be 999. These values are set on the Plant Manufacturing Data form.

Valid values are:

blank do not use forecast consumption

1 use forecast consumption

Document Types Tab

These processing options establish default document types.

1. Purchase Orders

When you receive messages related to purchase order creation, this document type will appear as the default. The default value is OP.

2. Work Orders

When you receive messages related to work order creation, this document type will appear as the default. The default value is WO.

3. Rate Schedules

When you receive messages that relate to the rate schedule creation, the document type appears as the default. Enter the UDC 00/DT of the document type for the rate schedule that you want to use.

Leadtimes Tab

Use safety leadtimes to allow extra time for delays in receipt or production. Use damper days to filter out unwanted messages.

---

1. Purchased Item Safety Leadtime

For items with stocking type P, the program adds the value you enter here to the item's level leadtime to calculate the total leadtime.

2. Manufactured Item Safety Leadtime

For items with stocking type M, the program adds the value you enter here to the item's level leadtime to calculate the total leadtime.

3. Expedite Damper Days

Expedite messages are suppressed, starting on the generation start date and continuing for the number of days you enter here.

4. Defer Damper Days

Defer messages are suppressed, starting on the generation start date and continuing for the number of days you enter here.

Performance Tab

These processing options define output, and increase or decrease processing time.

---

1. Clear F3411/F3412/F3413 Tables

2. Initialize MPS/MRP Print Code.

3. Messages And Time Series For Phantom Items

---

blank = do not generate

1 = generate

Use this processing option to specify whether the program generates messages and time series for phantom items.

Valid values are:

blank do not generate

1 generate

4. Ending Work Order Status

blank = all messages exploded

Use this processing option to specify the work order status at which messages are no longer exploded to components. If you leave this field blank, all messages are exploded to components.

5. Extend Rate Based Adjustments

blank = do not extend

1 = extend

Use this processing option to specify whether adjustments for rate based items are exploded to components, thereby creating messages for the components.

Valid values are:

blank do not extend

1 extend

6. Closed Rate Status

Enter the status of closed rates. When planning for a rate based item, the

program does not consider rate orders at this status or higher.

Process Mfg Tab

If you use process manufacturing, enter 1 to generate the plan based on the forecasts of the co-/by-products for the process. The program then creates messages for the process.

1. Process Planning

blank = discrete

1 = process

If you use process manufacturing, enter 1 to generate the plan based on the

forecasts of the co-/by-products for the process. The program then creates

messages for the process.

Valid values are:

blank discrete

1 process

Parallel Tab

These processing options specify the number of processors that the system uses during parallel processing. These options also specify whether the system runs preprocessing during parallel processing.

1. Number of Subsystem Jobs

0 = Default

Use this processing option to specify the of number subsystems in a server.

The default is 0 (zero).

2. Pre Processing

blank = Do not perform pre processing

1= Perform pre processing

Use this processing option to specify whether the system runs preprocessing during parallel processing. During preprocessing, the system checks supply and demand and plans only the items within supply and demand. Preprocessing improves performance when you run MRP and is valid only when the number of items actually planned is less than the total number of items in the data selection. Valid values are:

Blank The system does not run preprocessing.

1 The system runs preprocessing.

Reviewing Items for Net Change

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

If an item has changed, it appears on the Work with Net Change and Summary form with a Y in the Net Change field. The following list identifies the programs that automatically activate the net change flag:

Parts List Revisions	Any addition, change, or deletion activates the flag for that item. If a branch changes for an item, the system updates both old and new locations.
Parts List Substitutes	Any selection activates the flag for both the selected item and the item being substituted.
Work Order Entry	Any addition or deletion activates the flag for the item. If you change a request date for an item or quantity, the system activates the flag for the item. If an item status changes to 99, and the quantity ordered is not equal to the quantity completed, the system activates the flag for that item. If a branch changes for an item, the system updates both old and new locations.
Work Order Inventory Issues	Only overissues activate the flag.
Work Order Inventory Completions	If an item status changes to 99, and the quantity ordered does not equal the quantity completed, the system activates the flag for that item.

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

Additionally, any transaction that causes a change in supply or demand during the next MRP run updates the net change flag in the Item Branch table (F4102). Examples include:

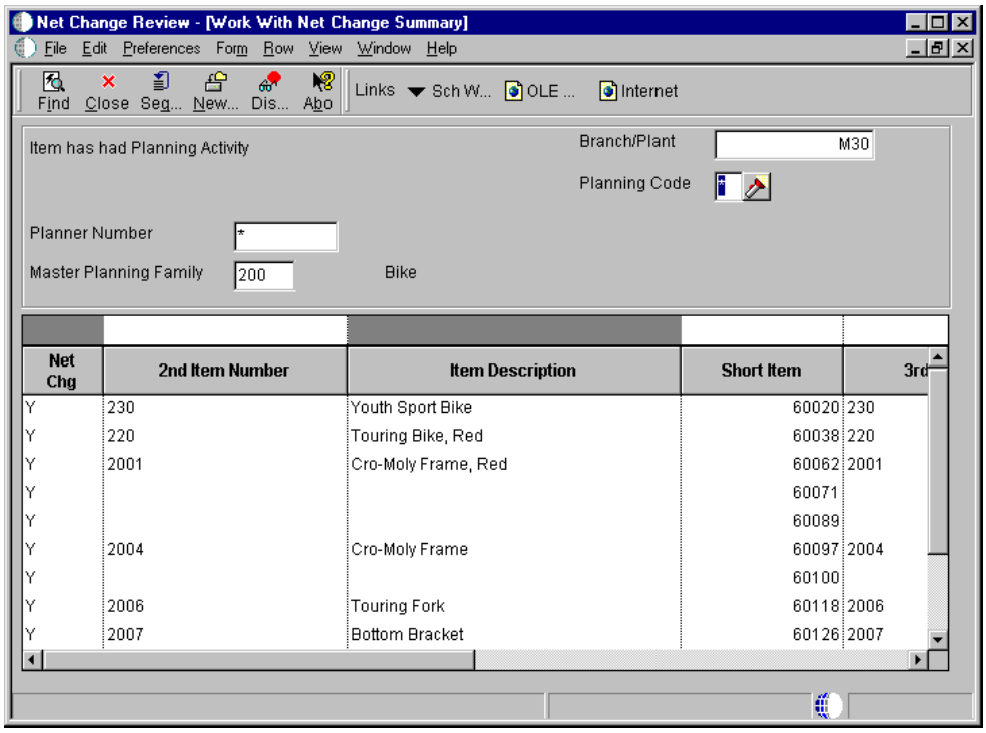
- You have taken action on an order message, and either the quantity, start date, or requested date changes.
- You have taken action on an Expedite or Defer message, and the recommended start date or recommended requested date processes.
- You cancel an order.

Note

You can update the net change flag from the Net Change Review program. Set the security parameters that only appropriate personnel, such as the master scheduling supervisors, have access.

► To review items for net change

From the Single Site Periodic Planning Operations menu (G3422), choose Net Change Review.



On Work With Net Change Summary, complete the following fields and click Find to locate the items that will be included in the next net change generation:

- Branch/Plant
- Master Planning Family

Processing Options for Net Change Review (P3402)

Defaults
Enter Planning Code or a blank for All
1. Planning Code

Generating a Master Schedule for Selected Items

From the Periodic Single Site Planning menu (G3422), choose DRP or MPS Net Change.

DRP and MPS net change use the same batch program as the DRP and MPS regenerations. Use a processing option to specify net change. You can further define the data selection to include only specific items that appear on the Work with Net Change Summary form. When you run DRP Net Change or MPS Net Change, the system:

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

The system selects items from Net Change Review based on the following types of activities:

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

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

► To process messages using consolidation

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

From the DRP Daily Operations menu (G3411), choose DRP Detail Message Review.

1. Right click DRP Detail Message Review, and then choose Prompt for Values.
2. Set the appropriate processing option to consolidate all messages for the same supplier into one purchase order, and then click OK.

   The system displays Work With Detail Messages.

3. On Work With Detail Messages, complete the following fields to locate the messages for the item, and then click Find:

    - Demand Branch
    - Item Number

4. Choose the messages that you want to process and then choose Process Messages from the Row menu.

    The system assigns purchase order numbers and displays them in the Order Number field for each item.

    Note
    If an item does not have a supplier assigned to it, the system displays an error message. Enter a supplier number and click OK.

5. To display the messages that you processed, choose Processed Messages from the View menu.

See Also

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

Reviewing the Time Series

Use the DRP or MPS time series inquiry programs to review the master schedule and decide whether to accept the planning that the system suggests or to override it. The data displayed is derived from the most recent generation or net change run. You should review the action messages for individual item numbers to determine which action, if any, to take. Use processing options in the DRP/MPS generation program to set up daily, weekly, or monthly time periods (buckets).

The following list describes some of the pertinent information on both the DRP or MPS time series:

Quantities for specific time periods

You can review the following:

- Time-phased inventory activity in any unit of measure
- Available to promise quantities in any valid unit of measure
- Time fences and the leadtime at the item level
- Cumulative and manufacturing leadtime occurrences

Adjusted or unadjusted period quantities

Period quantities are either adjusted or unadjusted.

The calculations for adjusted quantities assume that the user will process the messages.

The calculations for unadjusted quantities assume that the user will not process the action messages. The U at the end of a quantity type indicates that period quantities are unadjusted.

Refer to the lists of quantity types following this table for a definition of each period quantity type.

Forecast consumption

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

Various display formats

You can display the time series in different formats such as the following:

- Summarize all demand lines into one demand line
- Summarize all supply lines into one supply line
- Choose rows of information to select or suppress
- Toggle between two different quantity types as set up in the processing options

Access to other programs

You can access other programs while reviewing the time series:

- Supply/Demand Inquiry and Pegging Inquiry to determine where higher level demands are being generated
- MRP/MPS Detail Message Revisions to review message detail and take any appropriate actions
- Additional System Info to verify item setup details
- Detail Forecast Revisions to review item forecasts and sales history
- Rate Schedule Revisions to review item rate schedules
- MPS or DRP generation to run an online regeneration for the displayed item

Topics

- ❑ Review DRP time series
- ❑ Review MPS time series

DRP Quantity Types

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

+BA + Beginning Available

+IR + In Receipt Routing

+PO + Purchase Orders

-LEXP - Lot Expired

-FCST - MPS/Forecast

-SHIP - Shipped Quantity

-SO - Sales Order

-ID -Interplant Demand

=EA =Ending Available

+DRP +Distribution Requirements Plan

ATP Available to Promise

CATP Cumulative Available to Promise

After you run the MPS generation, ATP and ATPU that have a negative value appear blank on the Work with Time Series form, except for the first period. If ATPU is negative inside the planning time fence, then the system displays the resulting CATPU, whether it is positive or negative, in all previous time periods. When CATPU is equal to a running total of ATPU, the calculation assumes that the user has not acted on the messages.

MPS Quantity Types

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

+BAU +Beginning Available (Unadjusted)

+BA +Beginning Available

+IR In Receipt Routing

+POU +Purchase Orders (Unadjusted)

+PO +Purchase Orders (Unadjusted)

+WOU +Work Orders

+WO +Work Orders

+RSU +Rate Schedule (Unadjusted)

+RS +Rate Schedule

-LEXP -Lot Expired

-FCSI -MPS/Forecast (Unadjusted)

-FCST -MPS Forecast

-SHIP -Shipped Quantity

-SOU -Sales Orders (Unadjusted)

When you set up the time series inquiry, you can create a new user defined code table for the quantity types and change the appropriate processing option to display this new table. You can also use processing options to display two different tables, such as adjusted and unadjusted quantities.

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

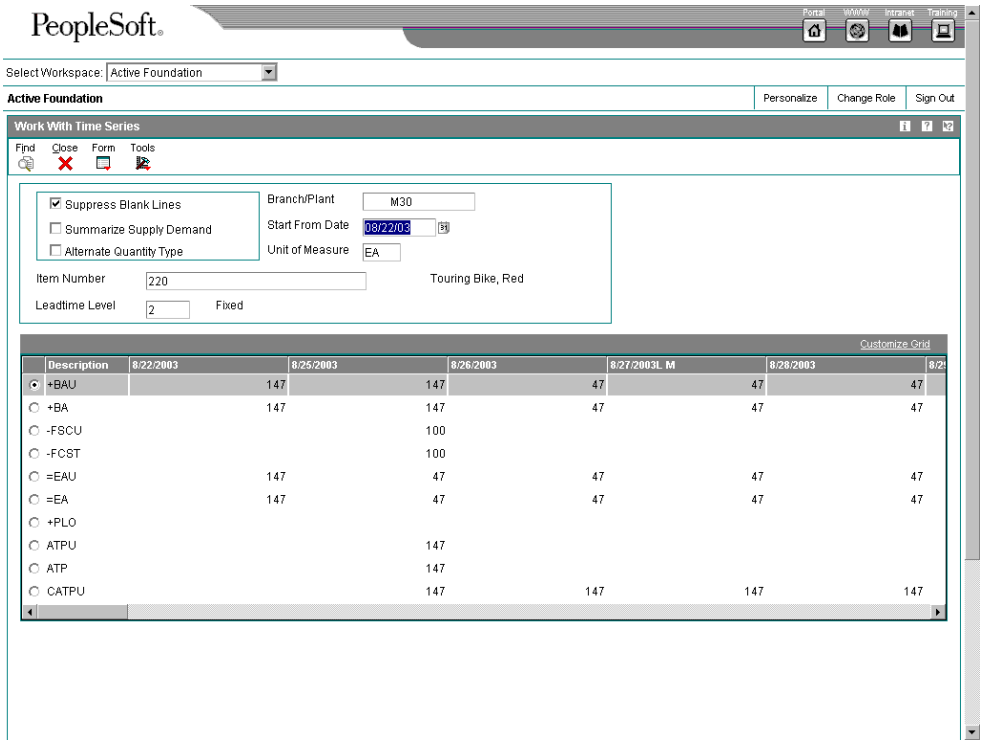
If you do not specify a particular user defined code list, all quantity types display. However, the time series calculation is not affected by the quantity types that are not pertinent to the application.

See Also

- *Working with DRP/MPS Output* for instructions on responding to the messages from the time series inquiry forms

► To review DRP time series

From the Daily DRP Operations menu (G3411), choose DRP Time Series/ATP Inquiry.



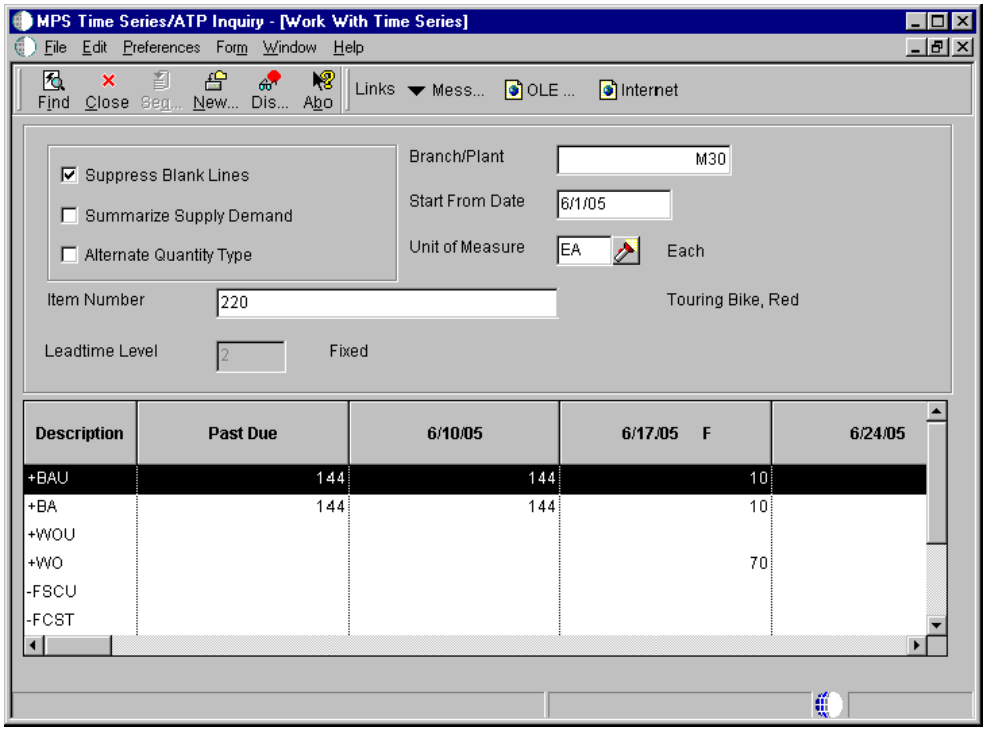
1. On Work With Time Series, complete the following fields and click Find:
    - Branch/Plant
    - Item Number
2. To change the display, choose any of the following options and click Find:

- Suppress Blank Lines
- Summarize Supply Demand
- Alternate Quantity Type

3. To access additional forms, choose from the Form menu.

► To review MPS time series

From the Daily MPS Operations menu (G3412), choose MPS Time Series/ATP Inquiry.



1. On Work With Time Series, complete the following fields and click Find:
   - Branch/Plant
   - Item Number
2. To change the display, choose any of the following options and click Find:
   - Suppress Blank Lines
   - Summarize Supply Demand
   - Alternate Quantity Type
3. To access additional forms, choose from the Form menu.

Processing Options for MPS Time Series (P3413)

Defaults Tab

These processing options allow you to specify the required and alternate UDC types for the time series row descriptions in the Time Series program (P3413).

---

1. UDC Type (Required)

Default = QT.

Use this processing option to specify the UDC code in system 34 for the list of row descriptions that appear on the time series. If you leave this option blank, the system uses the quantity type code (QT).

2. Alternate UDC Type (Optional)

Use this processing option to specify the UDC code in system 34 for the list of alternate row descriptions that appear on forms associated with the Time Series program (P3413). Choose the Alternate Quantity Type option to display the alternate row descriptions. If you do not check an option, the system does not display the alternate row descriptions.

Process Tab

These processing options identify what and how the information will display on the Time Series from. You can choose specific past due and forecast consumption periods. Additionally, you can choose to summarize supply and demand data into a single row.

---

1. Past Due Periods

0 (Default)

1

2

Use this processing option to specify the number of periods that the system displays prior to the MRP generation start date on the time series. Valid values are:

---

0 0 periods (default) prior to the MRP generation start date

1 one period prior to the MRP generation start date

2 two periods prior to the MRP generation start date

This value should correspond with the MRP Generation (R3482/R3483) past due periods. If the MRP Generation program has one past due period, this option should be set to one.

2. Summarize Supply and Demand

Blank = Do Not Summarize (Default).

1 = Summarize.

Use this processing option to summarize supply lines into a single row and demand lines into another single row on forms associated with the Time Series program (P3413). Valid values are:

Blank The system does not summarize supply and demand lines into single rows.

1 The system summarizes supply and demand lines into single rows.

3. Forecast Consumption Periods (FCP)

Blank = Do Not Indicate FCP (Default).

1 = Indicate FCP.

Use this processing option to specify whether the system indicates the forecast consumption periods in the Time Series program (P3413) when MRP uses forecast consumption. Valid values are:

Blank The system does not indicate the forecast consumptions periods.

1 The system indicates the forecasts consumptions periods by placing an asterisk next to the date.

Versions Tab

These processing options allow you to specify versions of reports and programs such as Single Item MRP (R3482) and MRP Detail Message Review (P3411) that you access through row and form exits from the Time Series program (P3413).

---

1. Single Item MRP (R3482)

Use this processing option to specify the version of the Single Item MRP program (R3482) that the system uses when you access it from the form exit on the Work With Time Series form. If you leave this option blank, the system uses the ZJDE0001 version.

2. MRP Detail Message Review (P3411)

Use this processing option to specify the version of the MRP Detail Message Review program (P3411) that the system uses when you access it from the row exit on the Work With Time Series form. If you leave this option blank, the system uses the ZJDE0001 version.

3. Supply and Demand Inquriy (P4021)

Use this processing option to specify the version of the Supply and Demand Inquiry program (P4021) that the system uses when you access it from the form exit on the Work With Time Series form. If you leave this option blank, the system uses the ZJDE0001 version.

4. Forecast Revisions (P3460)

Use this processing option to specify the version of the Forecast Revisions program (P3460) that the system uses when you access it from the form exit on the Work With Time Series form. If you leave this option blank, the system uses the ZJDE0001 version.

---

5. Pegging Inquiry (P3412)

Use this processing option to specify the version of the Pegging Inquiry program (P3412) that the system uses when you access it from the form exit on the Work With Time Series form. If you leave this option blank, the system uses the ZJDE0001 version.

6. Rate Schedule Revisions (P3109)

Use this processing option to specify the version of the Rate Schedule Revisions program (P3109) that the system uses when you access it from the form exit on the Work With Time Series form. If you leave this option blank, the system uses the ZJDE0001 version.

7. Work Day Calender (P00071)

Use this processing option to specify the version of the Work Day Calendar program (P00071) that the system uses when you access it from the form exit on the Work With Time Series form. If you leave this option blank, the system uses the ZJDE0001 version.

8. Item Branch (P41026)

Use this processing option to specify the version of the Item Branch program (P41026) that the system uses when you access it from the form exit on the Work With Time Series form. If you leave this option blank, the system uses the ZJDE0001 version.

Working with DRP/MPS Output

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

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

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

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

Topics

- ❑ Working with messages
- ❑ Adding a freeze code to a purchase order
- ❑ Adding a freeze code to a work order

See Also

- *Action Messages* for more information on what happens when the system processes messages

Working with Messages

You can manually review and process messages using the Detail Message Review program or automatically process the messages using the Detail Message Processing program.

Use the processing options for DRP/MPS/MRP to specify the default values for the order types that appear on Detail Message Review.

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

Caution

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

Topics

- Reviewing detail messages
- Processing work order messages
- Processing purchase order messages
- Processing messages for a planning family
- Processing messages automatically
- Placing messages on hold
- Clearing messages

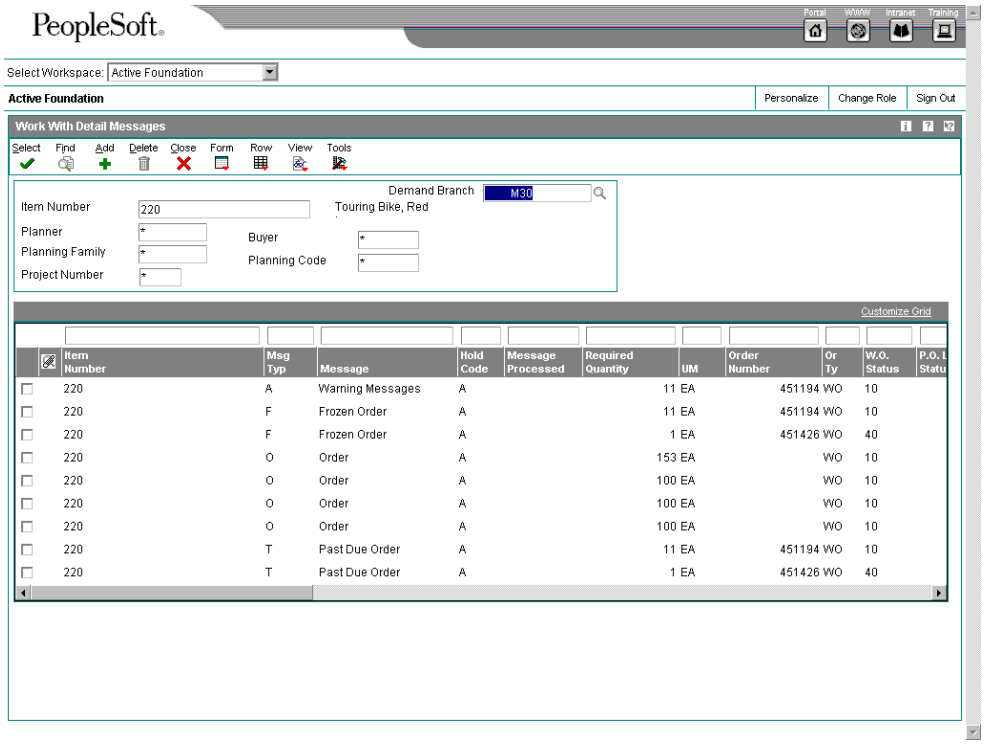
Reviewing Detail Messages

After you generate DRP/MPS, you review the action messages for the individual item numbers. After you review each message, you can perform one of the following:

- Place the message on hold
- Clear the message
- Delete the message
- You can delete any message that you have reviewed but did not process.
- Process the message

► To review detail messages

From DRP Daily Operations (G3411), choose DRP Detail Message Review.



1. On Work With Detail Messages, complete the following fields and click Find to locate the messages for the item:

    - Item Number
    - Demand Branch

2. Review the following fields:

    - Msg Typ
    - Message Processed
    - Order Number
    - Or Ty

Processing Options for DRP/MPS Detail Message Revisions

PO Info Tab

Use these processing options to define purchase order information.

---

1. Line Type

Use this processing option to specify how the system processes lines on a transaction. The line type affects the systems with which the transaction interfaces (General Ledger, Job Cost, Accounts Payable, Accounts Receivable, and Inventory Management). The line type also specifies the conditions for including a line on reports and in calculations. Some examples of valid values, which have been defined on the Line Type Constants Revisions form (P40205), are:

S Stock item

J Job cost, subcontracts, or purchasing to the General Ledger

B G/L account and item number

N Non-stock item

F Freight

T Text information

M Miscellaneous charges and credits

W Work Order

2. Beginning Status

Use this processing option to indicate the beginning status, which is the first step in the order process. You must specify a user defined code (40/AT) that has been set up on the Order Activity Rules form for the order type and the line type that you are using.

3. Consolidate

Blank = Do not Consolidate

'1' = Cosolidate

Use this processing option to indicate whether you want to consolidate all processed messages that apply to one supplier on one purchase order.

Valid values are:

1 Consolidate messages.

Blank Do not consolidate messages.

WO Info Tab

Use these processing options to define work order information.

---

1. Beginning Status

Use this processing option to specify the user defined code (00/SS) that identifies the default status of the work order to use when a work order is created.

2. Cancelled Orders Status

Use this processing option to identify the default user defined status code (00/SS) for a canceled work order.

OT Info Tab

Use this processing option to define transfer order information.

---

1. Consolidate

Blank = Do not Consolidate

'1' = Consolidate

Use this processing option to indicate whether you want to consolidate all processed messages that apply to one branch/plant on one transfer order.

Valid values are:

1 Consolidate messages.

Blank Do not consolidate messages.

Blanket Info Tab

Use this processing option to define blanket order information.

1. Blanket Order Document Type to Release

Blank = Do not release interactively

Use this processing option to indicate whether you want the program to perform an interactive release against a matching blanket order when processing messages to create purchase orders.

- Enter a document type to release against.
- If you leave this field blank, the program does not release against a blanket order.

Versions Tab

Use these processing options to define what version to use when this program accesses another program.

1. Blanket Order Release (P43060)

Use this processing option to specify a version of the Blanket Order Release program. The system calls this version when you access Blanket Order Release from this program.

When you choose a version, review the version's processing options to ensure

that the version meets your requirements.

2. Time Series (P3413)

Use this processing option to specify a version of the Time Series program. The system calls this version when you access Work with Time Series from the Form menu of Work with Detail Messages or Detail Message Revisions.
When you choose a version, review the version's processing options to ensure that the version meets your requirements.

4. Supply/Demand Inquiry (P4021)

Use this processing option to specify a version of the Supply and Demand Inquiry program. The system calls this version when you access Work with Supply and Demand from the Form menu of Work with Detail Messages or Detail Message Revisions.
When you choose a version, review the version's processing options to ensure that the version meets your requirements.

5. Purchase Order Entry (P4310)

Use this processing option to specify a version of the Purchase Orders program. The system calls this version when you access Work with Order Details from the Row menu of Work with Detail Messages or Detail Message Revisions.
When you choose a version, review the version's processing options to ensure that the version meets your requirements.

6. Work Order Entry (P48013)

Use this processing option to specify a version of the Work Order Processing program. The system calls this version when you access Work Order Processing

from this program.

When you choose a version, review the version's processing options to ensure that the version meets your requirements.

7. Rate Schedule Revisions (P3109)

Use this processing option to specify a version of the Enter/Change Rate Schedule program. The system calls this version when you access Work with Rate Schedules from the Form menu of Work with Detail Messages or Detail Message Revisions.

When you choose a version, review the version's processing options to ensure that the version meets your requirements.

8. Transfer Order Entry (P4210)

Use this processing option to specify a version of the Sales Order Entry program. The system calls this version when you access Sales Order Entry from this program.

When you choose a version, review the version's processing options to ensure that the version meets your requirements.

9. Scheduling Workbench (P31225)

Use this processing option to specify a version of the Manufacturing Scheduling Workbench program. The system calls this version when you access Work with Work Order Scheduling from the Form menu of Work with Detail Messages or Detail Message Revisions.

When you choose a version, review the version's processing options to ensure that the version meets your requirements.

10. Bill of Material Inquiry (P30200)

Use this processing option to specify a version of the Bill of Material Inquiry program. The system calls this version when you access Bill of Material Inquiry from the Row menu of Work with Detail Messages or Detail Message Revisions.

When you choose a version, review the version's processing options to ensure that the version meets your requirements.

11. Item Branch (P41026)

Use this processing option to specify a version of the Item Branch program. The system calls this version when you access Plant Manufacturing Data from the Row menu of Work with Detail Messages or Detail Message Revisions.

When you choose a version, review the version's processing options to ensure that the version meets your requirements.

Display Tab

Use this processing option to specify whether to view messages for demand branch/plant or supply branch/plant.

---

1. Viewing Messages For

Blank / 'D' = Demand Branch

'S' = Supply Branch

Use this processing option to specify whether to view messages for demand branch/plant or supply branch/plant.

Valid values are:

1 View messages for supply branch/plant.

Blank View messages for demand branch/plant.

Processing Work Order Messages

After you review the messages, you can process them. When you process work order messages, the system creates work order headers in the Work Order Master table (F4801) and assigns work order numbers. The system does not attach a parts list or routing information at this time.

You can process work order messages using any of the following methods:

- Process a single action message for an item
- Process multiple action messages for an item
- Process messages using a planning family
- Process messages automatically

The system first processes work order messages. Work order messages appear on Detail Message Review with an order type of WO. The master schedule remains firm or does not change from the beginning date through the end date that the system processes these work order messages. These firm orders are not automatically replanned in subsequent MPS generations. However, if the subsequent MPS generation finds a mismatch between the supply quantities or dates and the demand quantities or dates, the program recommends realignment of the existing work orders.

When you use fixed order quantity (FOQ), MPS/DRP does not generate an Increase message for an existing order to cover demand. Instead, the system generates Order messages in multiples of FOQ as needed to cover the demand.

When you create or update an order, you can modify the status of the order to indicate the stage of production. To do so, enter a new status in the Status field. The system displays this field only for messages that are related to order processing.

► To process work order messages

From MPS Daily Operations (G3412), choose MPS Detail Message Review.

1. On Work With Detail Messages, complete the following fields and click Find to locate the message for the item:
    - Demand Branch
    - Item Number
2. Choose the message that you want to process.
3. From the Row menu, choose Process Message.
4. To view the messages that you processed, choose Processed Messages from the View menu.

Processing Purchase Order Messages

Purchase order messages appear on Detail Message Review with an order type of OP. You can process a purchase order message using any of the following methods:

- Process a single action message without blanket order checking or consolidation
- Process one or more action messages with blanket order checking

- Process messages using purchase order consolidation to include more than one item on a purchase order
- Process purchase order messages using a planning family
- Process messages using the Supplier Scheduling system

Note
If an item does not have a supplier assigned to it, the system displays an error message. Enter a supplier number and click OK.

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

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

In addition, the program creates the purchase order in the purchasing unit of measure, even though the action message displays the primary unit of measure. The program makes the appropriate unit of measure conversions. After the next DRP/MPS regeneration, the quantities that are associated with processed messages appear in the time series display on the +PO Quantity Type row.

When you process messages, the system firms that portion of the DRP/MPS replenishment plan. Subsequent DRP/MPS regeneration does not change the timing or quantities that are associated with previously-processed messages. However, if the new regeneration finds a mismatch between the supply and demand quantities or dates, the program issues a message recommending that you realign the existing +POs.

Topics

- Process a single action message
- Process messages using consolidation
- Cancel items on a purchase order

► To process a single action message

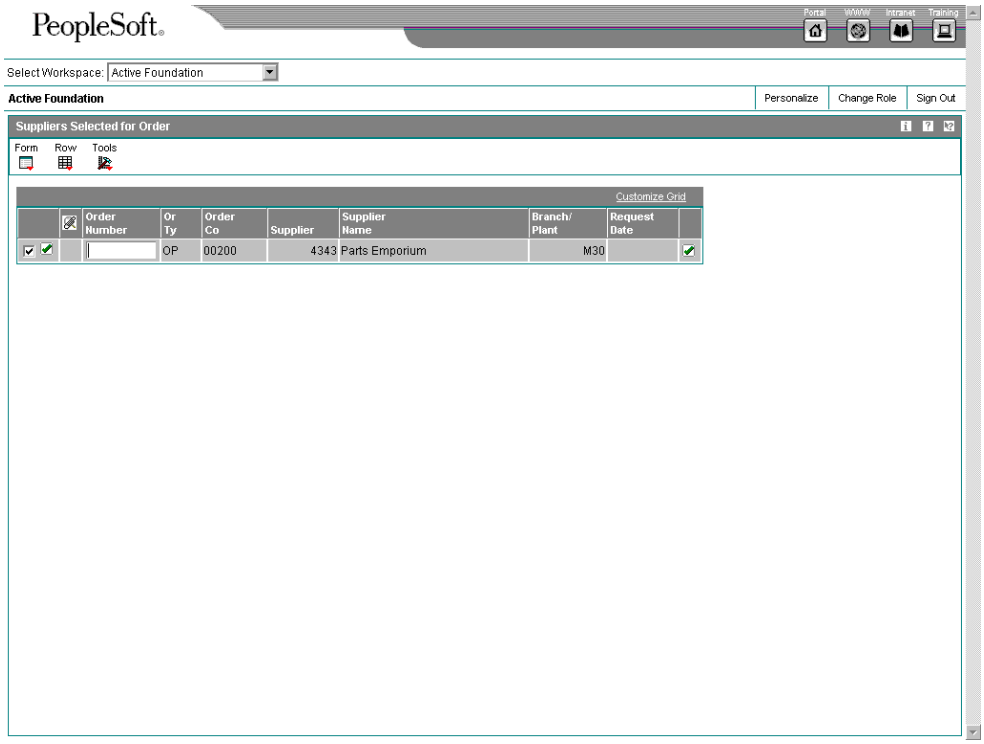
From MPS Daily Operations (G3412), choose MPS Detail Message Review.

1. On Work With Detail Messages, complete the following fields and click Find:
    - Demand Branch
    - Item Number
2. Choose the message that you want to process and then choose Process Message(s) from the Row menu.

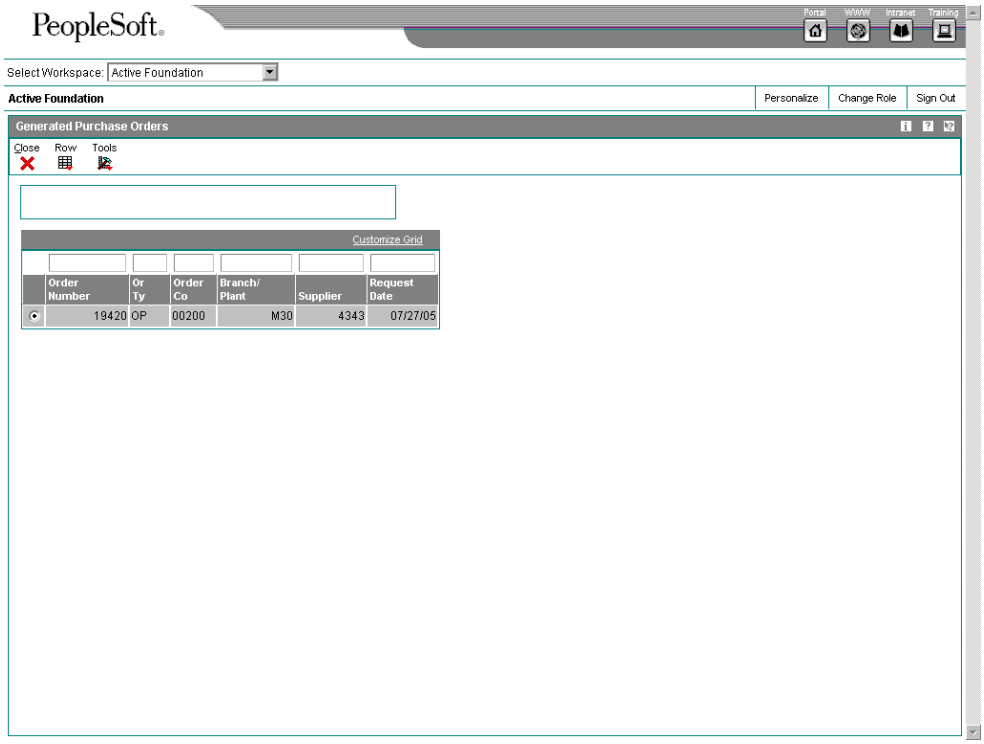
Note

If an item does not have a supplier assigned to it, the system displays an error message. Enter a supplier number and click OK.

3. Click Close.



4. On Suppliers Selected for Order, choose Generate Order(s) from the Form menu.



5. On Generated Purchase Orders, click Close.
6. To display the message that you processed on Work with Detail Messages, choose Processed Messages from the View menu. The system assigns a purchase order number and displays it in the Order Number field.

► To cancel items on a purchase order

From MPS Daily Operations (G3412), choose MPS Detail Message Review.

If items that you do not want to include appear on a purchase order, you can delete them from the purchase order.

1. On Work With Detail Messages, choose the item that you want to delete from the purchase order.
2. Click Delete.

See Also

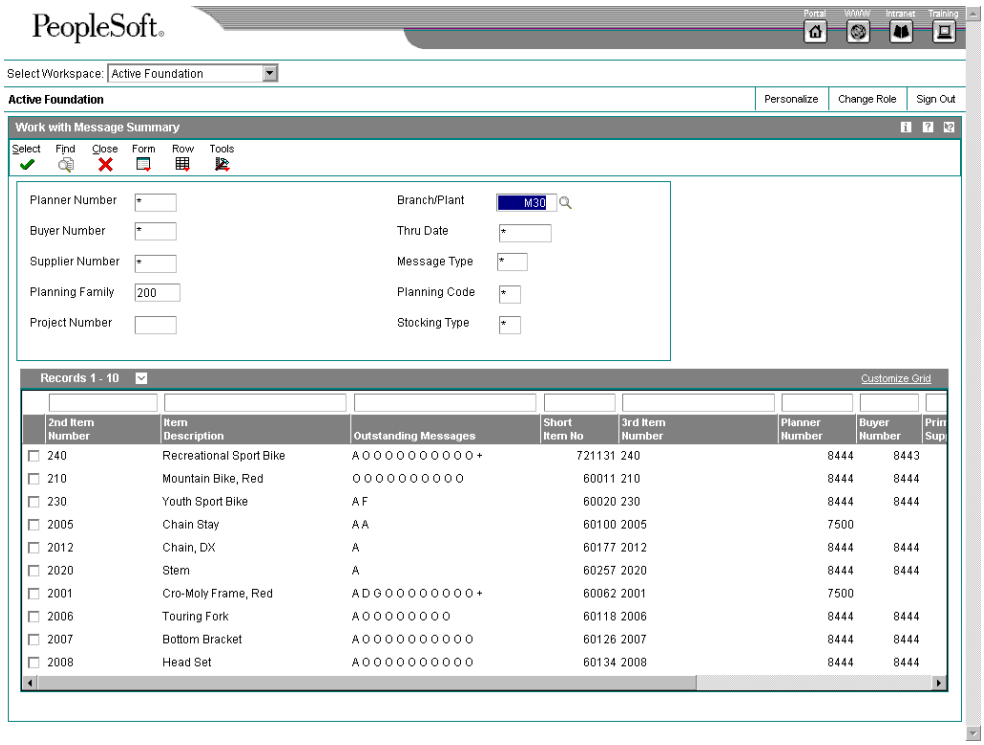
- *Processing Messages for a Planning Family*
- *Processing Orders*
- *Generating Supplier Schedules* for information about processing messages using this system

Processing Messages for a Planning Family

You can process messages for a planning family by using DRP Planning Family Review.

► To process messages for a planning family

From the DRP Daily Operations menu (G3411), choose DRP Planning Family Review.



1. On Work With Message Summary, complete the following fields and click Find to locate a planning family:

   - Branch / Plant
   - Planning Family

2. Choose the items whose messages you want to process, and choose Messages from the Row menu.

   Work with Detail Messages appears with the items you choose. Process the messages for each item the same way that you process messages using consolidation.

Processing Messages Automatically

From the DRP Daily Operations menu (G3411), choose DRP Detail Message Processing.

As an alternative to processing messages interactively, you can run Detail Message Processing. The program processes the following types of messages for work orders, purchase orders, and transfer orders:

B Order and Expedite

C Cancel

D Defer

E Expedite

G Increase Order Quantity To

L Decrease Order Quantity To

O Order

The program does not produce a report. You can review error messages in the Employee Work Center in the Submitted Jobs Queue. You can view any message that the program did not process on Work with Detail Messages.

See Also

- *Working with Messages* in the *OneWorld Foundation Guide*

Placing Messages on Hold

You can place messages on hold so that the system does not change the message during the next generation (for example, to preserve a manual reminder). The system retains held messages until you manually clear or delete them.

► To place a message on hold

From DRP Daily Operations (G3411), choose DRP Detail Message Review.

1. On Work With Detail Messages, select a row and choose Message Revision from the Row menu.
2. Choose Hold/Release from the Row menu.

   The system highlights held messages.

Clearing Messages

You can clear a message from Detail Message Review if you choose not to process it.

► To clear a message

From DRP Daily Operations (G3411), choose DRP Detail Message Review.

1. On Work With Detail Messages, choose a row and then choose Clear Message from the Row menu.
2. To view the message again after it has been cleared, choose All Messages from the View menu.

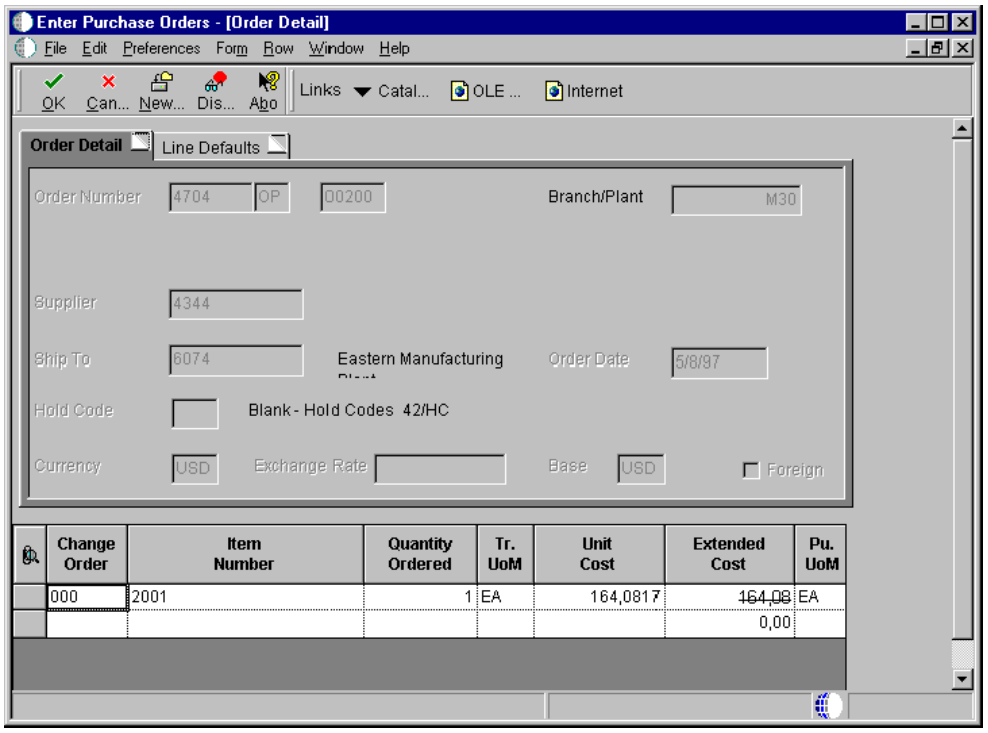
Adding a Freeze Code to a Purchase Order

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

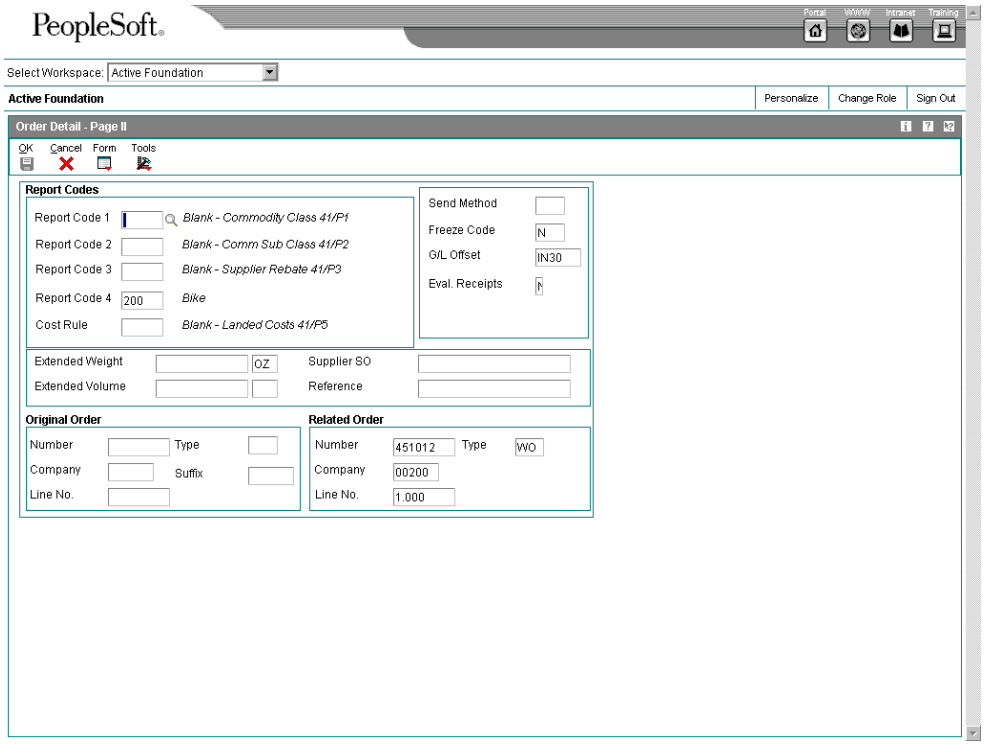
► To add a freeze code to a purchase order

From the Purchase Order Processing menu (G43A11), choose Enter Purchase Orders.

1. On Work With Order Headers, complete the following fields and click Find to locate a purchase order:
    - Order Number
    - Branch/Plant
2. Choose the purchase order and then choose Detail Revision from the Row menu.



3. On Order Detail, choose a row and then choose Additional Info from the Row menu.



4. On Order Detail - Page II, complete the following field and click OK:

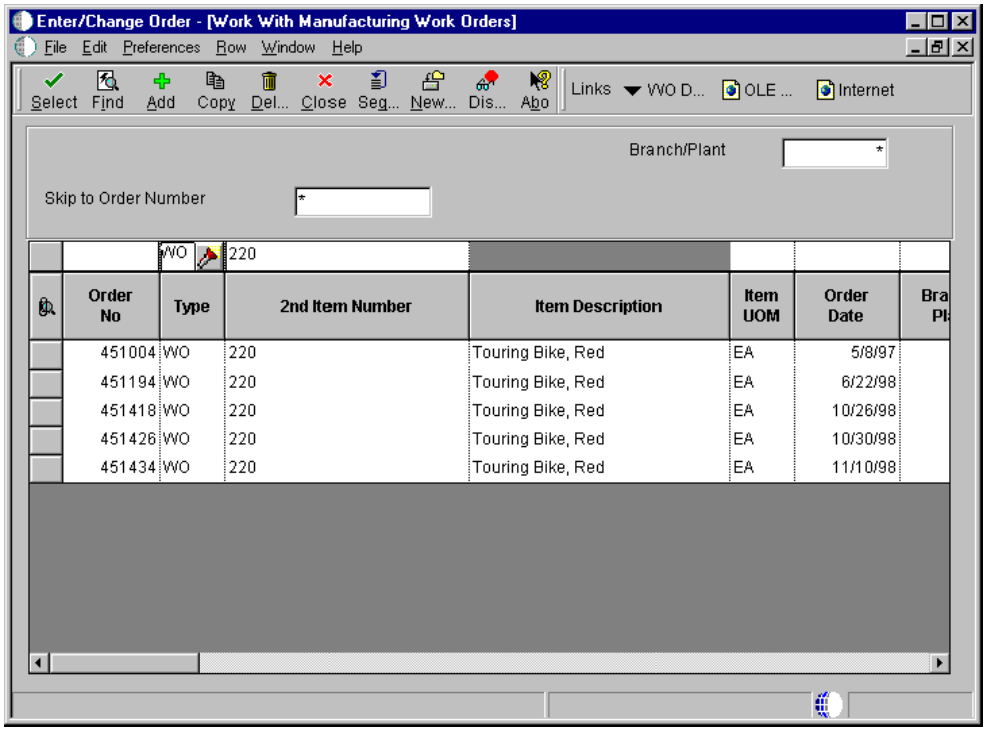
    - Freeze Code

Adding a Freeze Code to a Work Order

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

► To add a freeze code to a work order

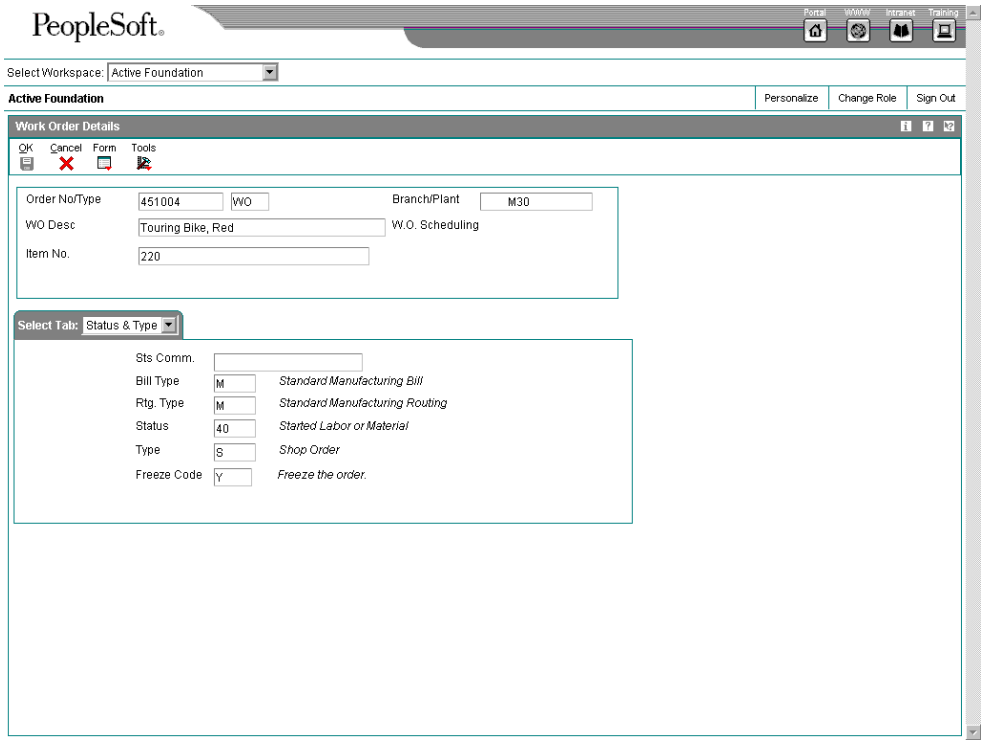
From the Daily Order Preparation - Discrete menu (G3111), choose Enter/Change Order.



1. On Work With Manufacturing Work Orders, complete the following fields and click Find:

    - Type
    - 2nd Item Number
    - Branch/Plant

2. Choose the work order that you want to freeze and click Select.



3. On Work Order Details, click the Status & Type tab and complete the following field:

    - Freeze Code

Understanding Forecast Consumption

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

Forecast consumption periods (FCPs) are user defined and are stored in the Forecast Consumption Periods table (F3405). Within an FCP, the system processes sales orders against the consumed forecast (quantity type of -FCSU) on a first-in, first-out (FIFO) basis. The system creates additional time periods if the forecast end dates of the consumption period do not coincide with the period end dates of the time series.

The additional forecast consumption time periods are incremental to the number of time periods identified in the Distribution Requirements Planning, Master Production Schedule, and Material Requirements Planning generation program. The total for all time periods cannot exceed 52.

The system only applies the forecast consumption calculations if you set the appropriate processing option.

Topics

- Past due time buckets
- Planning horizon time periods
- Forecast consumption calculation

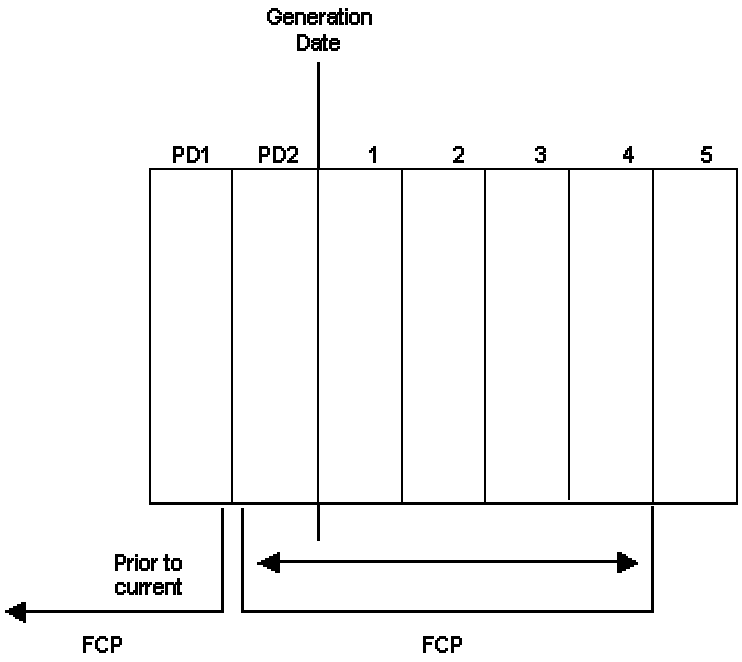
See Also

- *Setting Up Forecast Consumption Periods*
- *Understanding Time Fences and the Time Series*

Past Due Time Buckets

You can set the number of past due time buckets to 1 or 2.

Past Due Time Buckets



- The first past due bucket (PD2) includes all activity that is scheduled to occur before the current generation date but within the current forecast consumption period.
- The second past due bucket (PD1) includes all activity that is scheduled to occur before the beginning of the current forecast consumption period.

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

- Past due forecasts (-FCST prior to the generation date, but after the forecast consumption beginning date) are consumed by:
    - Past due sales orders (that have not shipped) that are within the forecast consumption period.

- Sales orders that were shipped within the forecast consumption period, but prior to the generation date.

- Any remaining -FCST is added to the -FCST in the first bucket that is not past due.

Planning Horizon Time Periods

You can specify both forecast consumption and period end dates of the time series on the Work with Forecast Consumption Revision form. You specify the number of daily, weekly, and FCP periods that are included in the planning horizon in the processing option for the MPS – Gross Regeneration version of the MRP/MPS Requirements Planning program (R3482). The system does not allow more than 52 total time series and forecast consumption period buckets.

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

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

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

Forecast Consumption Calculation

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

With forecast consumption processing, the system uses the following quantity types:

-FSCU Unadjusted forecast quantity (gross) for a specific item from the detail forecast table

-SOU Actual sales orders from the sales order detail table

-SO Portion of total sales orders that consumes the forecast. –SO can exceed the forecast when sales orders are greater than forecast.

-SHIP Shipments that occur within the forecast consumption period

-FCST Unconsumed forecast (net)

+WO, +PLO Work orders and planned orders: replenishment orders that cover the net requirements.

In the following example, work orders for 50 and 135 units are open. The forecast is spread through the forecast consumption period and is consumed on a first in first out basis. –SHIP + -SOU = Total Demand (10+ 40 + 175 = 225). Total Demand consumes FIFO; therefore, the beginning forecast is consumed and posted in the –SO line. The net balance of the forecast is posted in the –FCST line. Notice in the first three periods that the –FCST (net) has been

reduced by a total of 225 pieces. The –SO indicates the amount that is consumed in each period and also totals 225 pieces. Work order messages suggest increasing +WOU from 50 to 85. Messages suggest expediting and decreasing +WOU in 6-30 from 135 to 100 in period June 17th. The forecast consumption period is monthly and indicated with the asterisk in the period. This feature is turned on when the processing options for the times series are set.

Qty Type	Weeks				
	1	**2**	**3**	**4**	**5**
	6-03-05	**6-10-05**	**6-17-05**	**6-24-05**	*** 6-30-05**
+BAU	75	15	-35	-135	-235
+BA	75	15			
+WOU		50			135
+WO		85	100		
-FSCU	60	100	100	100	80
-FCST			35	100	80
-SHIP	10				
-SOU	40				175
-SO	60	100	65		
=EAU	15	-35	-135	-235	-180
=EA	15				

Processing Orders

From the Daily Order Preparation menu (G3111), choose Order Processing.

After you run either the MPS – Gross Regeneration version or the MPS - Net Change version of the MRP/MPS Requirements Planning program (R3482), use Order Processing (R31410) to process multiple work orders. The program:

- Attaches the parts list and routing instructions
- Assigns an initial order status
- Generates the shop packet, including:
  - Parts list
  - Routing instructions
  - Shop packet summary
  - Component shortages

Prerequisite

- Verify that work orders have been entered manually or have been created by the MPS Planning Messages program.

See Also

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

Processing Options for Order Processing (R31410)

Process
1. Generate Parts List and Routing Instructions
1 = Parts list only
2 = Routing instructions only
3 = Both parts list and routing instructions
Blank = Do not generate a parts list or routing instructions
2. Update Parts List and Routing Instructions
1 = Update the existing parts list and routing instructions.
Blank = Do not update the existing parts list or routing.
Defaults
1. Work Order Date
2. Header Status Code

Parts List
1. Substitutions
1 = Substitution processing performed
Blank = Substitution processing not performed.
2. Prior Revision Level
1 = Prior revision level used
Blank = Prior revision level not used
3. Preflush Items
1 = Material issued for all items
Blank = Material issued only for preflushed items
4. Commitment Processing Bypass
1 = Commitment processing not performed
Blank = Commitment processing performed per commitment control
5. Batch Bill of Material Processing
1 = Bypass batch bill processing
Blank = Perform batch bill processing
6. Parts List Text
1 = Copy the component's generic text
Blank = Do not copy the component's generic text
Routing
1. Unit of Measure
2. Document Type
3. Line Type
4. Beginning Status
5. Subledger Field
1 = Work order number entered into the subledger field of the purchasing journal entries
Blank = Work order number not used.
6. Batch Routing Processing
1 = Bypass batch routing processing
Blank = Perform batch routing processing
7. Routing Text
1 = Copy the operation's generic text
Blank = Do not copy the operation's generic text
Sales/Config
1. Line Type
2. Next Status
3. Standard Cost Calculation
1 = Calculate standard cost

2 = Calculate standard cost only if it has not already been calculated
Blank = Do not calculate standard cost
Printing 1
1. Work Orders
1 = Print work orders
Blank = Do not print work orders or any associated information
2. Parts Lists
1 = Print parts list
Blank = Do not perform any parts list print processing
3. Parts List Detail
1 = Print detail information
Blank = Do not print detail information
4. Parts List on Separate Pages
1 = Print each parts list on a new page
Blank = Print parts list on work order header page
5. Consolidated Parts List (FUTURE)
1 = Consolidate the parts list
Blank = Do not consolidate the parts list
6. Parts List Component Text
1 = Print component (generic) text
Blank = Do not print component text
Printing 2
1. Routing Instructions
1 = Print routing instructions
Blank = Do not perform any routing instructions print processing
2. Routing Instructions on Separate Pages
1 = Print routing instructions on a new page
Blank = Do not print routing instruction on new page
3. Routing Instructions Text
1 = Print routing instructions (generic) text
Blank = Do not print routing instructions text
4. Shop Packet Summary
1 = Print shop packet summary
Blank = Do not print summary
5. Sales Order Text Lines
1 = Print sales order text lines
Blank = Do not print sales order text
Warehouse Mgt
1. Pick Requests
1 = Generate request only
2 = Generate request and process using subsystem
Blank = No request processed
2. Location Driver Processing Version (R46171)

3. Staging Location

4. Staging Location Availability
1 = Check staging location for availability
Blank = Does not check for availability
Versions
1. Work Order Print (R31415)

2. Shortage Report (R31418)

3. Bar Coding Report (R31413)

4. Inventory Issues (P31113)

5. Purchase Order Entry (P4310)

6. Manufacturing Specifications (R37470)

Interop

1. Work Order Transaction Type

2. Parts List Transaction Type

3. Routing Instructions Transaction Type

4. Work Order Header Before Image
1 = Include before image
Blank = Do not include before image
5. Parts List Before Image
1 = Include before image
Blank = Do not include before image
6. Routing Instructions Before Image
1 = Include before image
Blank = Do not include before image

Multilevel Master Schedules

Multilevel master schedules support assemble-to-order production and delivery.

You set up and generate multilevel master schedules to:

- Define demand information on a family basis and make changes as needed.
- Define planning bills to acquire the options and features that you expect to sell. When several material purchasing options are available, your planners can make informed decisions within the available time frame. The system uses planning bills to notify planners when special attention is needed.
- Update a product plan with a change in customer demand or design specifications.
- Customize your schedule generation to include only the information that you require.
- Explode planned orders down to component items.

Topics

- Setting up feature planned percentages
- Generating multilevel master schedules

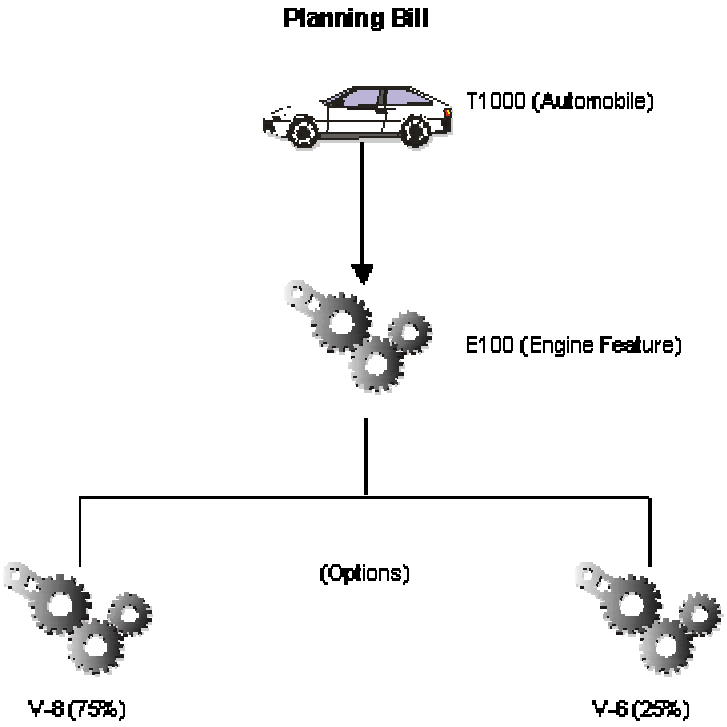
What Are Planning Bills?

Planning bills are groups of items in a bill of material format that reflect how an item is sold. Planning bills help you manage the acquisition of a variety of options and features that might be included in a saleable end item.

Planning bills allow you to configure a "pseudo" end item. For a pseudo item, you do not have to assign a unique part number or maintain a bill of material for every combination of options and features that might be included in the end product.

You define planning bills to acquire the options and features in the proportion that you expect to sell. A final assembly schedule coordinates the material selection and assembly after you order the product options.

The following graphic illustrates a planning bill for an automobile with two engine options:



A part number can be assigned to the engine feature for planning purposes. The two engine options cannot be assembled together, so the engine feature never actually exists in inventory. It is a pseudo item.

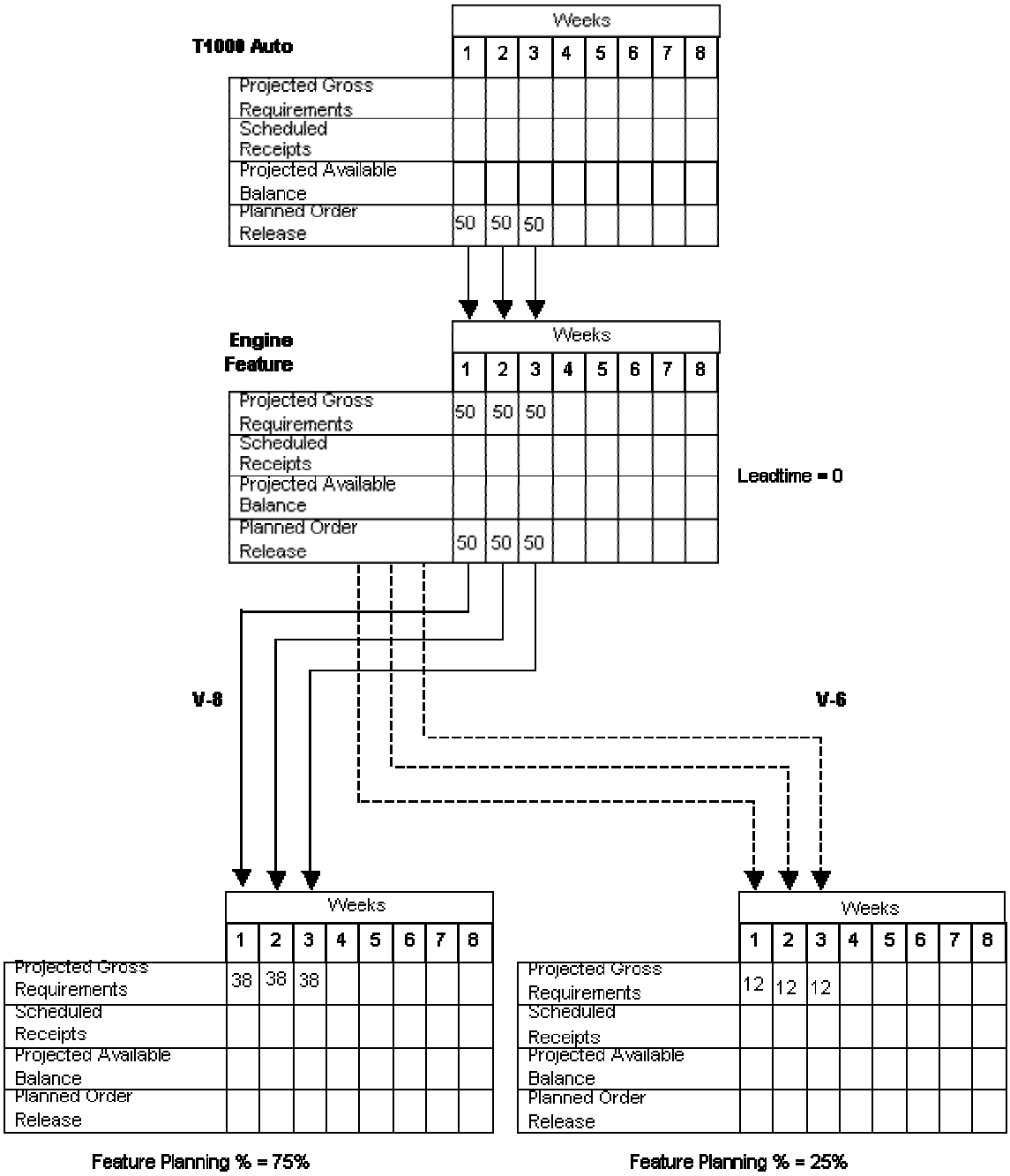
A stocking type of K identifies that the parent (automobile) is planned for in the same way as a kit. The feature item (engine) has a stocking type of 0 (phantom). Phantoms call for a special type of processing for which the leadtime is zero and the order policy is lot-for-lot.

The planner does not know which automobile will ship with which engine next month, but the ratio of engine types consumed is predictable. The planning bill of material above identifies the percentages of each type of engine that you expect to ship.

By exploding this bill against the master schedule for the T1000 family of automobiles, the system can calculate the total requirements for each type of engine.

Example: Exploding Planned Orders

In this example, the system uses phantom processing to pass planned order releases from the parent (T1000 automobile) directly through to the planned order releases of the engine feature. The system uses the feature planning percentages to explode the planned order releases for the engine feature down to the gross requirements for V-8 and V-6 engines.



Material Requirements Planning (MRP) acquires the required engine components, such as pistons, blocks, and so on, to build these engines. When you receive an order for a T1000 automobile with a specific combination of options, the desired engine is committed to the saleable end item after you attach the parts list to the work order for final assembly.

See Also

- *Master Production Scheduling* for an overview of master scheduling concepts and terms

Setting Up Feature Planned Percentages

You can set up a feature planned percentage to define the percentage of demand for a specified feature, based on projected sales.

When you set up a feature planned percentage, you can change the percentages on which the hypothetical parent item is based. This action allows you to account for any planning variations on which you might base planned orders.

▶ To set up a feature planned percentage

From the Daily PDM Discrete menu (G3011), choose Enter/Change Bill.

1. On Work with Bill of Material, complete the following fields and click Find to locate the item for which you want to plan orders:
    - Branch/Plant
    - Item Number
2. Choose a record and click Select.
3. On Enter Bill of Material Information, complete the following field and click OK:
    - Feat Plan %

Generating Multilevel Master Schedules

From the Single Site Periodic Planning Operations menu (G3422), choose MPS Regeneration.

When you run the MPS – Gross Regeneration version of the MRP/MPS Requirements Planning program (R3482), the system compiles a master schedule. Choose the MPS - Net Change version of the MRP/MPS Requirements Planning program when you want to include only those items that have changed since the last generation. You can create a version of the MRP/MPS Requirements Planning program specifically for multilevel master scheduling.

When you generate a multilevel master schedule, the system explodes planned orders to the bill of material component and identifies the percentages of all component items. By exploding the bill of material against the total number of expected sales of a parent item, you can obtain the total requirements for each item at each level in the bill of material.

When you generate a master schedule, the system evaluates selected information, performs calculations, and recommends a time-phased planning schedule for all selected items.

Prerequisite

- Set up multilevel master scheduling.

See Also

- *Generating Single-Level Master Schedules* for more information about generating master schedules and to review the processing options
- *Reviewing the Time Series* for information about how to review time series and action messages

MPS/DRP/MRP Parallel Processing

In the parallel processing method, the system plans more than one item simultaneously by using multiple processors. This method takes place when a system executes a batch program on a server that has more than one processor. The parallel processing method achieves significant performance gains, which are limited only by the number of processors that are available on your server.

The system creates a separate subsystem version to use parallel processing. In this version, the system uses a processing option that indicates the number of configured processors that the system uses to execute the subsystem version.

Note

Technical Support needs to complete standard tasks in system setup before you can execute the parallel processing method.

See Also

- *Understanding Parallel Processing*

Material Requirements Planning

Material Requirements Planning (MRP) uses information from the bill of material and inventory records to calculate the time-phased net material requirements for every component item and subassembly. MRP suggests a replenishment plan to support the production of the quantities that are specified in the Master Production Schedule (MPS).

A single-facility requirements plan critically affects lower-level components or resources, such as skilled labor or revenues. Single-facility implies MRP at the component level.

The MRP process consists of:

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

You can process a material requirements plan in one of two ways:

- Freeze the MPS and generate MRP
- Validate the MPS and then generate a combination of MPS and MRP

When you process a material requirements plan, the system summarizes gross material requirements for each assembly, component, and part number for raw material. The requirements plan supports the MPS for each time period in the planning horizon.

You can generate a material requirements plan for all items or for a net change generation, which includes only the items that have changed since the last generation. After you generate MRP output, you can review and respond to messages.

The system uses the following inputs to MRP:

- Demand
    - A service part's forecast and sales orders
    - The parent's planned and firm work order demand
- Supply
    - Firm work orders
    - Rate schedules
    - Purchase orders
    - Inventory
    - In-receipt routing
- Product data
    - Item Branch File (F4102)
    - Bill of Material Master File (F3002)

The system generates the following outputs from MRP:

- Action and warning messages
- Time series with calculated quantities for:
    - Ending Available (EA)

- Available to Promise (ATP)
- Cumulative Available to Promise (CATP)
- Planned orders

Topics

- ❑ Generating material requirements plans
- ❑ Working with material requirements plans
- ❑ Validating material requirements plans
- ❑ Processing orders for MRP

How Do You Use Bills of Material in MRP?

The bill of material provides product structure information that Material Requirements Planning (MRP) uses to explode the master production schedule to all component items. If a parts list does not exist for a work order, MRP generation uses the standard bill of material to explode demand.

The following features determine which components explode, how to modify the quantity, and how the system calculates schedule dates:

- Effectivity checking
- Feature planning percentage
- Quantity per
- Bill of material scrap factor
- Leadtime offset
- Operation scrap
- Fixed or variable quantity per assembly

What Are the Differences between MRP and MPS?

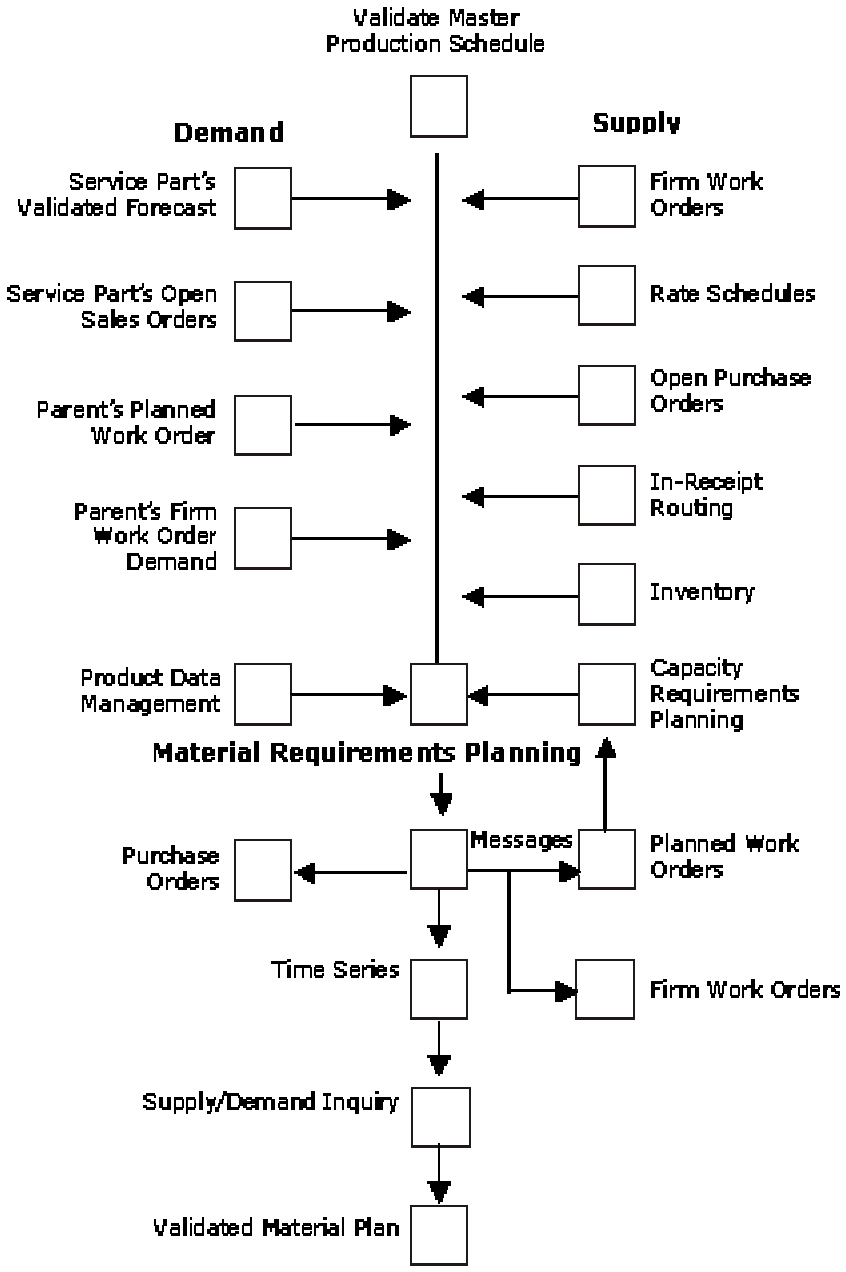
Master Production Scheduling (MPS) generally has independent demand, while Material Requirements Planning (MRP) has dependent demand. Independent demand is demand for an item that is unrelated to the demand for other items, such as demand for finished goods. Dependent demand is demand that is directly related to or derived from the bill of material structure for other items or end products. MRP might also include forecast and sales orders if items are sold as service (spare) parts. The majority of demand, however, is demand from parent orders. The demands on MRP include:

- Firm and planned work orders for a parent item
- Sales orders and forecast for a service part
- Interplant demands

You use the Material Requirements Plan (MRP) to generate material plans for lower level components. Processing options control how the system runs the generation.

The following graphic illustrates these differences:

MRP and MPS Flows



How Do You Run MRP Effectively?

Material Requirements Planning (MRP) runs most effectively when you ensure the accuracy and validity of the following items:

Master schedule Ensure that the master schedule is at least 95 percent accurate. Accuracy is measured by comparing the creation of an end product to the performance of the schedule.

Bill of material Ensure that the bill of material is at least 98 percent accurate and contains the correct components and quantities. Accuracy is measured by comparing how the item is built in the factory to the correct components and quantities that are contained in the bill of material.

Inventory Ensure that your inventory count is at least 95 percent accurate. You can achieve this accuracy through the cycle count process.

Leadtimes Ensure that your leadtimes are valid. The system provides planned leadtimes. In run time, the actual time to complete an order can vary.

Generating Material Requirements Plans

From the Single Site Periodic Planning Operations menu (G3422), choose MRP Regeneration.

Use the MRP- Gross Regeneration version of MRP/MPS Requirements Planning (R3482) to produce a single-facility MRP planning schedule for the items that you select. Alternatively, you can use the MRP - Net Change version of MRP/MPS Requirements Planning to produce a single-facility MRP planning schedule. You can generate a material requirements plan for:

- A single item
- All items
- Only items that are affected by transactions since the last generation

When you generate a material requirements plan, the system evaluates selected information, performs calculations, and recommends a time-phased replenishment plan for all selected items. MRP regeneration uses the same programs as DRP/MPS regeneration.

Review the following topics for further information about generating the MRP:

Bill of material MRP uses the bill of material to explode demand to all component items. If a parts list does not exist for a work order, MRP generation uses the standard bill of material to explode demand.

You should define a bill of material type M (standard manufacturing bill) for work order headers without a parts list and for parent planned orders. The MRP generation uses bill type M to schedule items according to how the product is built.

Low-level code The system uses the low-level code to determine parent and component relationships. The system explodes parent demand to the components. MRP generation explodes lowerlevel demand only for manufactured items. The system does not explode demand to levels below a purchased item, even if that item has a bill of material.

Generation type You must use generation types 4 and 5 to generate a master planning schedule for MRP items. If the status of MPS is frozen, generation type 5 explodes only the component items of the master scheduled item. Select generation type 4 to explode MPS items and component items.

Frozen orders If you identify work orders or purchase orders for an item as frozen, the program does not replan any orders for the item. Instead, you receive a frozen order message for that item.

Data selection To run an MRP regeneration, base your selection on branch/plant, category codes, and planning code. The system can process any selection from based-on table fields.

To run a net change generation, set the net change flag to 1 to select items that have changed since the last generation of the program.

Prerequisites

- Verify that Material Requirements Planning (MRP) has been set up.
- Generate a forecast for independent-demand items. See *Creating Detail Forecasts* in the *Forecast Management Guide*.

See Also

- *Generating Single-Level Master Schedules* in the *Requirements Planning Guide* for the processing options for this program

Working with Material Requirements Plans

Material Requirements Planning (MRP) output consists of information in the time series and action messages, and pegging. Use the time series information to decide whether to accept the planning that is suggested by the system or to override it. You should review the action messages for individual item numbers to determine which action, if any, that you need to take. Use pegging to identify parent demand for components.

Topics

- Reviewing MRP time series
- Reviewing planning families for MRP
- Working with messages for MRP
- Working with scheduling information

Reviewing Time Series

From the DRP Daily Operations menu (G3411), choose DRP Time Series/ATP Inquiry.

From the MPS Daily Operations menu (G3412), choose MPS Time Series/ATP Inquiry.

From the MRP Daily Operations menu (G3413), choose MRP Time Series/ATP Inquiry.

Use the appropriate version of the MPS Time Series program (P3413) to review the item series for the material requirements plan. The time series is a record of time-phased supply and demand netting for selected items. The system retrieves this data from the most recent

generation or net change run. Use processing options to set up daily, weekly, or monthly time periods (buckets).

The Time Series – MRP inquiry is the same program as used to inquire on the DRP/MPS time series. You can vary the settings in the processing options to accommodate the different requirements for MRP.

Use the Message Detail – MRP version of the MRP/MPS Detail Message Revisions program (P3411) to review the quantity types that are generated for the material requirements plan. These quantity types include:

Planned order (+PLO) Represents recommended replenishment orders for an item.

Planned work order (-PWO) Represents demand for components that are required from the parents planned work order (+PLO).

Work order (+WOU) (+WO/WOU) Represents a supply manufacturing order for the component that has a work order header. The _WOU is the work order as it is in the Work Order Master File (F4801). +WO is the work order if you processed all applicable action messages.

Firm work order (-FWO) Represents demand for components that will be consumed from the parents released work order (+WOU).

Prerequisite

- Generate a current material requirements plan that includes the start and end dates for the planning periods that you want to review. See *Generating Material Requirements Plans* in the *Requirements Planning Guide*.

See Also

- *Reviewing the Time Series* in the *Requirements Planning Guide*

Reviewing Planning Families

Use one of the following navigations:

From the DRP Daily Operations menu (G3411), choose DRP Planning Family Review.

From the MPS Daily Operations menu (G3412), choose MPS Planning Family Review.

From the MRP Daily Operations menu (G3413), choose MRP Planning Family Review.

After you generate the material requirements plan, you can review all of the item numbers that have messages. You can display the list of items with messages by using the following filters:

- Planner Code
- Buyer Number
- Planning Family

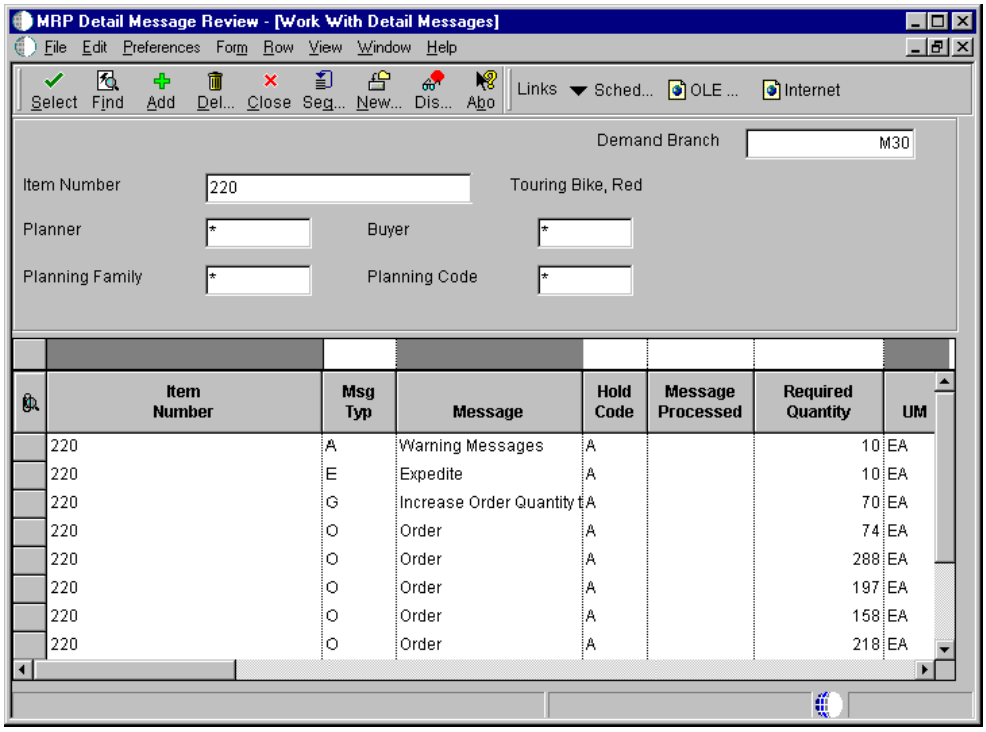
- Project Number
- Branch/Plant
- Thru Date
- Message Type
- Planning Code
- Stocking Type

See Also

- *Processing Messages for a Planning Family* in the *Requirements Planning Guide*

Working with Messages for MRP

From the MRP Daily Operations menu (G3413), choose MRP Detail Message Review.



Access the messages directly using the Detail Message Review program.

Each time you generate a material requirements plan, the system generates action messages to identify situations in which demand requires one of the following:

- Changing the existing supply orders
- Placing new orders

Use MRP Detail Message Review to review exception messages from the latest planning generation. These messages might help you evaluate planned and existing orders. You can review the most critical messages first and review other messages in the order that you process them.

MRP Detail Message Review uses the same program as DRP Detail Message Review. You can vary the settings in the processing options to accommodate the different requirements for MRP.

Topics

- Review MRP detail messages
- Process work order messages for MRP
- Process purchase order messages for MRP
- Review MRP detail messages
- Process work order messages for MRP
- Process purchase order messages for MRP

See Also

- *Working with Messages* for the processing options for this program

Reviewing MRP Detail Messages

Detail messages include all of the messages on Message Summary (P3401). After you generate a material requirements plan, you review the action messages for the individual item numbers. After you review each message, you can perform one of the following:

- Place the message on hold.
- Clear the message.
- Delete the message.
- Process the message.

Based on the messages for the parent item, the direct components also receive warning messages. At the component level are special S messages that are similar to warning messages (A). Although both types of messages originate from the parent, the S messages indicate that the parent demand is firm planned (status 41).

The following tables describes how the system uses document types, quantity types, and work order codes during the Material Requirements Planning (MRP) generation process.

Note

Status codes are user defined.

Work Order Output from DRP/MPS/MRP

Document Type (Time Series)	Other Codes	Description	Component Demand
WP (+PLO)	Status = P (planned)	Planned orders. WP is a system-generated document type without a header in the Work Order Master table (F4801). DRP/MPS/MRP automatically changes schedule dates and quantities each time that you run the program.	-PWO
WO (+WO does	Status = 10	Firm orders. A header is in the Work Order	-FWO/-FWOU. Message

not always equal +WOU in schedule dates or quantities)	(firm)	Master table (F4801). DRP/MPS/MRP creates messages that require planner action to balance supply and demand. For component demand, the system assumes that the planner will take action.	type A warns about parent supply/demand imbalances. -FWO does not always equal -FWOU in schedule dates or quantities.
WO (+WO does not always equal +WOU in schedule dates or quantities)	Status = 40 (firm)	Firm orders that have parts lists and routing instructions attached. DRP/MPS/MRP creates messages that require planner action to balance supply and demand. For component demand, the system assumes that the planner will take action.	-FWO/-FWOU. Message type A warns about parent supply/demand imbalances. -FWO does not always equal -FWOU in schedule dates or quantities.
WO (+WO does not always equal +WOU in schedule dates or quantities)	Status = 41 (firm planned order)	Firm orders with firm plans. These are orders that have been planned by a generation of DRP/MPS/MRP specifying status 41 in the Ending Work Order Status processing option. DRP/MPS/MRP creates messages that require planner action to balance supply and demand. For component demand, the system assumes that the planner will not take action. The messages have FPO planner remarks.	-FWO/-FWOU. Message type S warns about supply/demand imbalances for FPO parent. -FWO always equals -FWOU in schedule dates or quantities.
WO (+WO equals +WOU in schedule dates or quantities)	Inside freeze fence (any status code)	All firm orders inside freeze fence. DRP/MPS/MRP do not display action messages inside the freeze fence. The program creates message type A warnings to indicate a supply and demand imbalance inside the freeze fence. The program generates an action message outside the freeze fence to correct the supply/demand imbalance.	-FWO/-FWOU. The program does not create change messages from the parent demand.
WO (+WO equals +WOU in schedule dates or quantities)	Freeze code on work order header (any status code)	Frozen firm orders. DRP/MPS/MRP does not create action messages for these work orders. The program creates message type A and F warnings. The program creates messages for new orders to satisfy supply/demand imbalances.	-FWO/-FWOU. The program does not create change messages from the parent demand.

See Also

- *Reviewing Detail Messages* in the *Requirements Planning Guide*

Processing Work Order Messages

After you review the messages, you can process them. When you process work order messages, the system creates work order headers in the Work Order Master table (F4801) and assigns work order numbers. The system does not attach a parts list or routing information at this time.

You can process work order messages using any of the following methods:

- Process a single action message for an item

- Process multiple action messages for an item
- Process messages using a planning family
- Process messages automatically

The system first processes work order messages. Work order messages appear on Detail Message Review with an order type of WO. The master schedule remains firm or does not change from the beginning date through the end date that the system processes these work order messages. These firm orders are not automatically replanned in subsequent MPS generations. However, if the subsequent MPS generation finds a mismatch between the supply quantities or dates and the demand quantities or dates, the program recommends realignment of the existing work orders.

When you use fixed order quantity (FOQ), MPS/DRP does not generate an Increase message for an existing order to cover demand. Instead, the system generates Order messages in multiples of FOQ as needed to cover the demand.

When you create or update an order, you can modify the status of the order to indicate the stage of production. To do so, enter a new status in the Status field. The system displays this field only for messages that are related to order processing.

► To process work order messages

From MPS Daily Operations (G3412), choose MPS Detail Message Review.

1. On Work With Detail Messages, complete the following fields and click Find to locate the message for the item:
    - Demand Branch
    - Item Number
2. Choose the message that you want to process.
3. From the Row menu, choose Process Message.
4. To view the messages that you processed, choose Processed Messages from the View menu.

Processing Purchase Order Messages

Purchase order messages appear on Detail Message Review with an order type of OP. You can process a purchase order message using any of the following methods:

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

Note
If an item does not have a supplier assigned to it, the system displays an error message. Enter a supplier number and click OK.

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

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

In addition, the program creates the purchase order in the purchasing unit of measure, even though the action message displays the primary unit of measure. The program makes the appropriate unit of measure conversions. After the next DRP/MPS regeneration, the quantities that are associated with processed messages appear in the time series display on the +PO Quantity Type row.

When you process messages, the system firms that portion of the DRP/MPS replenishment plan. Subsequent DRP/MPS regeneration does not change the timing or quantities that are associated with previously-processed messages. However, if the new regeneration finds a mismatch between the supply and demand quantities or dates, the program issues a message recommending that you realign the existing +POs.

Topics

- Process a single action message
- Process messages using consolidation
- Cancel items on a purchase order

See Also

- *Processing Messages for a Planning Family*
- *Processing Orders*
- *Generating Supplier Schedules* for information about processing messages using this system

Working with Scheduling Information

In daily operations, you might need to identify detail information about items, work centers, or planning families. Use the MRP inquiry programs to determine the status of items or work centers.

Topics

- Review MRP pegging demand
- Review MRP supply and demand
- Review shop floor workbench for MRP
- Review leadtime for MRP

Reviewing MRP Pegging Demand

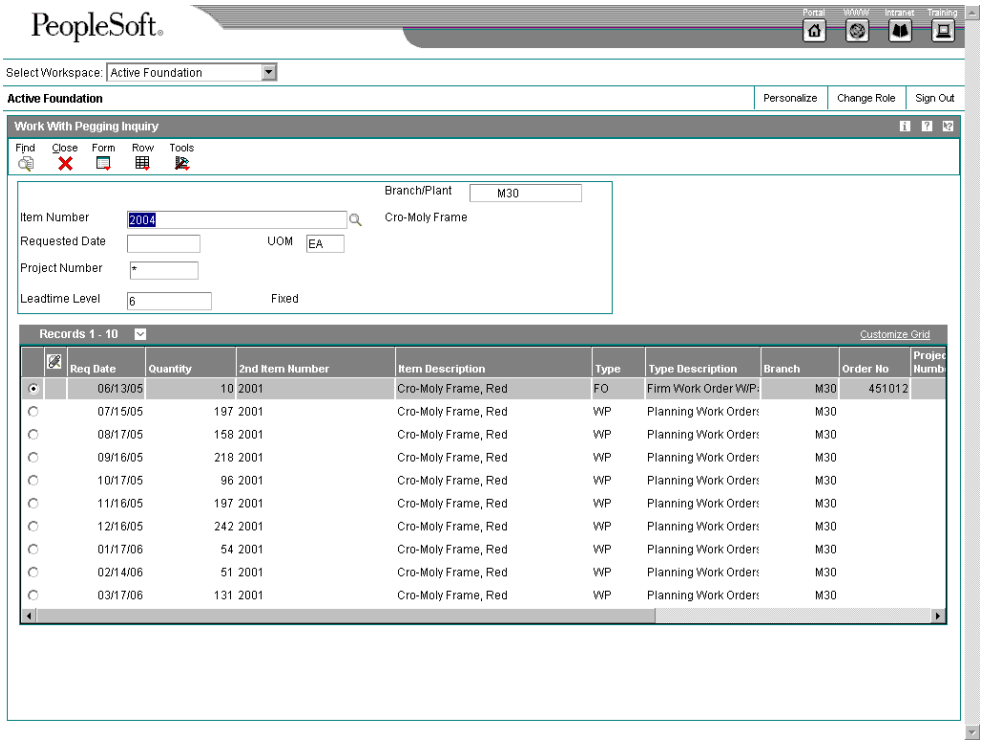
Use Pegging Inquiry to determine, or "peg," the source of demand for dependent requirements. Pegging Inquiry displays only those parents that contain planned or open orders. Pegging Inquiry allows you to:

- Display the work orders for a particular item
- Trace the source of demand for each item
- Display the different levels in a bill of material so that you can peg demand from the beginning level through the parent item

You can trace the path of dependent requirements up through parent items to the final assembled item and even to the sales order or forecast. You can use this information to determine if you need to reschedule or change orders.

► To review MRP pegging demand

From the MRP Daily Operations menu (G3413), choose Pegging Inquiry.



1. On Work With Pegging Inquiry, complete the following fields to locate the item for which you want to review pegging demand:
    - Branch/Plant
    - Item Number
2. To narrow your search to a specific date, complete the following field and click Find:

- Requested Date

Processing Options for Pegging Inquiry (P3412)

Versions
Enter the version for each program. If left blank, version ZJDE0001 will be used.
1. Message File Revisions
2. Time Series
3. Supply and Demand Inquiry
4. Item Branch (P41026B)

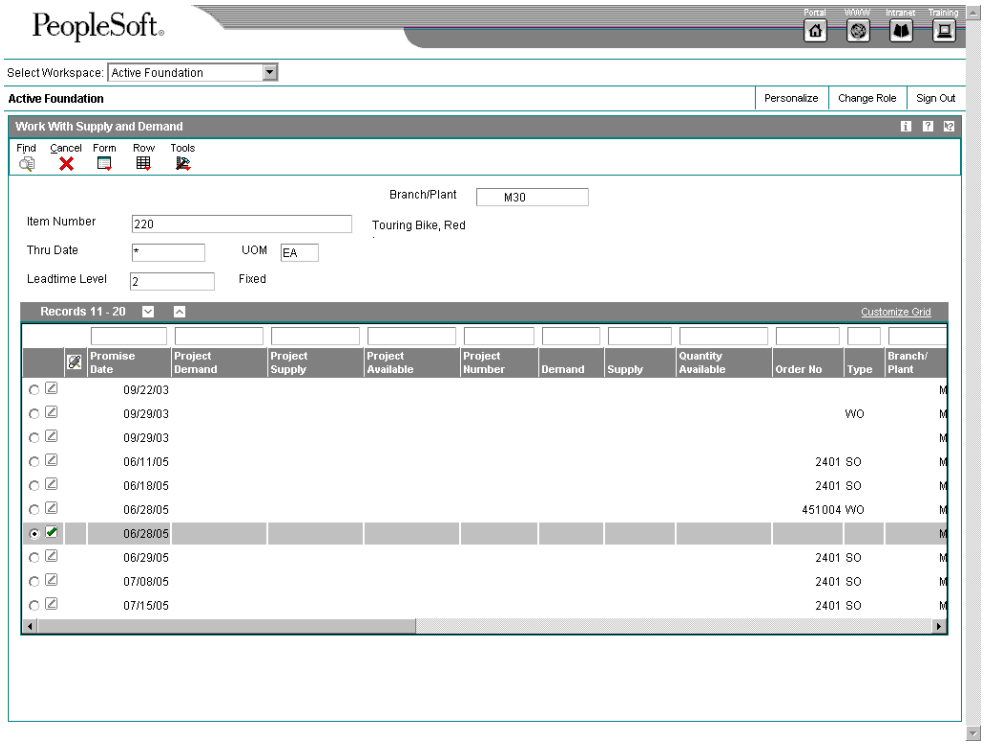
Reviewing MRP Supply and Demand

Use Supply and Demand Inquiry to review the current demand for a selected item. Supply and Demand Inquiry allows you to:

- Display the current inventory position, including all scheduled supply and demand
- Review item quantity supply, demand, and order availability in date order

► To review MRP supply and demand

From the MRP Daily Operations menu (G3413), choose Supply/Demand Inquiry.



1. On Work With Supply and Demand, complete the following fields to locate the item for which you want to review supply and demand:

   - Branch/Plant

- Item Number

2. To narrow your search to a specific order date, complete the following field and click Find:

    - Thru Date

Processing Options for Supply/Demand Inquiry (P4021)

Display 1 Tab

Use these processing options to specify whether the system displays the following values in the Supply/Demand Inquiry program (P4021):

- Availability without safety stock
- Routing instruction quantities
- Routing instruction step quantities summarized

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1. Deduct Safety Stock

Blank = Do not decrease

1 = Decrease

Use this processing option to specify whether the system displays the safety stock line and decreases the safety stock from the available quantity. Valid values are:

Blank The system does not deduct safety stock.

1 The system deducts safety stock.

2. Receipt Routing Quantities

Quantity in Transit

Blank = Do not include

1 = Include

Use this processing option to specify whether the system considers the Quantity in Transit part of the on-hand quantity. In a manufacturing

environment, sometimes it is necessary to establish where stock is, in order to determine whether it is available for immediate use. Valid values are:

Blank The system displays the Quantity in Transit for the appropriate date.

1 The system includes the Quantity in Transit in the on-hand inventory.

Quantity in Inspection

Blank = Do not include

1 = Include

Use this processing option to specify whether the system considers the Quantity in Inspection part of the on-hand quantity. In a manufacturing environment, sometimes it is necessary to establish where stock is, in order to determine whether it is available for immediate use. Valid values are:

Blank The system displays the Quantity in Inspection for the appropriate date.

1 The system includes the Quantity in Inspection in the on-hand inventory.

User Defined Quantity 1

Blank = Do not include

1 = Include

Use this processing option to specify whether the system considers the User Defined Quantity 1 part of the on-hand quantity. This quantity is defined in the Update Operation 1 field on the Receipt Routing Definition form. In a manufacturing environment, sometimes it is necessary to establish where stock

is, in order to determine whether it is available for immediate use. Valid values are:

Blank The system displays the User Defined Quantity 1 for the appropriate date.

1 The system includes the User Defined Quantity 1 in the on-hand inventory.

User Defined Quantity 2

Blank = Do not include

1 = Include

Use this processing option to specify whether the system considers the User Defined Quantity 2 part of the on-hand quantity. This quantity is defined in the Update Operation 2 field on the Receipt Routing Definition form. In a manufacturing environment, sometimes it is necessary to establish where stock is, in order to determine whether it is available for immediate use. Valid values are:

Blank The system displays the User Defined Quantity 2 for the appropriate date.

1 The system includes the User Defined Quantity 2 in the on-hand inventory.

3. Summarize Receipt Routing Steps

Blank = Do not summarize

1 = Summarize

Use this processing option to specify whether the system summarizes all quantities for the In Receipt routing steps into one line. Valid values are:

Blank The system does not summarize.

1 The system summarizes the In Receipt routing steps.

Display 2 Tab

Use these processing options to specify whether the system displays the following:

- Summarized item location records
- Supply/Demand Inquiry program (P4021) in the window format
- Planned orders
- Bulk stocking type records

4. Summarize Item Location Data

Blank = Do not summarize

1 = Summarize

Use this processing option to specify whether the system summarizes all the quantities in the item location records into one line. Valid values are:

Blank The system does not summarize.

1 The system summarizes all the quantities in the item location records.

5. Display Data in Window Mode

Blank = Do not display

1 = Display

Use this processing option to specify whether the system displays the Supply & Demand Inquiry program (P4021) in the window format if called from another program. Valid values are:

Blank The system displays the program in the full form format.

1 The system displays the program in the window format.

6. Include Planned Orders

Blank = Do not include

1 = Include

Use this processing option to specify whether the system displays planned orders from MPS/MRP/DRP generations. Valid values are:

Blank The system does not display planned orders.

1 The system displays planned orders.

7. Exclude Bulk Items

Blank = Do not exclude

1 = Exclude

Use this processing option to specify whether the system displays bulk stocking type records. Valid values are:

Blank The system displays bulk stocking type records.

1 The system does not display bulk stocking type records.

Display 3 Tab

Use these processing options to specify how the system processes the following quantities:

- Work order quantity
- Available quantity

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8. Convert Qty to Standard Potency

Blank = Do not convert

1 = convert

Use this processing option to specify whether the system converts quantities to the standard potency. Valid values are:

Blank The system does not convert the quantities.

1 The system converts the quantities.

9. Reduce Expired Lot Quantities

Blank = Do not reduce

1 = Reduce

Use this processing option to specify whether the system deducts the expired lot quantities from the available quantity. Valid values are:

Blank The system does not reduce the available quantity.

1 The system reduces the available quantity.

This processing option does not work with available to promise lines. If you choose value 1 in this processing option, you must set the Available to Promise Line Flag processing option, under the Process 1 Tab, to either blank or 2.

Process 1 Tab

Use these processing options to specify whether the system displays the available to promise line or the cumulative available to promise line, and the default inclusion version and default rate-based schedule type.

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1. ATP Line Flag

Blank = No ATP Line

1 = Display ATP Line

2 = Display Cum. ATP Line

Use this processing option to specify whether the system displays an available to promise line, a cumulative available to promise line, or neither. Valid values are:

Blank The system does not display either line.

1 The system displays the available to promise line.

2 The system displays the cumulative available to promise line.

If you choose to display the available to promise line (value 1) in this processing option, you cannot use the Display 3 Tab, Reduce Expired Lot Quantities processing option (above).

2. Supply/Demand Inclusion Rule

Use this processing option to specify the supply and demand inclusion rules version for the system to use. These rules define the order type, line type and line status. Inclusion rule version is a user defined code (40/RV) that identifies the version to use for processing. Enter an inclusion rule to use as the default value or choose it from the Select User Define Code form.

3. Rate Based Schedule Type

Use this processing option to specify the rate-based schedule type for the

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system to display. Rate-based schedule type is a user defined code (31/ST) that identifies the schedule type. Enter the type to use as the default value or choose it from the Select User Define Code form. If you leave this field blank, the system does not display any rate-based schedules.

Process 2 Tab

Use these processing options to specify which forecast types to include in the inquiry and the number of days from the system date to include in the forecast records.

4. Forecast Types (Upto Five)

Use this processing option to specify which forecast types, up to five, that the system includes in the inquiry. If you leave this field blank, the system does not include any forecast records. Enter multiple forecasts as follows: To enter 01, 02, and BF, type 0102BF.

5. Days from today to include Forecasts

Use this processing option to specify the number of days (+ or -) from the system date that you want the system to include forecast records. If you leave this field blank, the system uses the system date.

Versions 1 Tab

Use these processing options to specify the versions of the following programs that the system uses with the Supply/Demand Inquiry program (P4021):

- Purchase Order Entry (P4310)
- Purchase Order Inquiry (P4310)
- Sales Order Entry (P4210)
- Sales Order Inquiry (P4210)
- Scheduling Workbench (P31225)
- MRP/MPS/DRP Pegging Inquiry (P3412)

Versions control how the programs display information. Therefore, you might need to set the processing options to specific versions to meet your needs.

1. Purchase Order Entry (P4310)

Use this processing option to specify the version of the Purchase Order Entry program (P4311) that the system uses when call from row and form exits from the Work With Supply and Demand form. If you leave this field blank, the system uses the ZJDE0001 version of the Purchase Order Entry program.
Versions control how the Purchase Order Entry program displays information. Therefore, you might need to set the processing options to specific versions to meet your needs.

2. Purchase Order Inquiry (P4310)

Use this processing option to specify the version of the Purchase Order Inquiry program (P430301) that the system uses when call from row and form exits from the Work With Supply and Demand form. If you leave this field blank, the system uses the ZJDE0001 version of the Purchase Order Inquiry program.
Versions control how the Purchase Order Inquiry program displays information. Therefore, you might need to set the processing options to specific versions to meet your needs.

3. Sales Order Entry (P4210)

Use this processing option to specify the version of the Sales Order Entry program (P4211) that the system uses when call from row and form exits from the Work With Supply and Demand form. If you leave this field blank, the system uses the ZJDE0001 version of the Sales Order Entry program.
Versions control how the Sales Order Entry program displays information. Therefore, you might need to set the processing options to specific versions to meet your needs.

4. Sales Order Inquiry (P4210)

Use this processing option to specify the version of the Sales Order Inquiry program (P42045) that the system uses when call from row and form exits from the Work With Supply and Demand form. If you leave this field blank, the system uses the ZJDE0001 version of the Sales Order Inquiry program. Versions control how the Sales Order Inquiry program displays information. Therefore, you might need to set the processing options to specific versions to meet your needs.

5. Scheduling Work Bench (P31225)

Use this processing option to specify the version of the Scheduling Workbench program (P31225) that the system uses when call from row and form exits from the Work With Supply and Demand form. If you leave this field blank, the system uses the ZJDE0001 version of the Scheduling Workbench program. Versions control how the Scheduling Workbench program displays information. Therefore, you might need to set the processing options to specific versions to meet your needs.

6. MPS/MRP/DRP Pegging Inquiry (P3412)

Use this processing option to specify the version of the MPS/MRP/DRP Pegging Inquiry program (P3412) that the system uses when call from row and form exits from the Work With Supply and Demand form. If you leave this field blank, the system uses the ZJDE0001 version of the Pegging Inquiry program. Versions control how the Pegging Inquiry program displays information. Therefore, you might need to set the processing options to specific versions to meet your needs.

Versions control how the Sales Order Entry program displays information. Therefore, you might need to set the processing options to specific versions to meet your needs.

Versions 2 Tab

Use these processing options to specify the versions of the following programs that the system uses with the Supply/Demand Inquiry program (P4021):

- MRP/MPS/DRP Time Series (P3413)
- MRP/MPS/DRP Message Detail (P3411)
- Bill of Material Inquiry (P30200)
- Item Branch (P41026)
- Manufacturing Work Order Processing (P48013)
- Enter/Change Rate Schedule (P3109)
- Item Availability (P41202)

Versions control how the programs display information. Therefore, you might need to set the processing options to specific versions to meet your needs.

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7. MPS/MRP/DRP Time Series (P3413)

Use this processing option to specify the version of the MPS Time Series program (P3413) that the system uses when call from row and form exits from the Work With Supply and Demand form. If you leave this field blank, the system uses the ZJDE0001 version of the MPS Time Series program.

Versions control how the MPS Time Series program displays information. Therefore, you might need to set the processing options to specific versions to meet your needs.

8. MPS/MRP/DRP Msg Detail (P3411)

Use this processing option to specify the version of the MPS/MRP Detail Message Revisions program (P3411) that the system uses when call from row and form exits from the Work With Supply and Demand form. If you leave this field blank, the system uses the ZJDE0001 version of the MPS/MRP Detail Message Revisions program.

Versions control how the MPS/MRP Detail Message Revisions program displays information. Therefore, you might need to set the processing options to

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specific versions to meet your needs.

9. Bill of Material Inquiry (P30200)

Use this processing option to specify the version of the Bill of Material Inquiry program (P30200) program that the system uses when called from row and form exits from the Work With Supply and Demand form. If you leave this field blank, the system uses the ZJDE0001 version of the Bill of Material Inquiry program.

Versions control how the Bill of Material Inquiry program displays information. Therefore, you might need to set the processing options to specific versions to meet your needs.

10. Item Branch (P41026B)

Use this processing option to specify the version of the Item Branch program (P41026) that the system uses when you access the program from row and form exits on the Work With Supply and Demand form. If you leave this option blank, the system uses the ZJDE0001 version of the Item Branch program. Versions control how the Item Branch program displays information.

11. Mfg WO Processing (P48013)

Use this processing option to specify the version of the Manufacturing Work Order Processing program (P48013) program that the system uses when called from row and form exits from the Work With Supply and Demand form. If you leave this field blank, the system uses the ZJDE0001 version of the Manufacturing Work Order Processing program.

Versions control how the Manufacturing Work Order Processing program displays information. Therefore, you might need to set the processing options to specific versions to meet your needs.

12. Enter/Change Rate Schedule (P3109)

Use this processing option to specify the version of the Enter/Change Rate Schedule program (P3109) program that the system uses when called from row and form exits from the Work With Supply and Demand form. If you leave this field blank, the system uses the ZJDE0001 version of the Enter/Change Rate Schedule program.

Versions control how the Enter/Change Rate Schedule program displays information. Therefore, you might need to set the processing options to specific versions to meet your needs.

13. Item Availability (P41202)

Use this processing option to specify the version of the Item Availability program (P41202) that the system uses when called from row and form exits from the Work With Supply and Demand form. If you leave this field blank, the system uses the ZJDE0001 version of the Item Availability program.

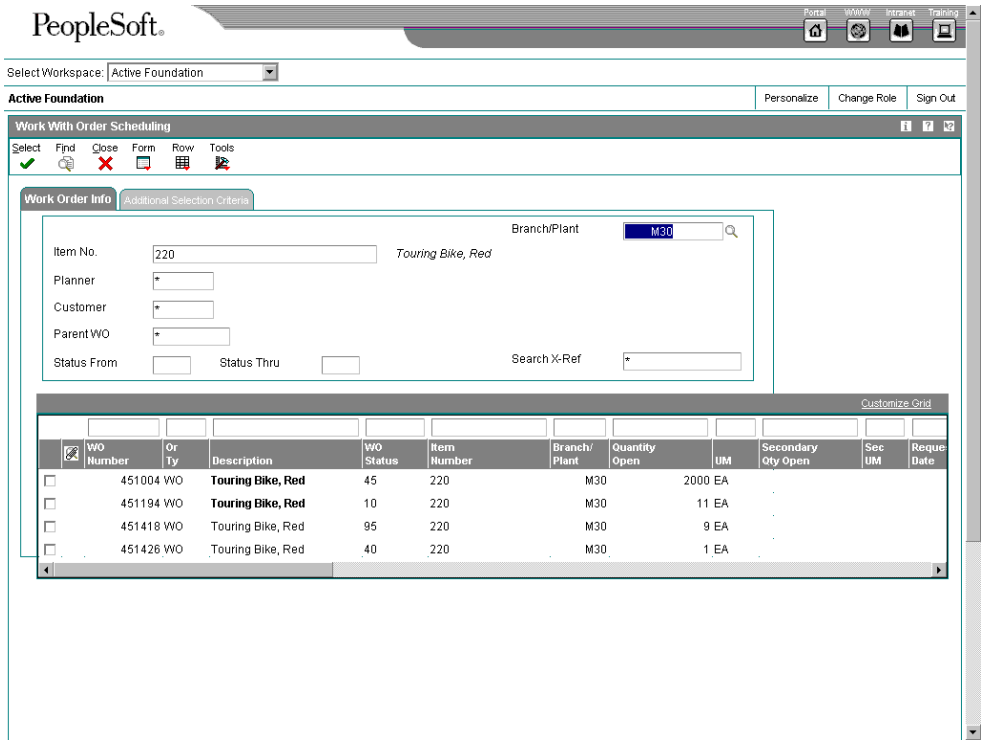
Versions control how the Item Availability program displays information. Therefore, you might need to set the processing options to specific versions to meet your needs.

Reviewing Shop Floor Workbench for MRP

After a work order is on the shop floor, you must review the order and check capacity at the planned production line. You might need to change a schedule to keep the Material Requirements Planning schedule valid.

► To review shop floor workbench for MRP

From the MRP Daily Operations menu (G3413), choose Shop Floor Workbench.



1. On Work With Order Scheduling, complete the following field to locate the branch/plant for which you want to display the shop floor workbench:

    - Branch/Plant

2. To narrow your search to a specific work order, complete the following fields and click Find:

    - Item No.
    - Planner
    - Customer
    - Parent WO
    - From Status
    - Search X-Ref

3. Review the following field:

    - Quantity Open

Processing Options for Manufacturing Scheduling Workbench (P31225)

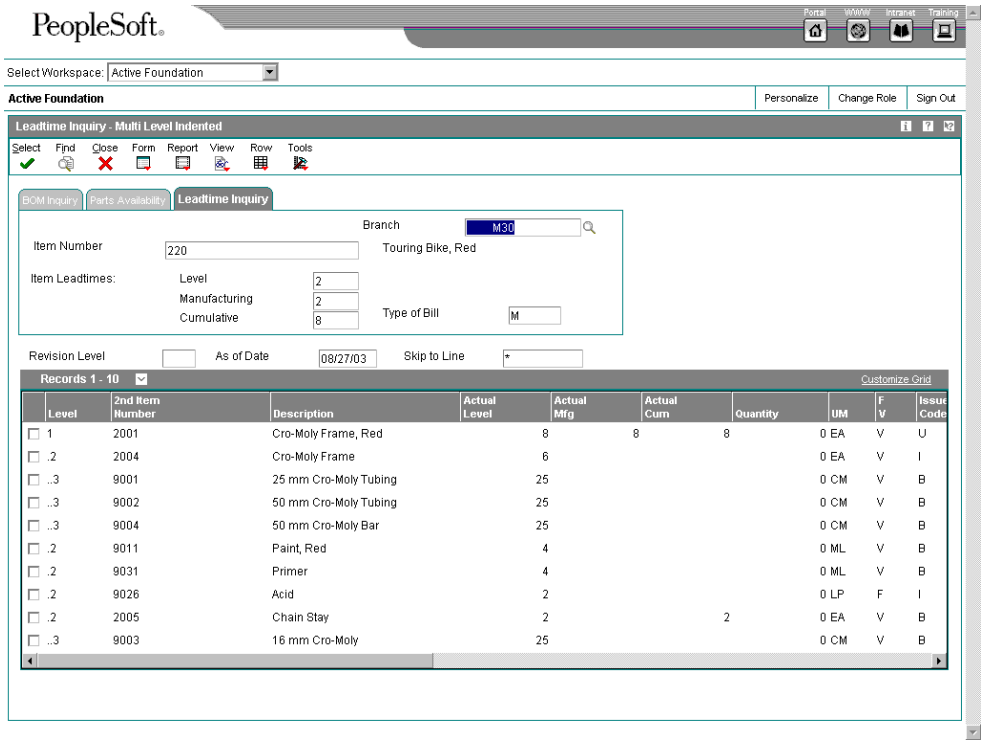
Status/Item
1. Select Status Range or Item
From WO Status
Thru WO Status
Item Number
Item Cross Reference
Addresses
1. Select Planner and/or Customer
Address Number-Planner
Address Number-Customer
Categories
1. Select WO Categories
WO Type
WO Priority
Phase (Category 1)
Category 2
Category 3
Document
1. Select WO Document Type
WO Document Type
Versions
1. Note: Versions will default to ZJDE0001
Sales Order Inquiry Version
Purchase Order Inquiry Version
Work Order Completions Version
Super Backflush Version
Inventory Issues Version
Work Order Entry Version
Sales Order Entry Version
Purchase Order Entry Version
Work Order Parts List Version
Work Order Routing Version

Reviewing Leadtime for MRP

Use Leadtime Inquiry to review leadtimes for a component or ingredient.

► To review leadtime for MRP

From the MRP Daily Operations menu (G3413), choose Leadtime Inquiry.



1. On Leadtime Inquiry - Multi Level Indented, complete the following fields and click Find to locate the item for which you want to display leadtimes:
    - Branch
    - Parent Item
2. Review the information in the following fields:
    - Level
    - Manufacturing
    - Cumulative

Processing Options for Bill of Material Inquiry (P30200)

Defaults Tab

These processing options specify the default options that the system applies during the processing and inquiry modes, bill of material type, and display sequence.

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1. Processing Mode

Use this processing option to specify how the system displays the information

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on which you inquiry. Choose from the following processing modes: simple inquiry, parts availability, or leadtime inquiry.

The simple inquiry mode displays the components of a bill of material.

The parts availability mode displays the components of a bill of material and the available quantities for those components. If you use this mode, specify whether you want the system to subtract safety stock from the quantity on hand and whether to display negative quantities using the Safety Stock and Negative Items processing options under the Select tab.

The leadtime inquiry mode displays actual and calculated leadtimes for an item. Actual leadtimes are derived from the leadtimes as updated in the Item Branch table by the Leadtime Rollup program. Calculated leadtimes are the number of days that you must start to manufacture a part prior to the date that the parent needs it. You can use this mode of processing to define leadtimes for an item at each routing instruction step or to compare the actual and calculated leadtimes. If you use this mode, specify whether you want the system to display the actual or calculated leadtimes in the Leadtime Values processing option under the Select tab.

Valid values are:

1 The system displays the simple inquiry mode.

2 The system displays the parts availability mode.

3 The system displays the leadtime inquiry mode.

If you leave this processing option blank, the system displays the simple inquiry mode.

2. Inquiry Mode

Use this processing option to specify the level of detail that you want the system to display. The single level mode displays the parent item and its components. The multilevel mode displays the parent item, its components, and the subassemblies of the components. The multilevel indented mode displays the parent item, its components, and the subassemblies of the components. In

addition, it indents the subassemblies. Valid values are:

1 The system displays the single level mode.

2 The system displays the multilevel mode.

3 The system displays the multilevel indented mode.

If you leave this processing option blank, the system displays the multilevel indented mode.

3. Bill of Material Type

Use this processing option to specify the type of bill of material that the system uses as the default value in the Type of Bill field on the Work With Bill of Material form. Bill of material type is a user defined code (40/TB) that designates the type of bill of material. Enter the bill of material type to use or choose it from the Select User Define Code form. If you leave this processing option blank, the system uses M for manufacturing bill of material.

4. Display Sequence

Use this processing option to specify how you want the system to sort information on the Work With Bill of Material form. You can choose to sequence the data by component line number or by operation sequence number. The component line number indicates the sequence of the components on a bill of material. The operation sequence number indicates the sequence of the fabrication or assembly steps in the manufacture of an item. Valid values are:

1 The system sorts by component line number.

2 The system sorts by operation sequence number.

If you leave this processing option blank, the system sorts the data by component line number.

Versions Tab

These processing options specify which versions the system runs for the following programs: Bill of Material Print, ECO Workbench, ECO Header, Bill of Material Revisions, Item Master, Process Inquiry, Work With Routing Master, Item Availability, Item Cross Reference, and Item Search.

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1. Bill Of Material Print (R30460)

Use this processing option to specify the version of the Bill of Material Print report that the system uses. If you leave this processing option blank, the system uses the ZJDE0001 version.

Versions control how the Bill of Material Print report displays information. Therefore, you might need to set the processing option to a specific version to meet your needs.

2. ECO Workbench (P30225)

Use this processing option to specify the version that the system uses when you choose the Row exit to the ECO Workbench program from the Work With Bill of Material form. If you leave this processing option blank, the system uses the ZJDE0001 version.

Versions control how the ECO Workbench program displays information. Therefore, you might need to set the processing option to a specific version to meet your needs.

3. ECO Header (P48020)

Use this processing option to specify the version of the ECO Header program that the system uses when you choose the Form exit to the Bill of Material Revisions program from the Work With Bill of Material. If you leave this processing option blank, the system uses the ZJDE0001 version.

Versions control how the ECO Header program displays information. Therefore, you might need to set the processing option to a specific version to meet your needs.

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4. Bill of Material Revisions (P3002)

Use this processing option to specify the version that the system uses when you choose the Form exit to the Bill of Material Revisions program from the Work With Bill of Material form. If you leave this processing option blank, the system uses the ZJDE0001 version.
Versions control how the Bill of Material Revisions program displays information. Therefore, you might need to set the processing option to a specific version to meet your needs.

5. Item Master (P4101B)

Use this processing option to specify the version that the system uses when you choose the Form exit to the Item Master program from the Work With Bill of material form. If you leave this processing option blank, the system uses the ZJDE0001 version.
Versions control how the Item Master program displays information. Therefore, you might need to set the processing option to a specific version to meet your needs.

6. Process Inquiry (P30240)

Use this processing option to specify the version that the system uses when you choose the Form exit to the Process Inquiry program from the Work With Bill of Material form. If you leave this processing option blank, the system uses the ZJDE0001 version.
Versions control how the Process Inquiry program displays information. Therefore, you might need to set the processing option to a specific version to meet your needs.

7. Work With Routing Master (P3003)

Use this processing option to specify the version of the Work With Routing Master program that the system uses. If you leave this processing option blank, the system uses the ZJDE0001 version.
Versions control how the Work With Routing Master program displays information. Therefore, you might need to set the processing option to a specific version to meet your needs.

8. Item Availability (P41202)

Use this processing option to specify the version of the Item Availability program that the system uses. If you leave this processing option blank, the system uses the ZJDE0001 version.
Versions control how the Item Availability program displays information. Therefore, you might need to set the processing option to a specific version to meet your needs.

9. Item Cross Reference (P4104)

Use this processing option to specify the version of the Item Cross Reference program that the system uses. If you leave this processing option blank, the system uses the ZJDE0001 version.
Versions control how the Item Cross Reference program displays information. Therefore, you might need to set the processing option to a specific version to meet your needs.

10. Item Search (P41200)

Use this processing option to specify the version of the Item Search program that the system uses. If you leave this processing option blank, the system uses the ZJDE0001 version.
Versions control how the Item Search program displays information. Therefore,

you might need to set the processing option to a specific version to meet your needs.

Select Tab

These processing options display the availability of parts for the safety stock, negative quantities, and leadtime values.

1. Safety Stock

Use this processing option to specify whether the system subtracts the safety stock from the quantity on hand. Use this processing option in conjunction with the Parts Availability mode in the Processing Mode processing option under the Defaults tab. Valid values are:

Blank The system does not subtract safety stock from the quantity on hand.

1 The system subtracts safety stock from the quantity on hand.

2. Negative Quantities

Use this processing option to specify whether the system displays negative amounts for the component quantities. Use this processing option in conjunction with the Parts Availability mode in the Processing Mode processing option under the Defaults tab. Valid values are:

Blank The system displays all amounts.

1 The system displays only negative amounts.

3. Leadtime Values

Use this processing option to specify whether the system displays the actual or calculated leadtime values. Use this processing option in conjunction with the Leadtime Inquiry mode in the Processing Mode processing option under the

Defaults tab. Valid values are:

Blank The system displays the actual leadtime values from the Item Branch table (F4102).

1 The system displays the calculated leadtime values.

Process Tab

These processing options specify whether the system includes or excludes phantom items, process items, text lines, and subassemblies during inquiry. Also, use these processing options to specify whether the system consolidates component items; whether the system includes or excludes shrink, scrap, and yield from the calculation of extended quantity; and whether the system goes to the next level of purchased items.

1. Phantom Items

Use this processing option to specify whether the system explodes the phantoms to the next level and omits the display of the phantom. A phantom is normally defined for engineering or manufacturing purposes. Phantoms allow common parts, that may or may not be assembled, to be grouped in a bill of material structure. When viewing the bill of material, you may want to display only the subassemblies and raw material. Valid values are:

Blank The system omits the phantom items from the inquiry and displays only the subassemblies and raw material.

1 The system includes phantom items in the inquiry.

2. Process Items

Use this processing option to specify whether the system displays the process items. Process items include the process, co-products, by-products, and ingredients. A discrete bill may contain a component that is produced from a process. You use this processing option when you combine discrete and process manufacturing to display a complete structure of the requirements. Valid values are:

Blank The system excludes process items from the inquiry.

1 The system includes process items in the inquiry.

3. Text Lines

Use this processing option to specify whether the system displays the text lines. Valid values are:

Blank The system excludes text lines from the inquiry.

1 The system includes text lines in the inquiry.

4. Consolidate Component Items

Use this processing option to specify whether the system consolidates duplicate components. The same component may be listed in the bill of material several times, either on different subassemblies or on the same subassembly at different operations. When you use this processing option with the Subassemblies processing option, the system consolidates components at the subassembly level or for all levels of the bill of material. When viewing the consolidated components, the quantity required is accumulated for duplicate components. Valid values are:

Blank The system displays individual occurrences of duplicate components in the inquiry.

1 The system consolidates duplicate components in the inquiry.

5. Subassemblies

Use this processing option to specify whether the system displays the subassemblies. A subassembly is an assembly that is used at a higher level to make up another assembly. Valid values are:

Blank The system excludes subassemblies from the inquiry.

1 The system includes subassemblies in the inquiry.

6. Shrink

Use this processing option to specify whether the system adjusts the requested quantity for shrinkage. Shrinkage is the planned loss of a parent item caused by factors such as breakage, theft, deterioration, and evaporation. Valid values are:

Blank The system does not adjust the requested quantity.

1 The system adjusts the requested quantity for shrinkage.

7. Scrap

Use this processing option to specify whether the system adjusts the extended quantity for scrap. Scrap is unusable material that results from the production process. It is material outside of specifications and of such characteristics that rework is impractical. Valid values are:

Blank The system does not adjust the extended quantity.

1 The system adjusts the extended quantity for scrap.

9. Purchased Items

Use this processing option to specify whether the system explodes to the next level of purchased items in the bill of material report. Valid values are:

Blank The system excludes lower-level purchased items from the report.

1 The system includes lower-level purchased items in the report.

Validating Material Requirements Plans

After you generate the material requirements plan, you must validate it to ensure that you have sufficient work center capacity. Use Capacity Requirements Planning (CRP) to determine whether the material plan can be executed with the available resources. See *Validating Material Requirements Plans*.

Processing Orders for MRP

From the Daily Order Preparation - Discrete menu (G3111), choose Order Processing.

After you run MRP Regeneration or MRP Net Change, use the Order Processing batch program to process multiple work orders. The system:

- Attaches the parts list
- Attaches the routing instructions
- Sets an initial order status
- Generates the shop packet, including:
  - Parts list
  - Routing instructions
  - Shop packet summary
  - Component shortages

The program that you use to process orders for MRP is the same program that you use to process orders for Distribution Requirements Planning, Master Production Schedule, and Rough Cut Capacity Planning.

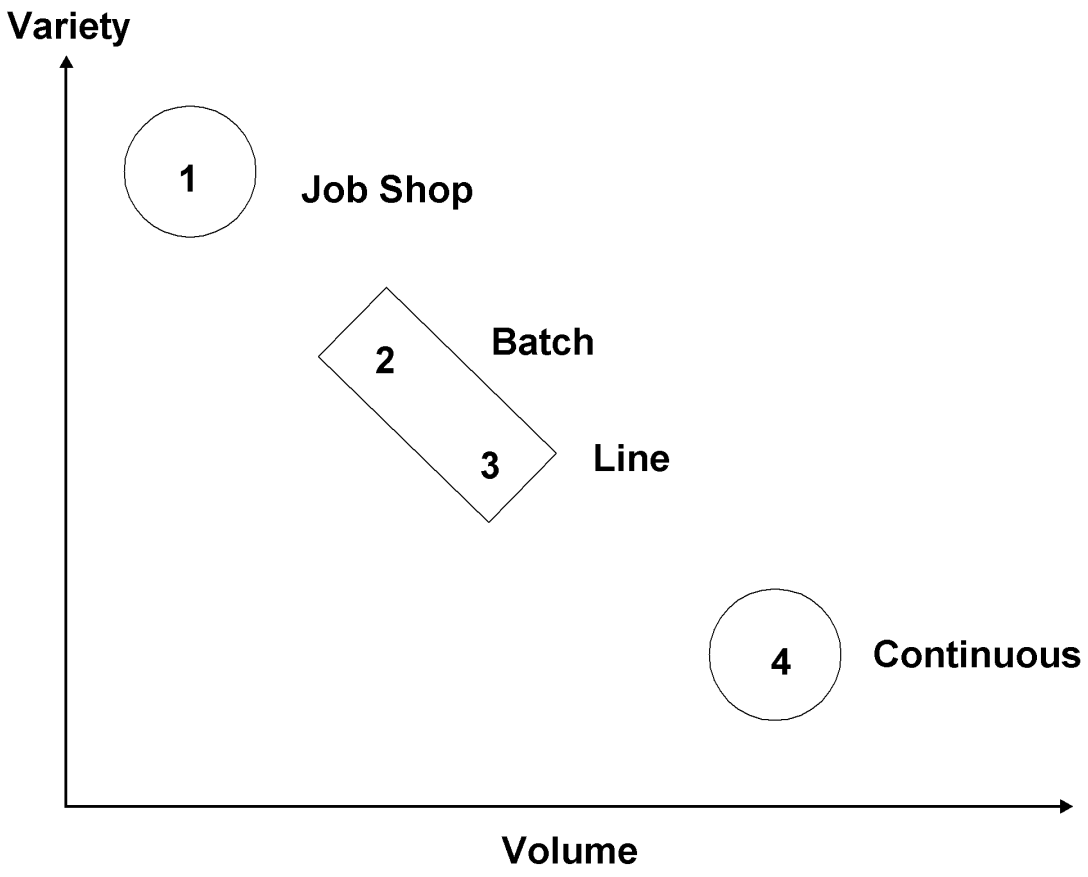
See Also

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

Manufacturing and Distribution Environments

Today's customer-driven manufacturing strategies require flexible manufacturing and distribution systems.

The following graphic shows manufacturing and distribution environments that vary along a continuum from discrete, low-volume production of customized designs to process, high-volume production of commodities.



Depending on the products manufactured, companies tend to create manufacturing and distribution environments along the diagonal of the graph. Competitive advantages occur when a company can move upward and to the right (that is, manufacture more volume along with more variety).

Sometimes a company can gain a competitive advantage by creating a mixed-mode manufacturing environment. In mixed mode, some high-volume products and some high-variety products are made within the same company, but in different manufacturing and distribution environments.

The Manufacturing and Distribution Planning system's shared database provides mixed-mode capability. Manufacturing and Distribution Planning can simultaneously manage discrete items for a job shop, rate-based items for a flow shop, and continuous items for a process industry.

The J.D. Edwards Distribution systems work together with the manufacturing systems to ensure that the right item is in the right place at the right time to meet customer demand. Supply and demand components must balance to ensure that this can occur. For example, the Inventory Management system does the following:

- Stores item information for the manufacturing systems
- Stores sales and purchasing costs and quantities available by location
- Tracks items on hold for locations from which you should not sell
- Updates the inventory account balances in the general ledger with any change in inventory valuation, count variances, or movement

Discrete manufacturing uses bills of material and routings. The bill of material contains individual parts or components, such as a nut, bolt, wire, or a plastic or metal part of a fixed or variable quantity. Products are further divided into subassemblies that are used in various larger assemblies.

Typical examples of products of discrete manufacturing are:

- Cars
- Furniture
- Electronics
- Airplanes

Discrete manufacturing is usually further characterized by the manufacturing strategy used, such as:

- Make-to-stock, using either a highly repetitive or process order based system
- Any of the "to-orders," such as make-to-order, assemble-to-order, or engineer-to-order
- The "one-off" or job shop environment

Note

If you manufacture products using configuration, MRP does not recognize configured, or string, differences for a configured item. See *Working with Configured String History* in the *Sales Configurator Guide.*

Topics

- ❑ Working with batch planning
- ❑ Working with process planning
- ❑ Working with repetitive planning

Working with Batch Planning

With batch manufacturing, a product is made from a bill of material in a standard run or lot size. The lot size is determined by vessel size or standard run length. Typical products that use batch manufacturing include:

- Pharmaceuticals

- Foods
- Glues
- Fermented beverages
- Paints

The objective for batch manufacturing is to process work orders with a batch quantity that corresponds to a batch bill of material and to use these orders for MRP processing. Just as the bill type uniquely defines a bill of material, you can use the batch quantity with bill type to further define a unique bill.

With this manufacturing method, some restrictions on capacity determine the size of the batch produced. For example, you might need to fill the vats to a certain level for the process to perform properly.

In addition, the system specifically defines the component quantities for the batch. For example, a 50-gallon vat requires a given quantity of one component, but the system does not necessarily double the component for a 100-gallon vat. Such components are often enzymes or catalysts.

Vats are often physically located close to a more repetitive downstream process. For example, in the manufacture of bread, dough is mixed and left to rise in a vat before formed into individual loaves and sent for baking and packaging.

You often express units of measure for batches in terms of volume or weight, such as liters or kilograms.

After you create a batch bill of material and batch routing for the work order header, you process the batch work order to attach the parts list and routing instructions to the work order header. Then you generate a master schedule of batch work orders and review the output.

Topics

- ❑ Reviewing batch bills of material
- ❑ Generating MPS for batch bills
- ❑ Reviewing batch output from MPS (optional)

See Also

- ❑ *Working with Routing Instructions* in the *Product Data Management Guide* for more information about batch routings

Reviewing Batch Bills of Material

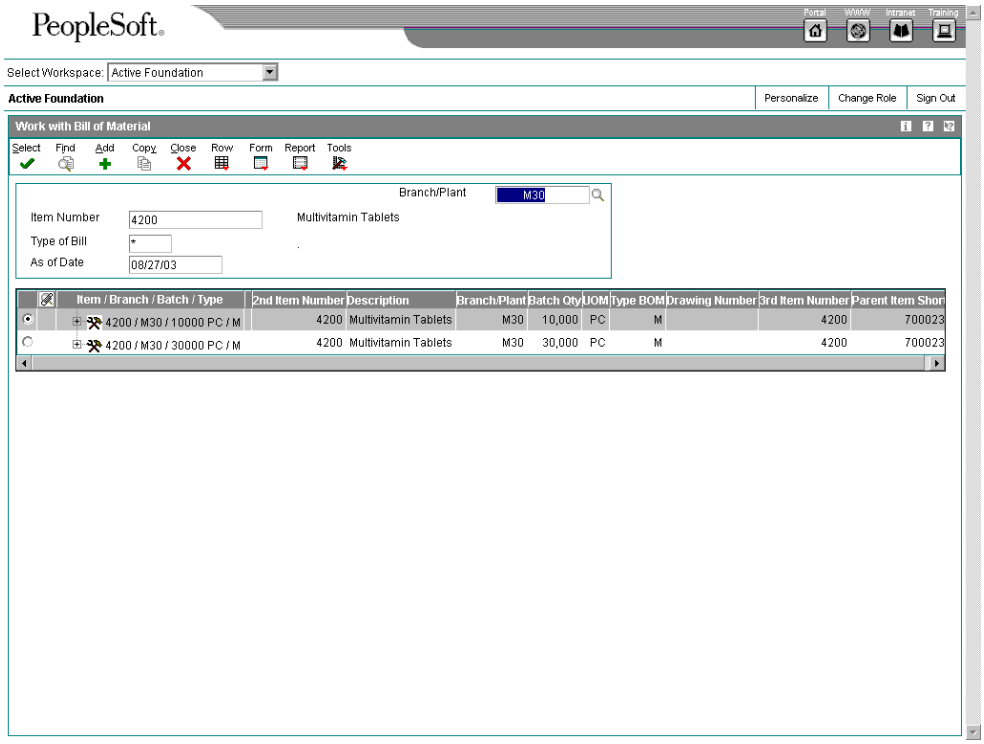
You use batch bills of material to accommodate physical constraints. For example, some industries, such as the pharmaceutical or food industries, use ovens or vats to make products in fixed quantities or batches. You can enter many combinations of batch sizes and bill types.

Before You Begin

- ❑ Set the appropriate processing option to display the Batch Quantity field.

► To create a batch bill of material

From the Daily PDM Discrete menu (G3011), choose Enter/Change Bill.



1. On Work with Bill of Material, complete the following fields and click Find to locate the bill of material:

    - Item Number
    - Branch/Plant
    - Type of Bill

2. Review the following fields:

    - UOM
    - Batch Qty
    - Type of Bill

See Also

- *Working with Bills of Material* in the *Product Data Management Guide* for more information about batch bills of material

Processing Options for Bill of Material Revisions (P3002)

Defaults
1. Component Branch
Blank = The system uses component branch when copy BOM.
1 = The system uses parent branch when copy BOM.

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2. Bill of Material Type
Blank = The system uses M for manufacturing bill of material.
3. As of Date
Blank = The system uses all dates.
1 = The system uses the current date.
4. Display Sequence
Blank = The system sequences by component line number.
1 = The system sequences by component line Number.
2 = The system sequences by operation sequence number.
Display
1. Bill Type
Blank = The system does not display the Bill Type field.
1 = The system displays the Bill Type field.
2. Batch Quantity
Blank = The system does not display the Batch Quantity field.
1 = The system displays the Batch Quantity field.
Versions
Enter the version for each program. If left blank, version ZJDE0001 will be used.
1. Single Level BOM Print (R30460)
2. Multi Level BOM Print (R30460)
3. ECO Workbench (P30225)
4. Component Maintenance (P3015)
5. ECO Header [P30BREV]
6. Bill of Material Where Used (P30201)
7. Item Master (P4101B)
8. Co/By- Products Inquiry (P30211)
9. Bill of Material Inquiry (P30200)
Edit
1. Item Branch Validation
Blank = The system does not check to see if the item branch is valid.
1 = The system checks for a valid item branch record.
Interop
1. Transaction Type
Blank = The system does not perform outbound interoperability processing.
JDEBOM = The system performs outbound interoperability processing.
2. Write Image for a Change Transaction
Blank = The system stores the after image from F3002 to F3002Z1
1 = The system stores the before image from F3002 to F3002Z1
3. Interoperability Outbound (R00460)
Blank = Ths system uses the ZJDE0001 version of R00460.

Generating MPS for Batch Bills

From the Single Site Periodic Planning Operations menu (G3422), choose MPS Regeneration.

Use MPS Regeneration to generate a master schedule for all items or for selected items. This program functions differently depending on whether more than one batch bill exists.

If only one batch bill exists, MPS uses the batch quantity as follows:

- As a multiple, if the net requirements are greater than the batch quantity
- As a minimum, if the net requirements are less than the batch quantity

In either case, the program generates a separate planned order for each batch quantity.

For example:

Batch Quantity	MPS Requirement	Resulting MPS Planned Order

1000	1500	1000 1000
1000	967	1000

For example, if the batch quantity is 1000 and the MPS requirement is:

- 1500, the program generates two planned orders for 1000 each
- 967, the program generates a planned order for 1000

If one batch bill is greater than all of the batch quantities, the program uses the largest batch quantity in combination with any of the other quantities to most accurately satisfy the requirement.

For example:

Batch Quantity	MPS Requirement	Resulting MPS Planned Order
400 600 800 1000	1500	1000 600
400 600 800 1000	3000	1000 1000 1000

- For example, batch quantities are:
  - 400
  - 600
  - 800
  - 1000
- MPS requirement is for 1500
- The program generates a planned order for 1000 and a planned order for 600. Using the batch quantities, 1600 is the quantity that most accurately satisfies the requirement.

If multiple batch bills exist and the net requirement is less than the largest batch quantity, the program uses the next highest batch quantity to satisfy the requirement.

For example:

Batch Quantity	MPS Requirement	Resulting MPS Planned Order
400 600 800 1000	780	800

- For example, batch quantities are:
  - 400
  - 600
  - 800
  - 1000
- MPS requirement is for 780.
- The program generates a planned order for 800.

Your company might have completed setup for parallel processing. In the parallel processing method, the system plans more than one item simultaneously by using multiple processors. This method takes place when a system executes a batch program on a server that has more than one processor. The parallel processing method achieves significant performance gains, which are limited only by the number of processors that are available on your server.

The system creates a separate subsystem version to use parallel processing. In this version, the system uses a processing option that indicates the number of configured processors that the system uses to execute the subsystem version.

See Also

- *Understanding Parallel Processing*
- *Generating Single-Level Master Schedules* for the processing options for this program

Reviewing Batch Output from MPS

After you generate a master schedule, use MPS Time Series Inquiry and MPS Detail Message Review to review the time series and messages from the MPS generation.

The time series is a record of time-phased supply and demand netting for selected items. The messages reflect how the system uses batches to generate order quantities for net requirements for each time period.

Topics

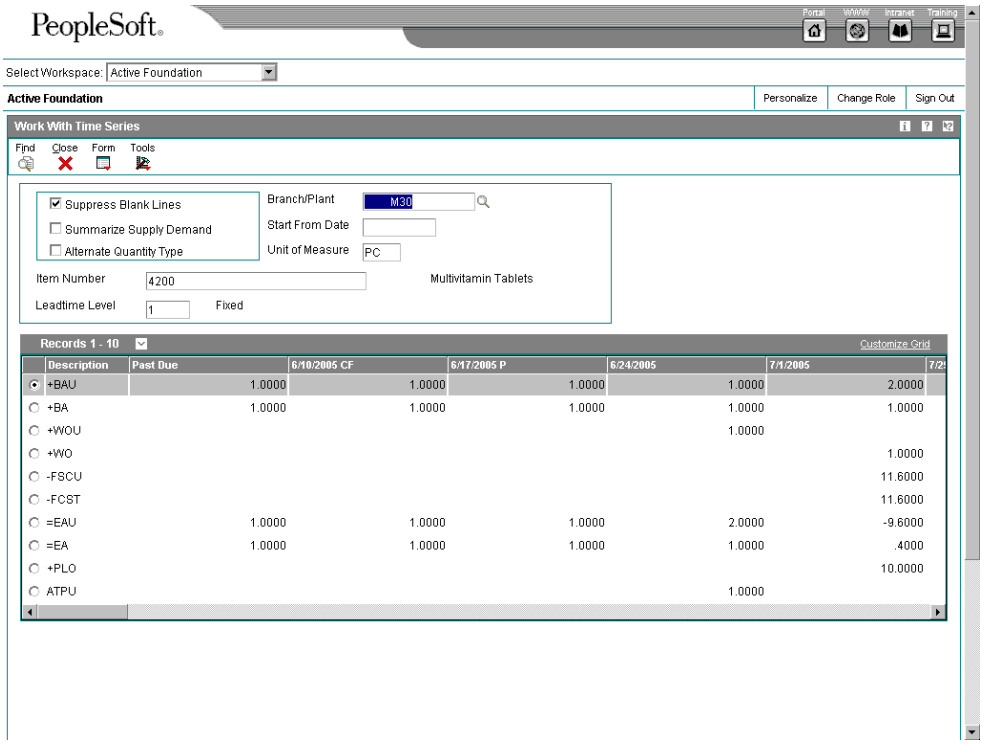
- Reviewing the time series for batch output
- Reviewing action messages for batch output

See Also

- *Reviewing the Time Series* for more information about Time Series Inquiry, and for the processing options
- *Working with Messages* for more information on and processing options for MPS Detail Message Review

► To review the time series for batch output

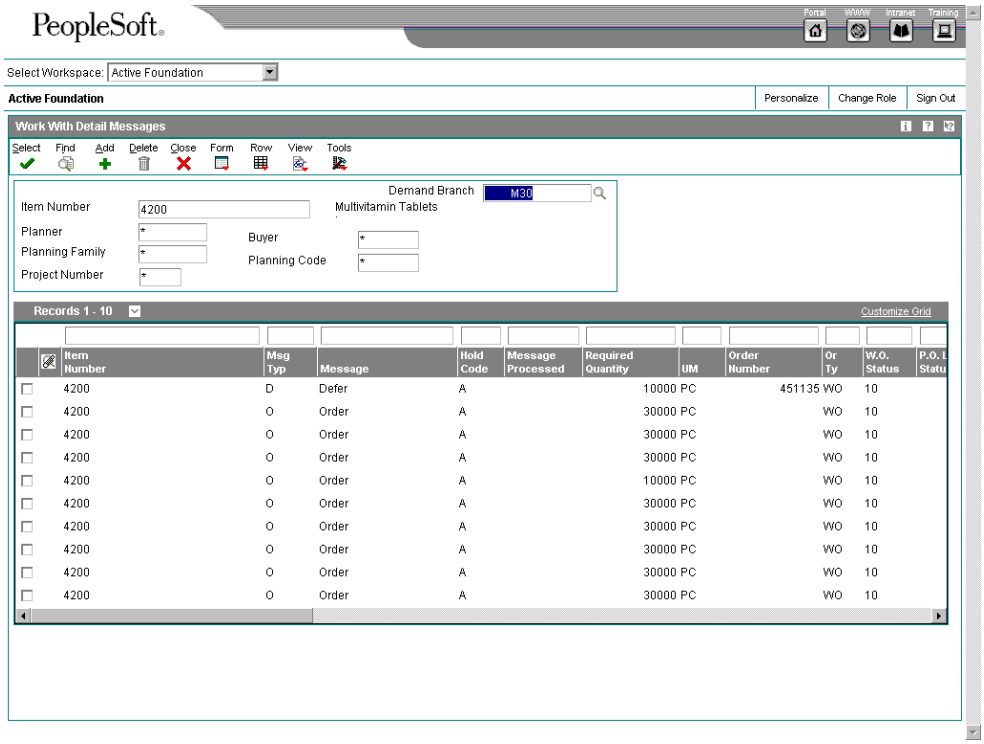
From the MPS Daily Operations menu (G3412), choose MPS Time Series/ATP Inquiry.



1. On Work With Time Series, complete the following fields to locate the time series for your item:
   - Branch/Plant
   - Item Number
2. To suppress the quantity types that have no quantity in the time series, click the following option and then click Find:
   - Suppress Blank Lines

► To review action messages for batch output

From the MPS Daily Operations menu (G3412), choose MPS Detail Message Review.



On Work With Detail Messages, complete the following fields and click Find to locate the messages for your item:

- Demand Branch
- Item Number

Working with Process Planning

Process manufacturing results in products such as liquids, fibers, powders, or gases. Pharmaceuticals, foodstuffs, and beverages are typical examples of process products. Products such as these are usually manufactured by a two-step process:

- Mixing or blending
- Filling or packaging

These kinds of products might involve intermediate steps, such as curing, baking, or preparation.

Process manufacturing uses ingredients and bills of material. Ingredients can be either consumed or produced during the manufacturing process. In a process bill of material, the quantity of a component can vary according to its grade or potency.

Unique features of process manufacturing are:

- Pacing co-products
- Planned co-products (by-products are unplanned)

- Additional processing options in MPS/MRP

Process manufacturing produces co-products and by-products. A co-product is a saleable end item that results from a process. A by-product is a material of value that is produced incidental to or as a residual of the process.

The different types of process manufacturing are:

- Batch
- Continuous

In batch processing, you usually produce a product in a standard run or lot size determined by vessel size, line rates, or standard run length. Because of the life cycle of the product after its completion, you typically schedule items made this way in short production runs. Co-products and by-products can be generated during batch processing. Typical items produced with batch processing include:

- Pharmaceuticals
- Foods
- Inks and paints
- Glues
- Oil or chemical products

In the continuous flow environment, production runs typically continue for an extended duration. Equipment is dedicated to one product or product line. This method of manufacturing is characterized by difficulty in matching output volume with demand and varying yield from process operations. Examples are petroleum-based products and water purification. Co-products and by-products are generally more prevalent in continuous processing than in batch processing.

MPS calculates the time series for co-products. Demand for the co-product generates MPS order messages to drive the production process. Co-products that are fully satisfied by the process do not receive order messages. Processes might also make a by-product that has value, but is not the central purpose of the process. For example, the lubricant process has co-products of household lubricant and graphite lubricant, and a by-product of sludge. The lubricant would not be processed primarily to obtain sludge.

Usually, both batch and continuous processing methods require extensive record keeping, such as recording quality and tolerance values during the process, and strict adherence to lot tracing and tracking.

To identify an item for process manufacturing, you must define the item's stocking type to distinguish it from co-products or discrete items. You must then specify both the percentage of the demand for co-products that is satisfied from process work orders and the percentage that is satisfied from other sources, such as work orders for the co-products. You can then generate and review a master schedule of all process work orders and output. This output consists of time series and messages for the co-products and by-products.

Topics

- ❑ Generating MPS for the process industry
- ❑ Reviewing process output from MPS generation

Before You Begin

- ❑ Set up the stocking types for all items. See *Defining Stocking Types for Processes.*

- Set up the co- and by-products. See *Defining Co-Products and By-Products*.

Generating MPS for the Process Industry

From the Single Site Periodic Planning Operations menu (G3422), choose MPS Regeneration.

When you choose MPS Regeneration, the system:

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

Your company might have completed setup for parallel processing. In the parallel processing method, the system plans more than one item simultaneously by using multiple processors. This method takes place when a system executes a batch program on a server that has more than one processor. The parallel processing method achieves significant performance gains, which are limited only by the number of processors that are available on your server.

The system creates a separate subsystem version to use parallel processing. In this version, the system uses a processing option that indicates the number of configured processors. The system uses these processors to execute the subsystem version.

See Also

- *Understanding Parallel Processing*
- *Generating a Master Schedule for Selected Items*

Reviewing Process Output from MPS Generation

After you generate a master schedule, use MPS Time Series Inquiry and MPS Detail Message Review to review the time series and messages that the system generates.

Many processes produce multiple co-products. In each time period, whichever co-product has the greater demand is the pacing co-product. For example, a process might produce both plastic and ethylene glycol (anti-freeze). If there is greater demand for plastic in a time period, the system plans for the process based on the demand for plastic, which might result in excess antifreeze production.

The time series is a record of time-phased supply and demand netting for selected co- and by-products. Co-products that are fully satisfied by the process do not receive order messages. Instead, the system creates warning messages for co-products that are planned by a process.

Note

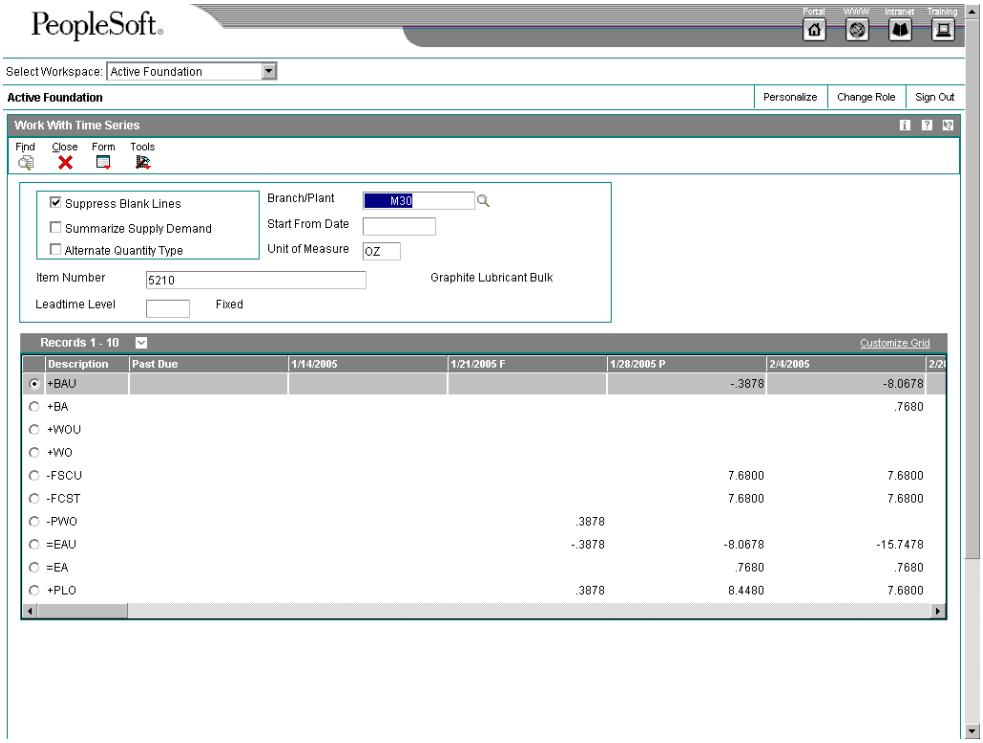
Process item numbers do not have a time series.

Topics

- Reviewing time series for co-products and by-products
- Reviewing messages for processes

► To review time series for co-products and by-products

From the MPS Daily Operations menu (G3412), choose MPS Time Series/ATP Inquiry.



1. On Work With Time Series, complete the following fields to locate the time series for a co-product or by-product:

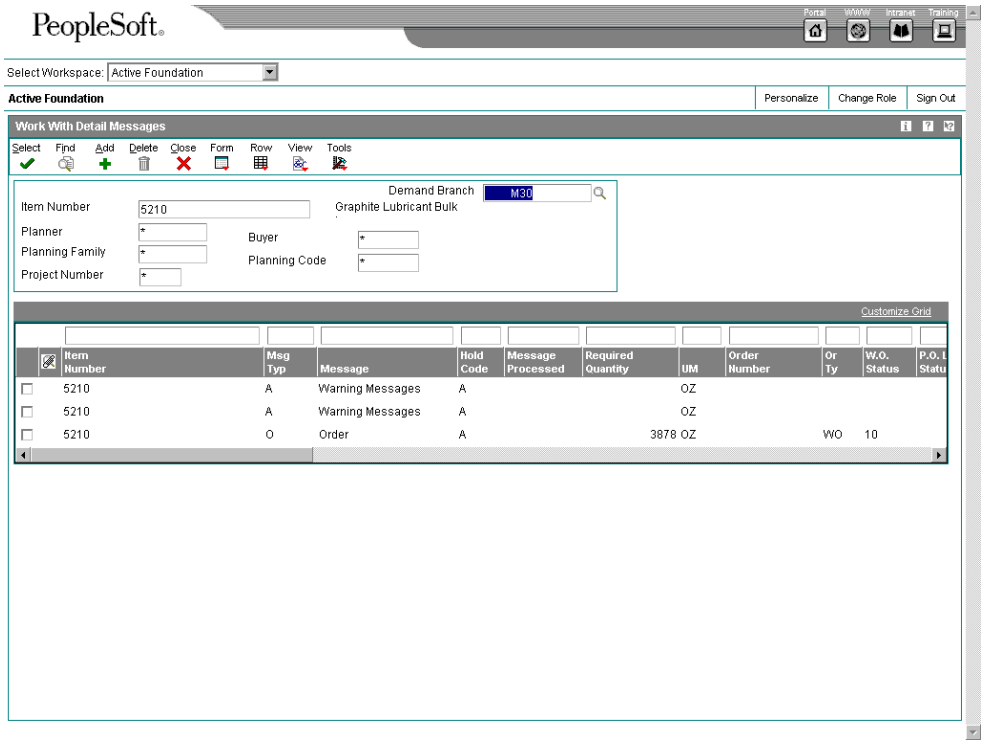
    - Branch/Plant
    - Item Number

2. To suppress the quantity types that have no data in the time series, click the following option and then click Find:

    - Suppress Blank Lines

► To review messages for processes

From the MPS Daily Operations menu (G3412), choose MPS Detail Message Review.



On Work With Detail Messages, complete the following fields and click Find to locate the messages for a process item:

- Demand Branch
- Item Number

Note

Co-products that are fully satisfied by the process do not receive order messages.

See Also

- *Working with DRP/MPS Output*

Working with Repetitive Planning

Use repetitive manufacturing for highly repetitive production that relies on a production rate. Repetitive manufacturing enables you to specify a rate schedule by effective date in daily, weekly, or monthly quantities.

Repetitive manufacturing has the following characteristics:

- Production volume is stable and predictable.
- Leadtime is short.

- Factory layout is product-oriented and often characterized as "cellular manufacturing" in which dissimilar operations are physically grouped so that the product flows rapidly from one operation to the next.
- Setups are short so that switching between products does not significantly affect the time available for production.
- Group technology is often incorporated into the design engineering and manufacturing engineering to accommodate some variety with little affect on cost or production speed.
- Unit of measure is often "each." However, it can also be volume- or weight-related when it is used in an environment that is similar to process manufacturing (as opposed to discrete).

Examples of repetitive products are:

- Electronic goods
- Automobiles
- Durable consumer goods (washing machines, refrigerators, and so on)

To plan for repetitive items, you:

- Identify the item as a rate-scheduled item for a specific branch/plant
- Create a routing for the item
- Attach the rate-scheduled item to a line

After you set up the processing for repetitive items, you can generate a master schedule and review the output. This output consists of time series and messages. You can then validate the load on lines or cells by viewing the effects of a rate schedule on a given work center and adjusting the priorities of the schedule.

Topics

- ❑ Generating MPS for repetitive items
- ❑ Reviewing repetitive output from MPS
- ❑ Reviewing rate schedule loads

Before You Begin

- ❑ Identify the reorder point for repetitive items. See *Defining Order Policy.*
- ❑ Ensure that all routings are set up. See *Verifying Repetitive Routings*.
- ❑ Ensure that all production lines are identified. See *Creating Line and Item Relationships*.
- ❑ Ensure that all rate schedules are set up. See *Verifying Rate Schedules.*

Generating MPS for Repetitive Items

From the Single Site Periodic Planning Operations menu (G3422), choose MPS Regeneration.

When you run the MPS Net Change or Regeneration program, the system:

- Evaluates selected information
- Performs calculations

- Generates a time series and messages for the selected items

To generate MPS for repetitive items:

- Set the processing options to generate the master production schedule.
- Enter the type of rate schedule that you want to use for processing.
- Set the appropriate processing option to extend rate adjustments to lower-level items.

Your company might have completed setup for parallel processing. In the parallel processing method, the system plans more than one item simultaneously by using multiple processors. This method takes place when a system executes a batch program on a server that has more than one processor. The parallel processing method achieves significant performance gains, which are limited only by the number of processors that are available on your server.

The system creates separate subsystem version to use parallel processing. In this version, the system uses a processing option that indicates the number of configured processors. The system uses these processors to execute the subsystem version.

See Also

- *Understanding Parallel Processing*
- *Generating a Master Schedule for All Items*
- *Generating a Master Schedule for Selected Items*

Reviewing Repetitive Output from MPS

After you generate a master production schedule, use MPS Time Series Inquiry and MPS Detail Message Review to review the time series and messages that the system has generated.

The time series is a record of time-phased supply and demand netting for selected items. The system links the planned order releases for the parent item to the gross requirements of component items.

If a component does not have its own rate schedule, the system applies the demand from the parent item. The demand from the rate-scheduled parent follows the same logic as regular work orders**.** When a rate schedule is added for a component of a rate-based parent, the calculation includes the information for the component in both the rate schedule (+RS) and unadjusted rate schedule (+RSU) data lines. The component is processed as supply, and regular MRP logic applies.

The messages reflect how the system uses rate-scheduled items to generate quantities for net requirements for each time period. The MPS/MRP program produces the following three main action messages that pertain to repetitive items:

I = Increase rate to	Updates an existing rate to the increased quantity.
H = Decrease rate to	Updates an existing rate to the decreased quantity.

N = Create rate

Treats messages as a group from the MPS/MRP Detail Message Review form. You can answer more than one message at a time.

Instead of creating a single rate for a given schedule period type over a date range, the system creates a series of rates to cover the entire period. For instance, instead of having one weekly rate in effect for four weeks, the system creates four weekly rates, each in effect for a week.

When you process a Create Rate message, the system can attach the parts list and routing automatically.

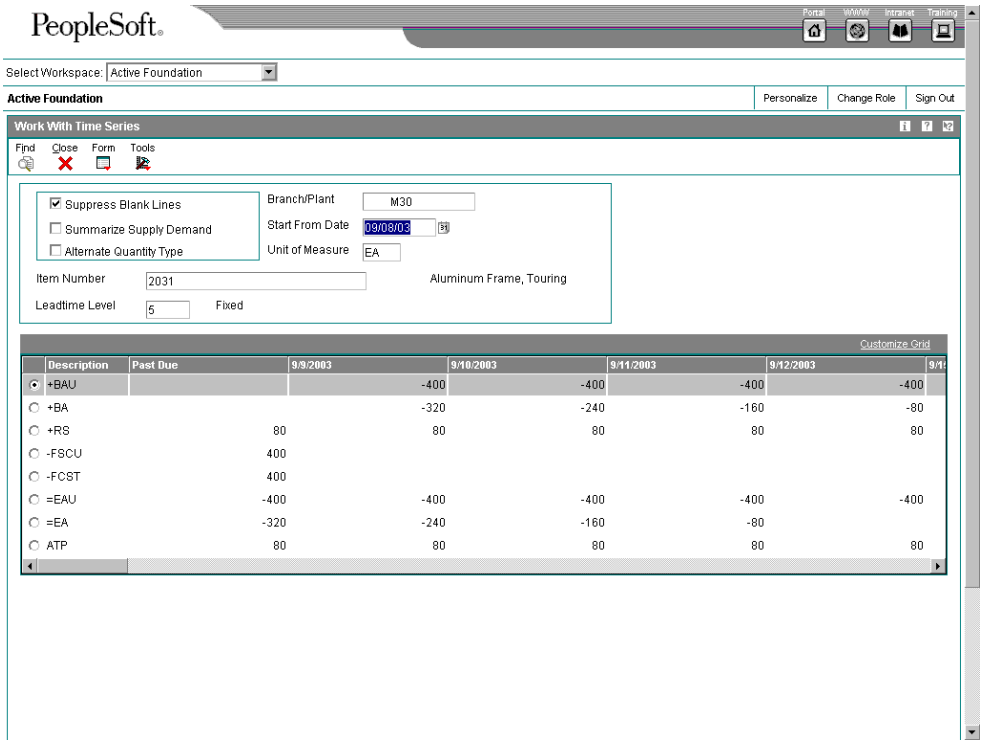
When the system processes messages to update rates (I and H messages), it does not check the validity of the dates received. The MPS/MRP regeneration produces messages with valid dates. However, you can change these dates before processing the message. To avoid updating invalid rates, ensure the validity of the dates that you enter whenever you change message dates before processing.

Topics

- Reviewing the time series for rate-scheduled output
- Reviewing action messages for rate-scheduled output

► To review the time series for rate-scheduled output

From the MPS Daily Operations menu (G3412), choose MPS Time Series/ATP Inquiry.

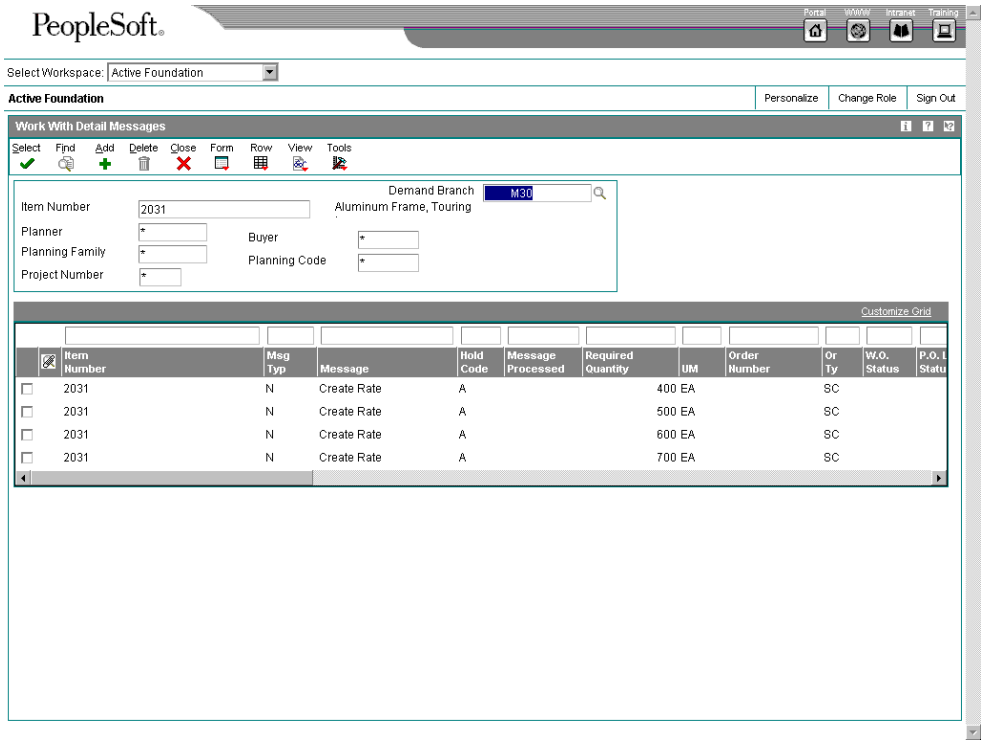


On Work With Time Series, complete the following fields and click Find to locate the time series for your item:

- Branch/Plant
- Item Number

► To review action messages for rate-scheduled output

From the MPS Daily Operations menu (G3412), choose MPS Detail Message Review.



On Work With Detail Messages, complete the following fields and click Find to locate the messages for your item:

- Item Number
- Demand Branch

See Also

- *Working with DRP/MPS Output*

Reviewing Rate Schedule Loads

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

Schedule Review is used primarily for rate-based items and is an alternative for viewing the load on a work center. A processing option allows you to include work order-generated loads before or after rate loads.

See Also

- *Reviewing Rate Schedule and Work Center Loads*

Material Requirements Planning

Material and Capacity Planning Setup

You must complete setup tasks prior to using the material and capacity planning system. Setup includes such tasks as entering user defined codes, item information, and the rules for the planning systems.

Topics

- Understanding UDCs for Manufacturing and Distribution Planning
- Setting up the planning systems

Understanding UDCs for Manufacturing and Distribution Planning

Many fields throughout the planning systems accept only user defined codes (UDCs). You need to define these codes before you can use the planning programs. For example, before you generate a resource requirements plan, you must define the information that the system uses to select and display data.

UDCs are stored in tables by system and code type. For example:

- 33/UT represents the CRP system and user defined code Unit Types
- System 34, type TF (34/TF) represents the DRP/MRP/MPS system and user defined code Time Fence

To set up UDCs for the planning systems, you must identify all the codes you want to use on the User Defined Codes form. If you enter an operation status code on another form that you did not identify as an operation status code on the User Defined Codes form, the system displays an error message. For example, you can only enter codes in the operation status code field that exist in the UDC table for system 31 and type OS.

You can access all codes through a single UDC form. After you select a UDC form from a menu, change the system code and user defined code type fields to access another UDC table. The system stores user defined codes in the User Defined Codes table (F0005).

Topics

The following UDCs are primary to capacity and resource planning:

- Capacity Requirements Display (33/CR)
- Rough Cut Capacity Display (33/RC)
- Resource Requirements (33/RR)
- Unit Types (33/UT)

The following UDCs are primary to DRP, MRP, and MPS:

- Message Types (34/MT)
- Time Fence Rules (34/TF)

See Also

- *Customizing User Defined Codes* in the *OneWorld Foundation Guide* for detailed information about user defined codes

Capacity Requirements Display (33/CR)

The system uses 33/CR as the user defined code for the Capacity Requirements Display. Use the capacity requirements display to specify row descriptions for all CRP forms and reports.

Rough Cut Capacity Display (33/RC)

The system uses 33/RC as the user defined code for the Rough Cut Capacity Display. Use Rough Cut Capacity Display to specify row descriptions for RCCP forms and reports.

Resource Requirements (33/RR)

The system uses 33/RR as the user defined code for resource requirements. The resource requirements display identifies the types of loads on a work center. You can review these on the Review Work Center Load form.

Unit Types (33/UT)

The system uses 33/UT as the user defined code for unit types. You need to identify all the different types of resource units that can be associated with any work center.

Message Types for DRP, MPS, MRP, and RCCP (34/MT)

The system uses 34/MT as the user defined code for message types. All the messages are predefined for these messages that the system displays when you generate DRP, MPS, and so on. Because the character code is hard coded, you can change the description but not the function of the message type.

Time Fence Rules for DRP, MRP, and MPS (34/TF)

Time fences are points of time at which you can make changes to either policy or operating procedures. The system uses 34/TF as the user defined code for time fence rules. The system supports three time fences:

Freeze Fence (F)	Within this time period, orders are neither created nor replanned.
Planning Fence (P)	Within this time period, the system uses demand from the forecast and customer orders to calculate ending available product.
Message Display Fence (D)	After this time period, messages are neither created nor displayed.

Setting Up the Planning Systems

You must define the information that the system uses when it runs the planning and scheduling programs. The system uses setup information to determine how to select and display data. You must set up some of this information in other systems, such as the Inventory Management (system 41), Product Data Management (system 30), and Shop Floor Management (system 31).

Topics

- Set up supply and demand inclusion rules
- Set up forecast consumption periods (optional)
- Set up order policy rules
- Set up stocking types
- Define the stocking types for processes
- Define co-products and by-products
- Defining order policy
- Verifying repetitive routings
- Creating line and item relationships
- Verifying rate schedules

Setting Up Supply and Demand Inclusion Rules

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

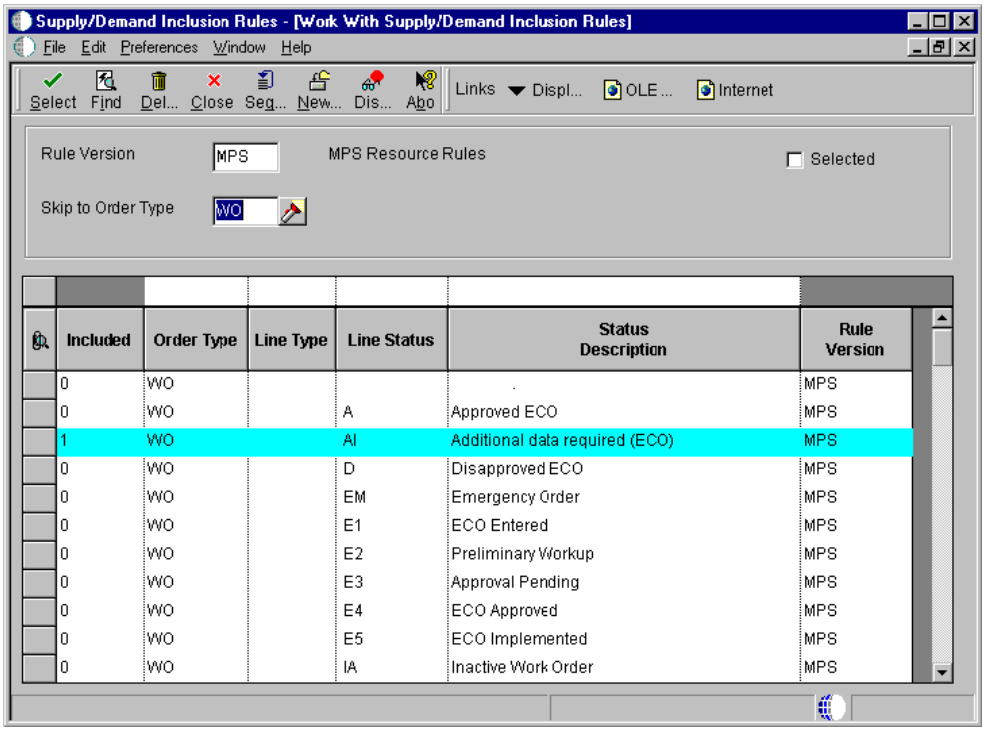
On-hand inventory	Quantity on hand
Purchase orders	Open quantity on purchase orders
Manufacturing work orders	Quantity entered on work order - quantity completed - quantity scrapped
Safety stock	Safety stock
Sales orders	Quantity entered on sales order - quantity shipped - quantity canceled
Work order requirements	Quantity required - quantity issued
Co-/by-products supply from work orders	Quantity ordered - quantity completed - quantity scrapped

► To set up supply and demand inclusion rules

Use one of the following navigations:

From the Material Planning Setup menu (G3442), choose Supply/Demand Inclusion Rules.

From the Planning Setup menu (G1346), choose Supply/Demand Inclusion Rules.

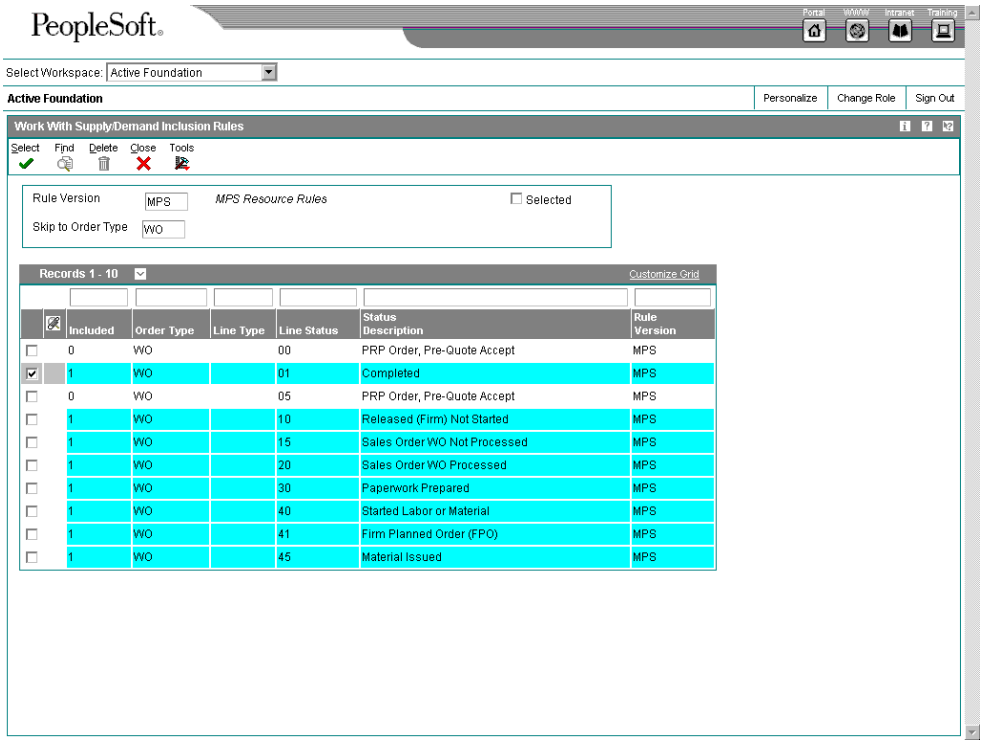


1. On Work With Supply/Demand Inclusion Rules, complete the following fields and click Find to locate the status values for your inclusion code:

   - Rule Version
   - Skip to Order Type

2. Choose each record that includes the order type and line status for which you want the inclusion rules to apply and click Select.

   When you apply inclusion rules to work order documents, line types do not appear. Line types are not applicable to the Work Order system.



Processing Options for Supply/Demand Inclusion Rules (P34004)

WO Types
1. Enter the WO document types for the Inclusion rules. These can be stacked up one after another for multiple document types. If left blank, "WO" will be used.
Work Order Document Types

Setting Up Forecast Consumption Periods

You set up forecast consumption periods to identify a period of time in which forecasts are consumed by sales orders. The system stores this information in the Forecast Consumption Periods table (F3405).

You define the end date for each forecast consumption period on the Work with Forecast Consumption Revision form. The periods apply system-wide. You cannot have different forecast consumption periods for different locations or branch/plants.

The system adds the forecast consumption periods to the number of time series periods that you specified in the processing options for the DRP/MPS generation program. The total for all time periods cannot exceed 52.

Before You Begin

- ❑ Verify that the following information has been set up:
  - Planning fence rule H in user defined code list 34/TF

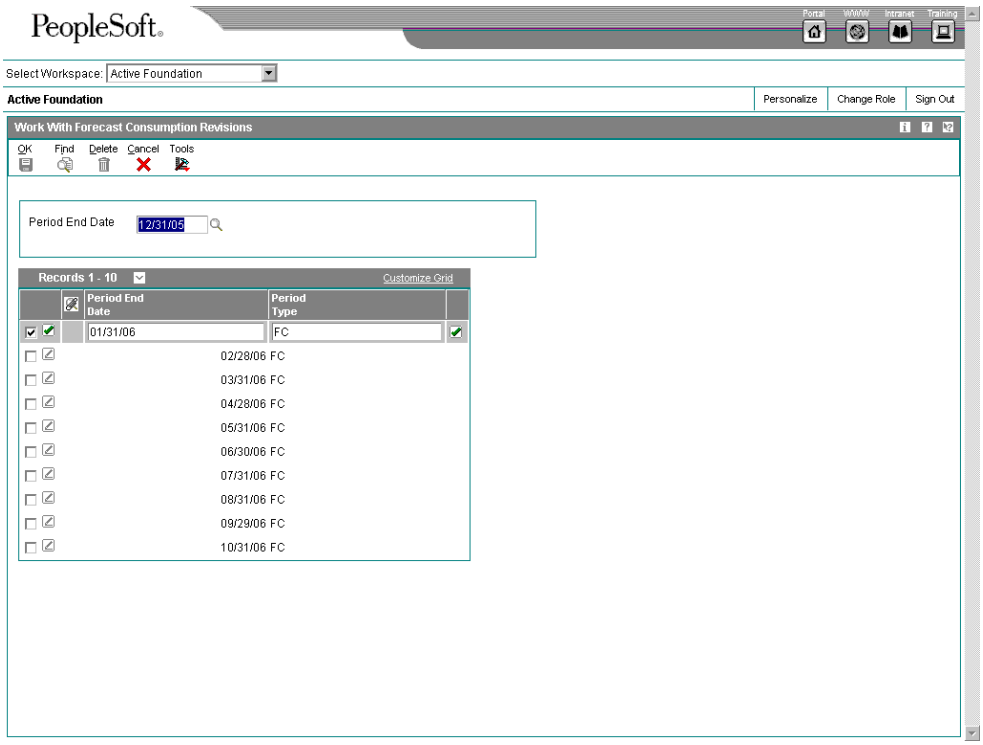
- The order types in user defined code list 40/CF, to include in shipped order calculations
- The -SHIP quantity type in user defined code list 34/QT, to calculate shipped orders quantity
- The order types in user defined code list 40/IU, to update inventory (includes order type SO)
- The Planning Fence Rule field on the Plant Manufacturing Data form, with a value of H
- The Planning Fence field on the Plant Manufacturing Data form, with a value beyond the end of the planning horizon
- The appropriate processing options in the DRP/MPS generation program

Note

You must set up the planning fence field on Plant Manufacturing Data with a value beyond the end of the planning horizon. (J.D. Edwards recommends a planning fence of 999). If you do not set the planning fence beyond the planning horizon, the batch planning programs (DRP/MPS/MRP Regeneration and Net Change) will not work properly.

► To set up forecast consumption periods

From the Material Planning Setup menu (G3442), choose Forecast Consumption Periods.



On Work With Forecast Consumption Revisions, complete the following fields and click OK:

- Period End Date
- Period Type

Setting Up Order Policy Rules

You must set up order policy rules to control how multilevel master scheduling calculates dates and quantities. The order policy rules that you set up are:

Planning code Include the item in the DRP, MRP, or MPS planning runs.

The system uses planning codes to process the item. Use planning codes 1, 2, or 3 for multi-level master scheduling. Use planning codes 4 and 5 for forecasting with a planning bill.

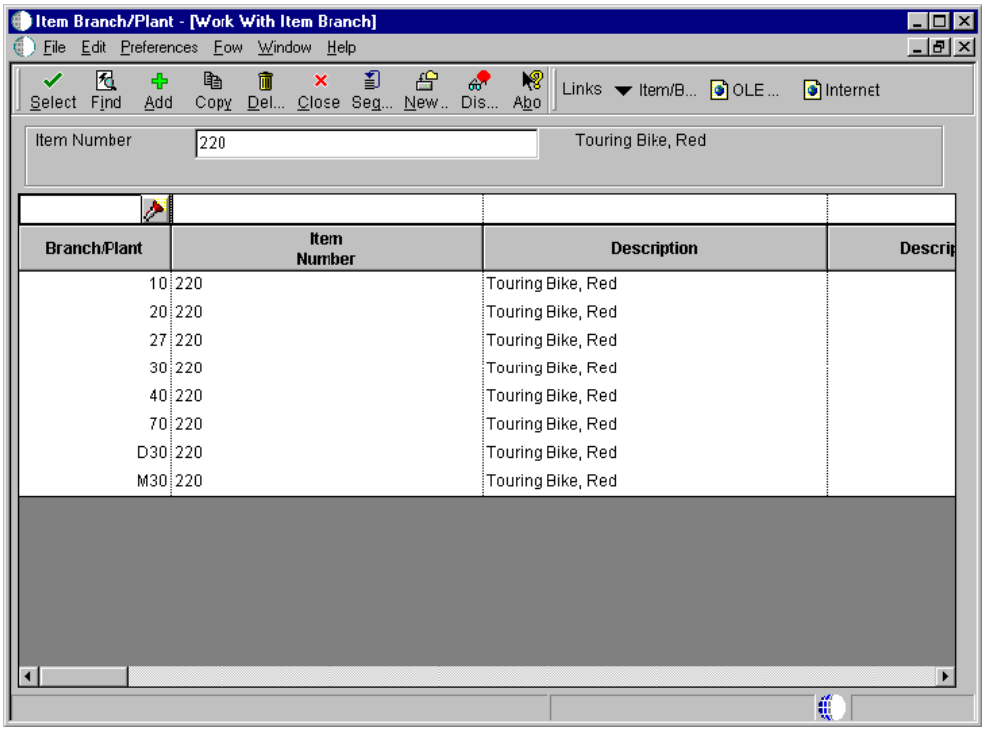
Order policy code Designate several different rules for reordering inventories, including fixed order quantity, lot for lot, or number of days supplied. For example, purchasing a 90-day supply of V-8 engines.

Leadtime level for phantom items Indicate the transfer or purchase leadtime for an item to ensure that you have it in stock on time.

You must set the leadtime of the phantom item to zero so that the parent planned orders are recorded directly to the options as a gross requirement without being offset by the leadtime. The system multiplies the planned orders by the feature planning percentage before placing the planned orders as component gross requirements.

► To set up order policy rules

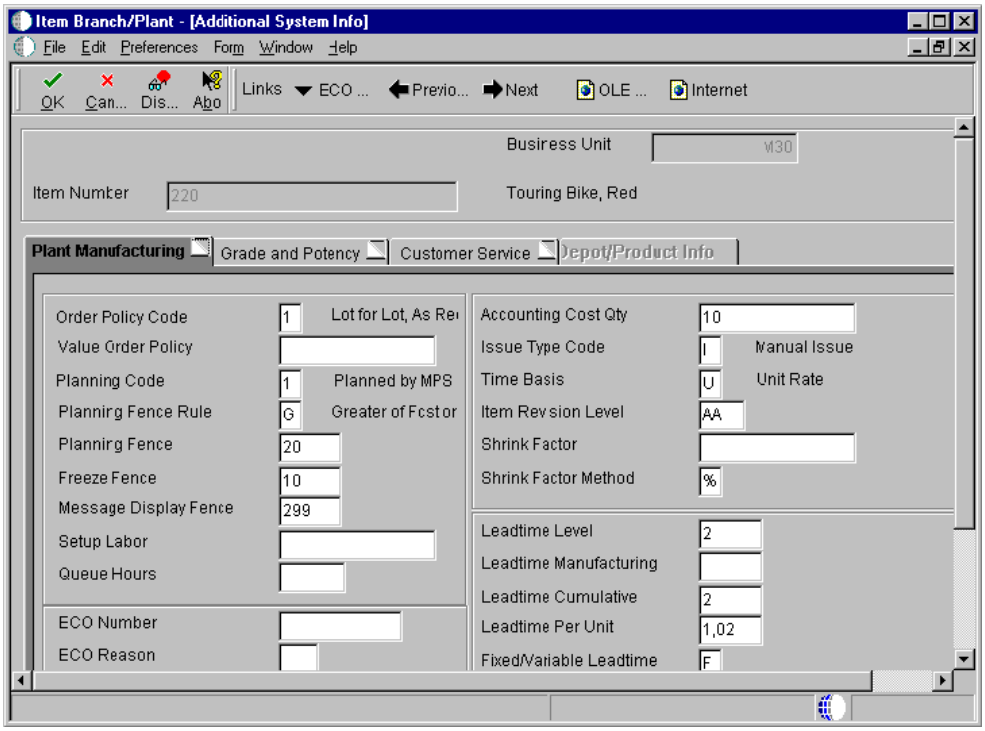
From the Inventory Master/Transactions menu (G4111), choose Item Branch/Plant.



1. On Work With Item Branch, complete the following field and click Find to locate the item for which you want to plan orders:

    - Item Number

2. Choose a record and choose Additional System Information from the Row menu.



3. On Additional System Info, complete the following fields to control how multilevel master scheduling calculates dates and quantities, and then click OK:

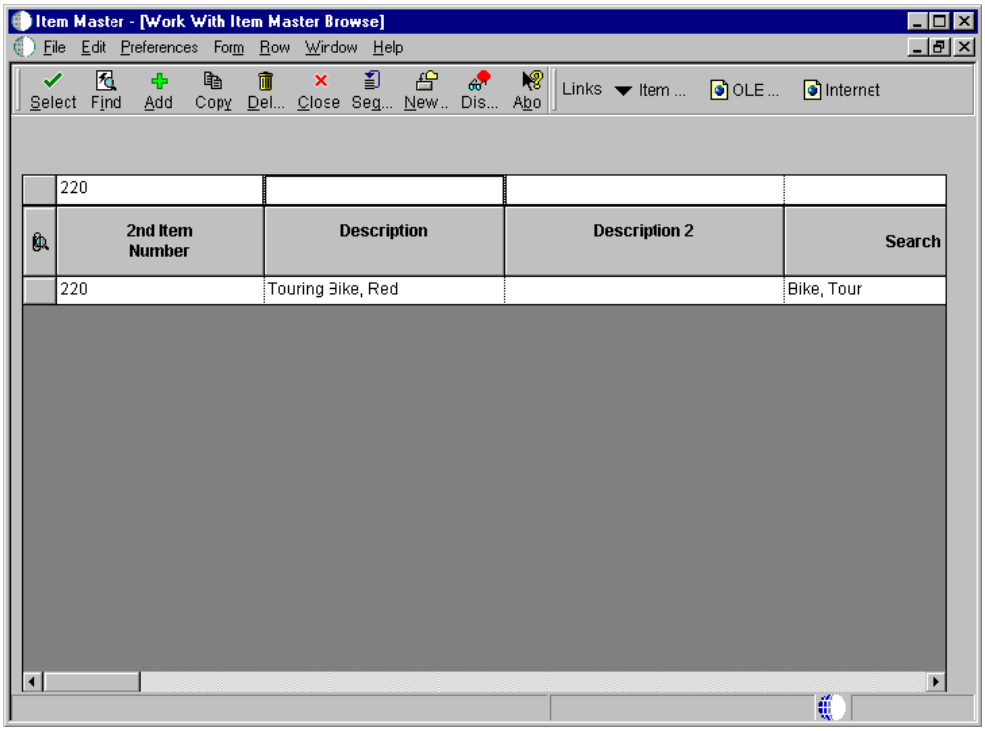
    - Order Policy Code
    - Planning Fence
    - Leadtime Level

Setting Up Stocking Types

Set up a stocking type for each item to identify how you stock it (for example, as finished goods or raw materials).

► To set up a stocking type

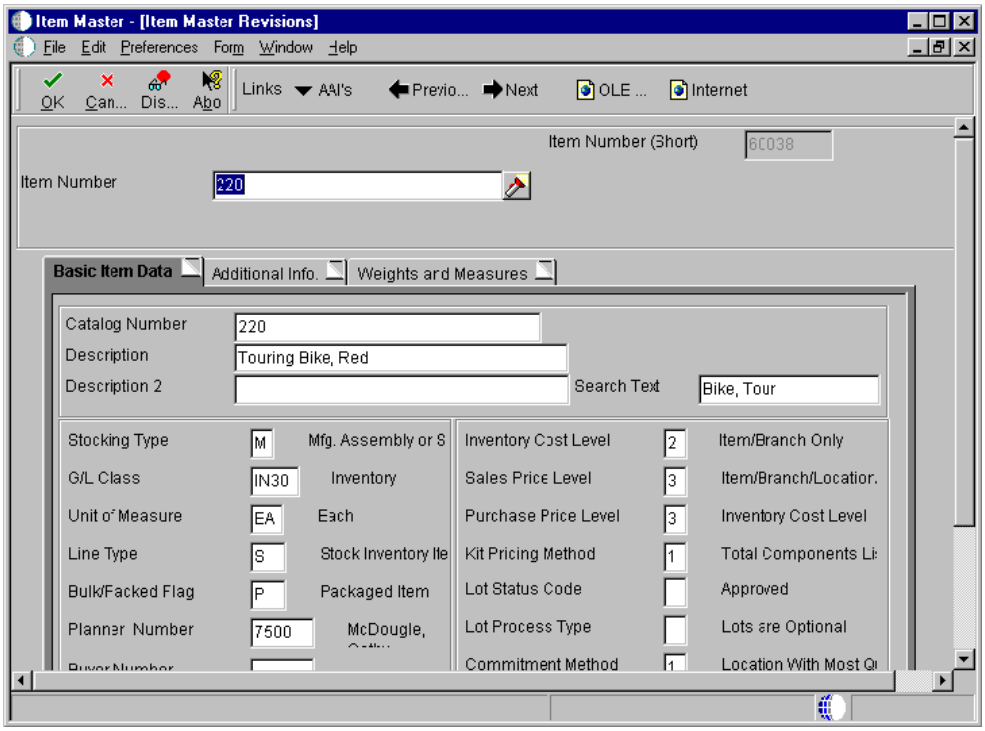
From the Inventory Master/Transactions menu (G4111), choose Item Master.



1. On Work With Item Master Browse, complete the following field and click Find to locate the item for which you want to plan orders:

    - Item Number

2. Choose the record and click Select.



3. On Item Master Revisions, complete the following field to indicate how you stock the item and click OK:

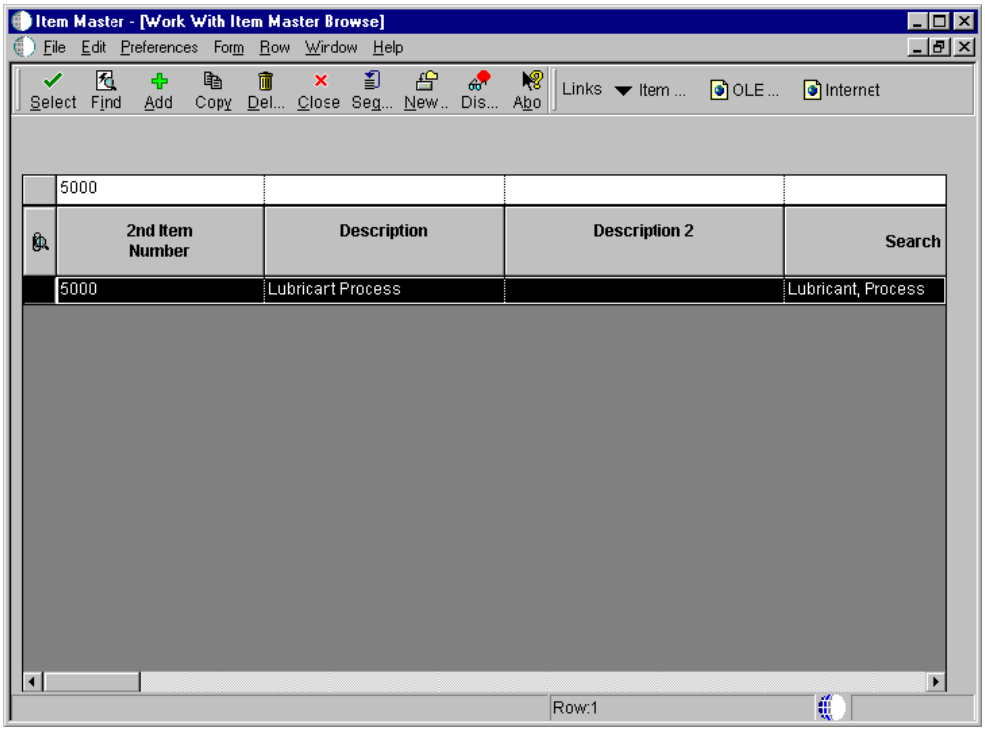
    - Stocking Type

Defining the Stocking Types for Processes

You define the stocking type of process to distinguish the processed item from its co-products or discrete items.

► To define the stocking types for the process

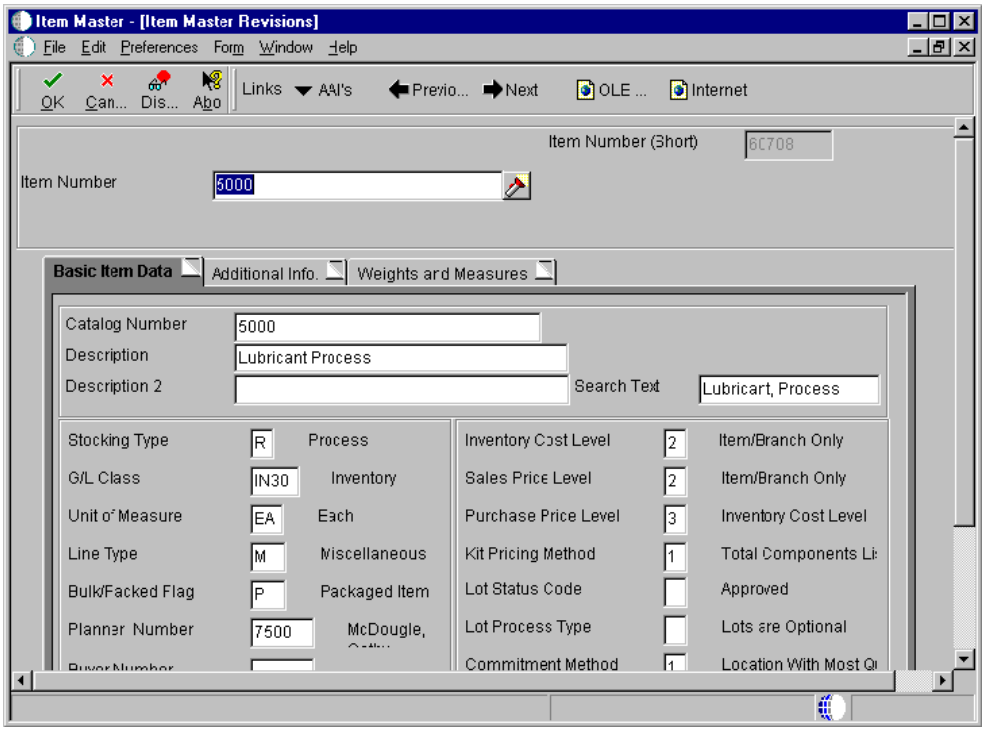
From the Inventory Master/Transactions menu (G4111), choose Item Master.



1. On Work With Item Master Browse, to locate your process item record, complete the following field and click Find:

    - Item Number

2. Choose the record and click Select.



3. On Item Master Revisions, enter an R in the following field and click OK:

    - Stocking Type

Defining Co-Products and By-Products

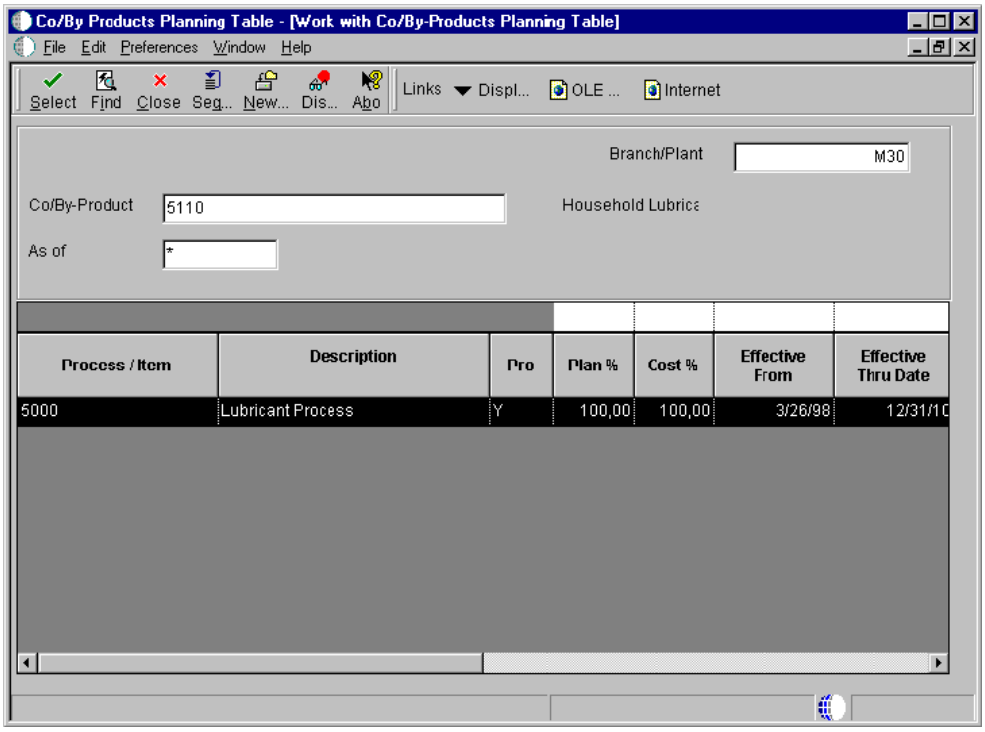
Use the Co-/By-Products Planning Table to set up co-product and by-product processes for MPS and MRP. This table specifies the percentage of the demand for co-products that is satisfied from process work orders and the percentage that is satisfied from other sources.

You can also specify special circumstances. For example, by entering 75 percent in the table, you specify that 75 percent of demand is satisfied from process work orders and the balance from other sources. The system automatically satisfies the balance, for example, by planning co-product work orders or creating purchase orders.

If a co-product can be produced by more than one process, both processes appear in the table when you locate the co-product. For example, a 65 percent - 35 percent relationship can exist between the two processes.

► To define co-products and by-products

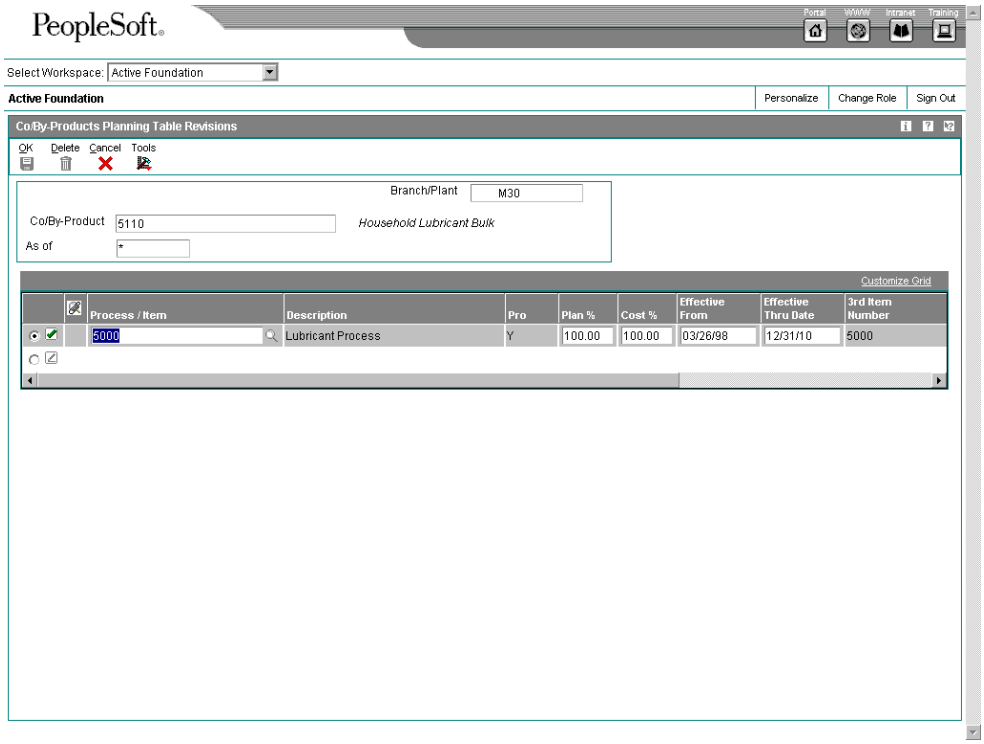
From the Product Costing Setup menu (G3042), choose Co-/By-Products Planning Table.



1. On Work with Co/By Products Planning Table, complete the following fields and click Find to locate the Co/By Product table:

    - Branch/Plant
    - Co/By-Product

2. Choose a process and click Select.



3. On Co/By-Products Planning Table Revisions, complete the following fields and click OK:

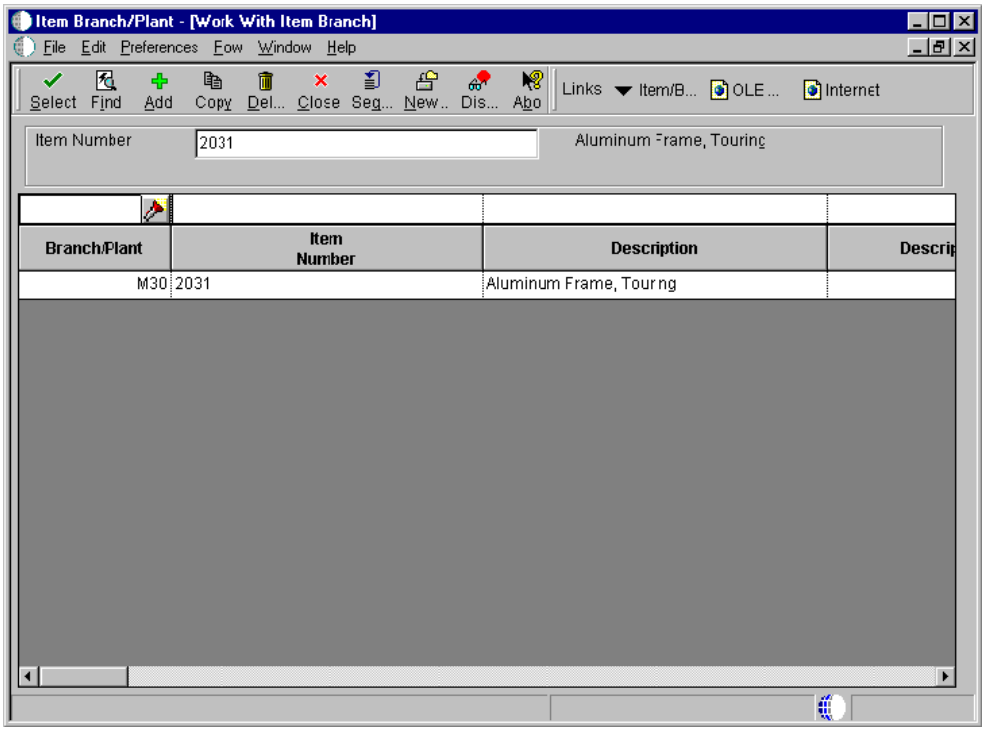
    - Plan %
    - Cost %
    - Effective From
    - Effective Thru Date

Defining Order Policy

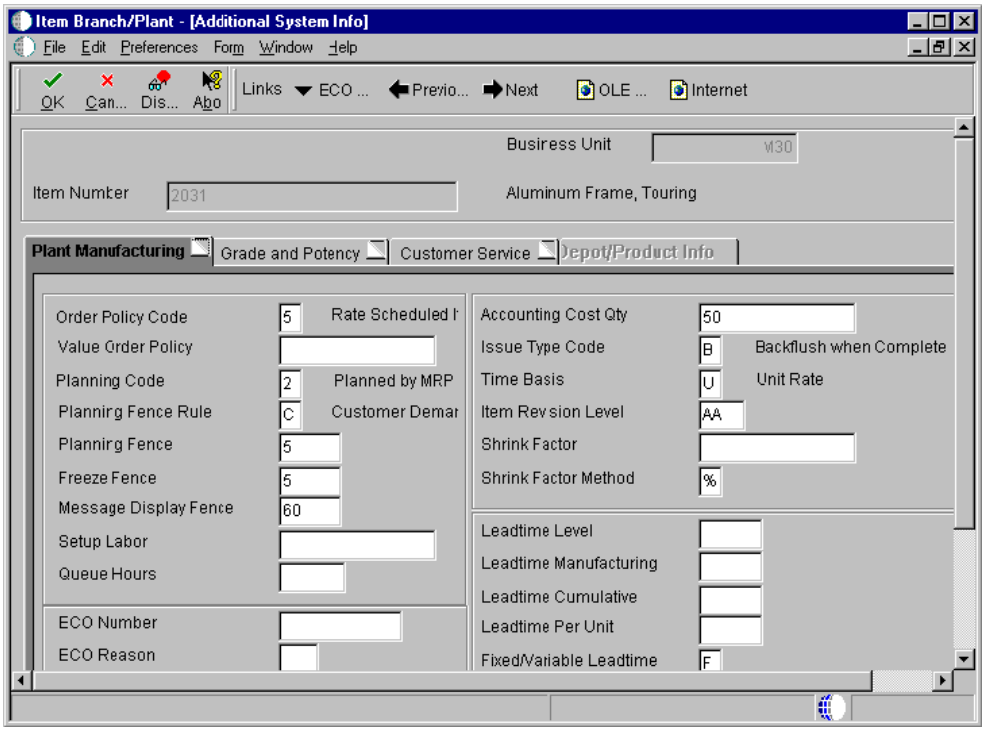
To have an item included in MPS/MRP/DRP, you must identify the rules for ordering additional product for each branch/plant that purchases, stores, or manufactures the item.

► To define order policy for repetitive items

From the Inventory Master/Transactions menu (G4111), choose Item Branch/Plant.



1. On Work With Item Branch, complete the following field and click Find:
    - Item Number
2. Choose a row and choose Additional System Information from the Row menu.



3. On Additional System Info, complete the following field to identify the item as a rate-scheduled item:

    - Order Policy Code

See Also

- *Entering Item Branch/Plant Manufacturing Information* in the *Inventory Management Guide*

Verifying Repetitive Routings

A routing is a list of the operations and resources that are required to complete a process. The repetitive routing includes line and cell information in the header area of the routing as well as for each operation in the detail area.

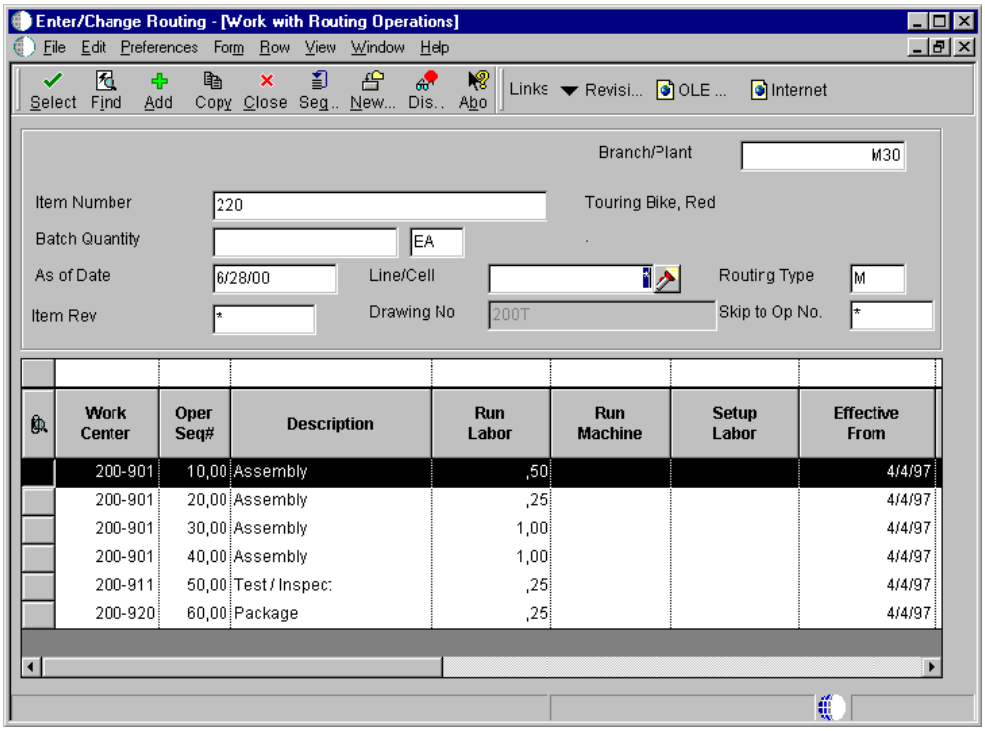
► To verify repetitive routings

From the Daily PDM Discrete menu (G3011), choose Enter/Change Routing.

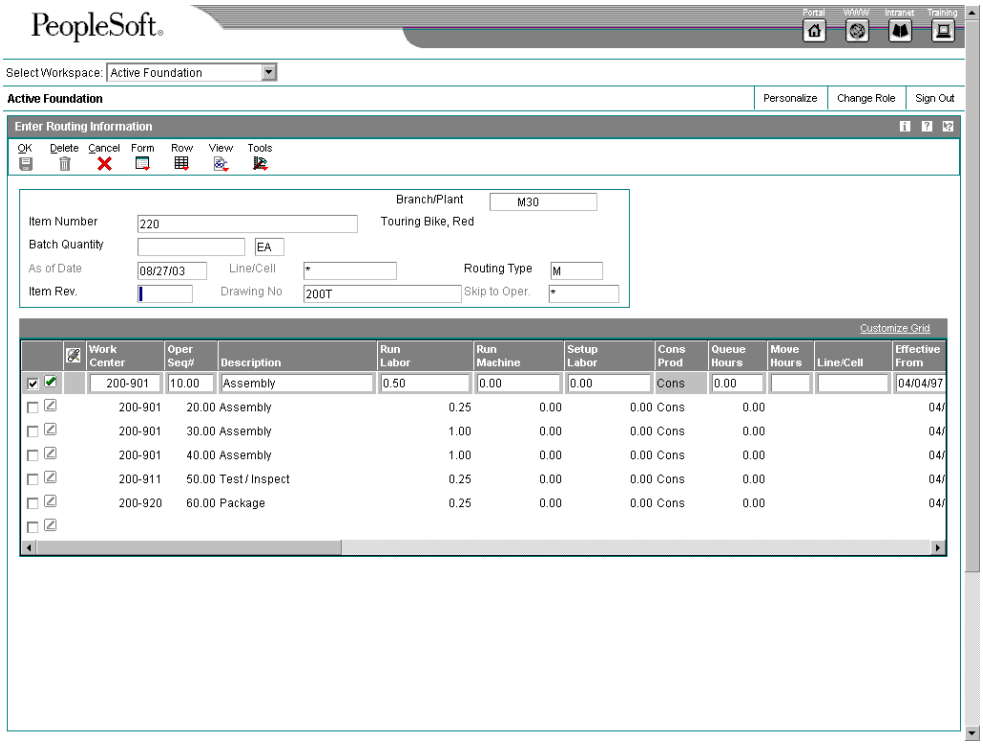
1. On Work With Routing Operations, complete the following fields and click Find:

    - Branch/Plant
    - Item Number

2. On Routing Selection Inquiry, choose the routing that you want and click Select.



3. To change any sequence, choose that row and click Select.



4. On Enter Routing Information, review the following fields for each operation sequence:

    - Line/Cell
    - Resource Units
    - Consuming Location

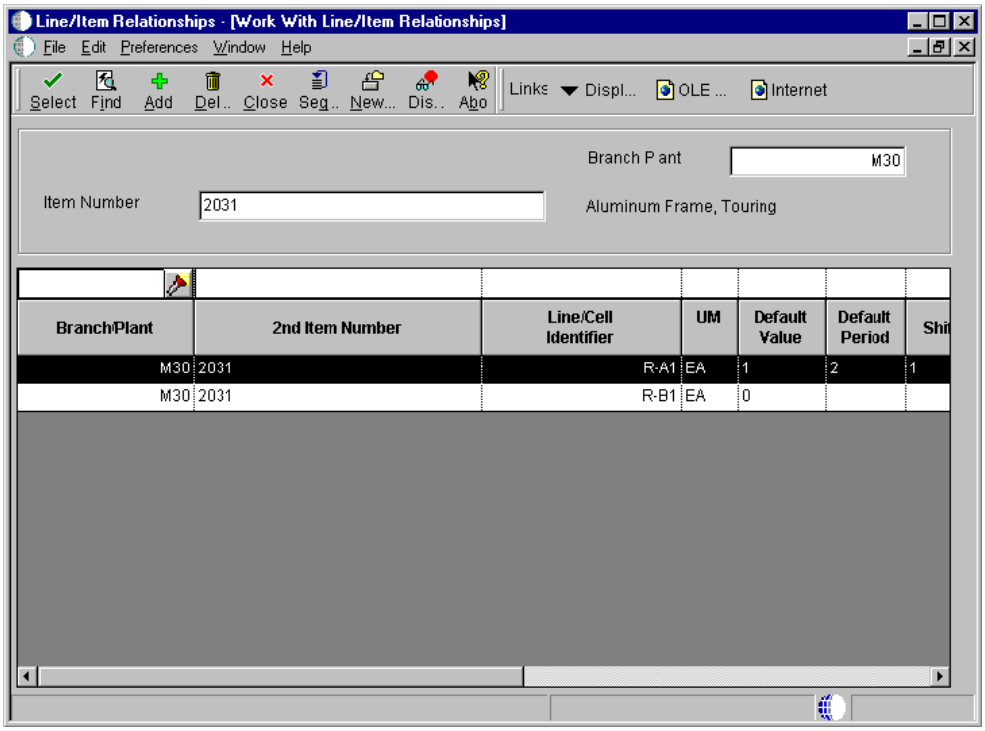
5. If you make changes to any operation, click OK.

See Also

- *Entering Routing Instructions* in the *Product Data Management Guide* to add, change, or delete routings

► To create line and item relationships

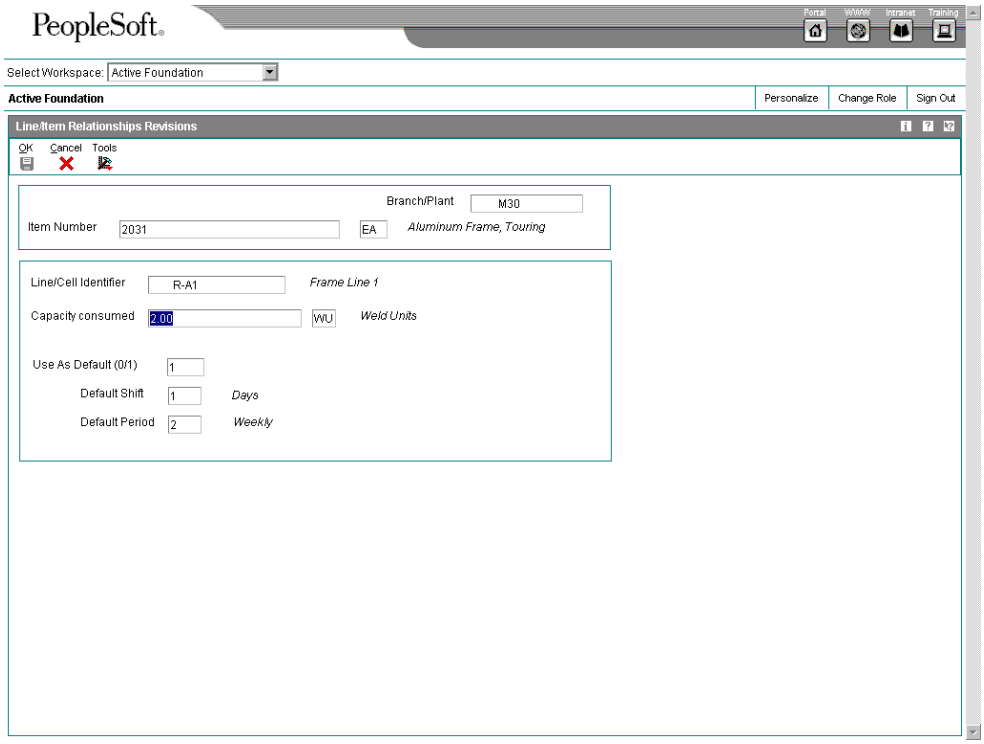
From the Shop Floor Management Setup menu (G3141), choose Line/Item Relationships.



1. On Work With Line/Item Relationships, complete the following fields and click Find:

    - Branch Plant
    - Item Number

2. Click Add.



3. On Line/Item Relationships Revisions, complete the following fields and click OK:

    - Line/Cell Identifier
    - Capacity consumed
    - Use As Default (0/1)

    Identify the default line/cell by typing 1.

    - Default Shift
    - Default Period

Creating Line and Item Relationships

Line/Item Relationships identifies on which production line a product is assembled. Line/Item Relationships also defines shift and period information for that line.

See Also

- *Setting Up Item to Line Relationships* in the *Shop Floor Management Guide*

Verifying Rate Schedules

A rate schedule is a request to produce a certain quantity of items on a specified periodic basis for a given length of time. Rate schedules eliminate the need to create multiple work

orders for items that you want to produce monthly, weekly, or daily in regular quantities. You generally use rate schedules in repetitive manufacturing.

To create a rate schedule, you:

- Specify engineering information, such as schedule types and effective dates
- Specify production information, such as the item and quantities on which the rate is based

You can use processing options to define a default schedule type, schedule period, and spread value. You can also choose to display only active schedules. In addition, you can access associated forms by indicating the version of these forms in the processing options. You can use these forms to view and modify information for routing, work center, MPS/MRP/DRP time series, rate generation, and scheduling.

When working with rate schedules, you should know the following:

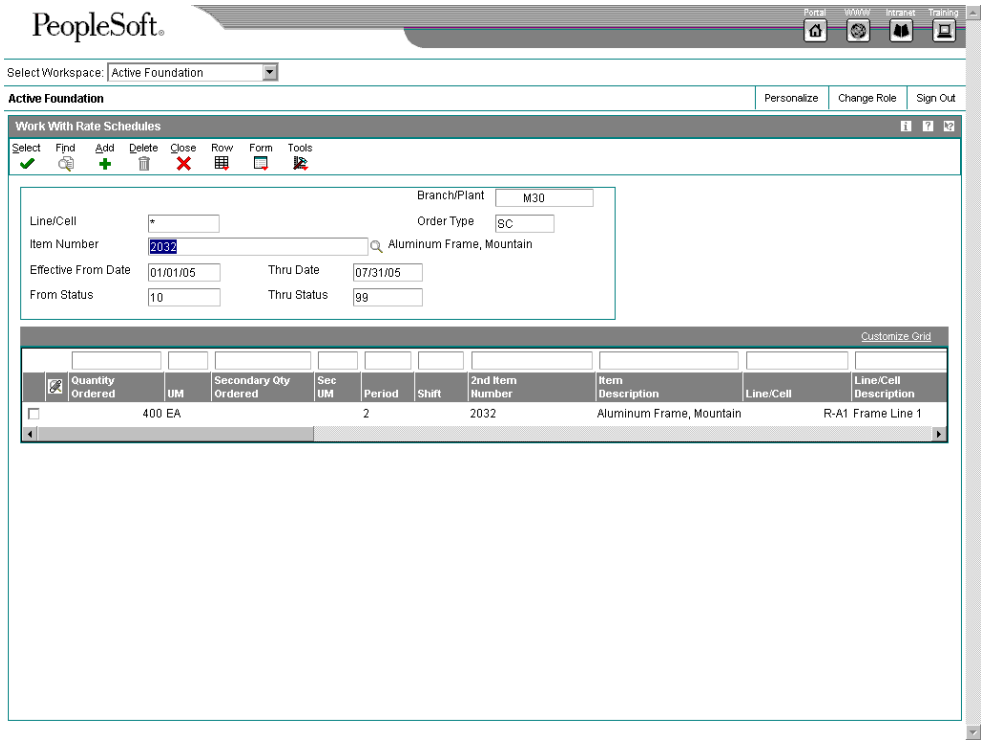
Delete a rate schedule	You can only delete a rate schedule if it has never been used. Active rate schedules cannot be deleted. You must close out the schedule.
Duplicate rate schedules	You can enter duplicate rate schedules.
Create automatically	You automatically create a rate when you process a Create Rate message in Detail Message Review.

Before You Begin

- ❑ Set up the work centers where manufacturing is completed. See *Setting Up Work Centers* in the *Shop Floor Management Guide.*
- ❑ Set up routing instructions. See *Attaching Routing Instructions* in the *Shop Floor Management Guide.*
- ❑ Set up line/item relationships. See *Creating Line and Item Relationships.*

► To verify rate schedules

From the Daily Processing - Repetitive menu (G3115), choose Enter/Change Rate Schedule.



1. On Work With Rate Schedules, complete the following fields and click Find:
    - Branch/Plant
    - Order Type
    - Item Number
    - Line/Cell
    - Effective From Date
    - Thru Date
    - From Status
    - Thru Status
2. Review the following default information:
    - Period
    - Shift

- Category 1
- Category 2
- Category 3
- Qty Completed
- Qty Scrapped

See Also

- *Entering Rate Schedules* and *Working with Repetitive Schedules* in the *Shop Floor Management Guide*

Multifacility Planning

In a multifacility operation, planned orders at the demand facility are the source of demand at the supply facility. You set up and maintain multifacility plans to:

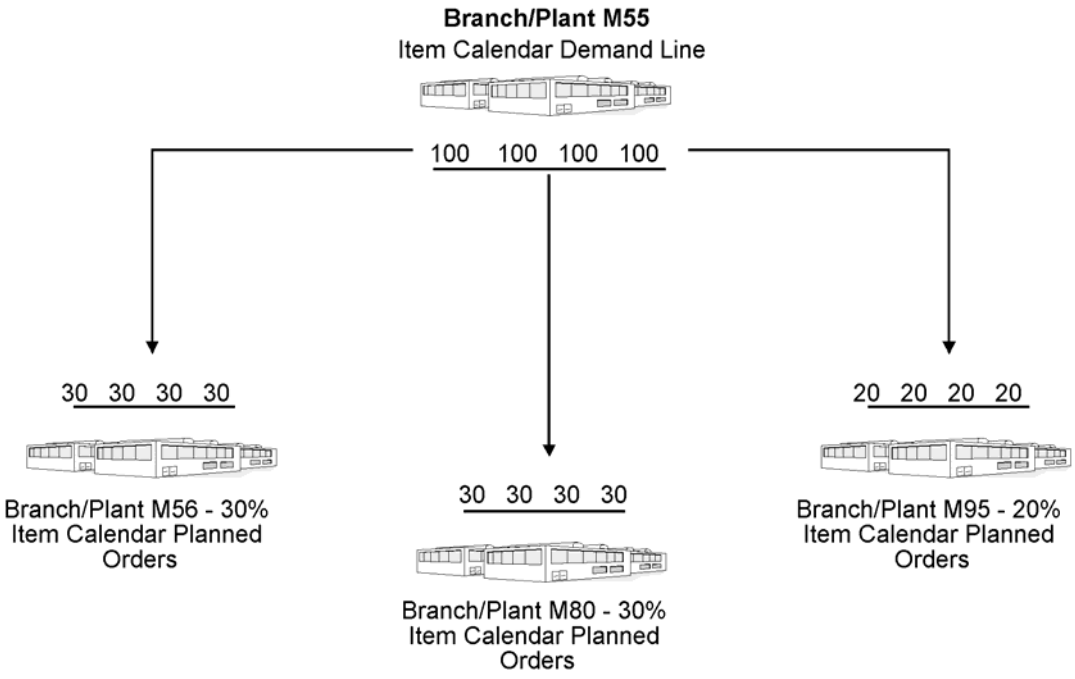
- Manage the movement of material through distribution networks and multiple production facilities
- Formalize the process of transferring items among your facilities
- Create internal transfer orders to help ensure traceability of materials and their costs between facilities
- Ensure that the facility from which you are ordering has enough inventory in stock to fill the order, or schedule the supply plant to produce it
- Schedule production according to realistic time frames
- Use assembly lines at one plant to begin the assembly of a product and a different plant for final assembly
- Handle all resupply movements throughout the manufacturing network

Multifacility plans allow greater control of your enterprise. You can define facility relationships at any level of detail for an entire facility, a product group, master planning family, or an individual item number. In addition, you can incorporate all your facilities into a single plan.

In MRP, the system transfers items among your manufacturing plants at the component level. The system transfers component items by generating:

- Purchase orders at the demand plant for the supply plant
- Sales orders from the demand plant at the supply plant

In the following example, the demand plant (M55) receives components from three different supply plants. Supply plants can also manufacture the end deliverable item.



A breakdown of the percentage received from each supply branch/plant indicates that M55 satisfies 80 percent of its required demands from the three supply branch/plants. In this case, the demand plant also supplies the remaining 20 percent of the end item.

Two types of multifacility planning are available:

Consolidation

Multifacility planning for consolidation allows you to:

- Combine all planning activity under one specific facility
- View total requirements throughout your network for an overall corporate projection
- View individual facilities' contribution to supply and demand, item availability, and sales
- Select processing options that generate planning for non-consolidated branches
- Consolidate all planning requirements at a selected branch
- Create plans for each of your individual facilities as well as an overall plan for the parent company

Branch relationships

Multifacility planning for branch relationships allows you to:

- Use the branch/plant relationships to explode demand through the supply network
- Provide a manufacturing or transfer facility code for a component item within a bill of material
- Pick or manufacture a part at a nearby facility without creating an interfacility transfer order
- Specify any number of supply facilities for each component
- Pass any of the demand from the demand plant to the supply plant

Topics

- Setting up multifacility planning
- Generating multifacility plans
- Working with multifacility plans

Setting Up Multifacility Planning

You set up multifacility planning to track supply, demand, and movement of material among the individual facilities of your enterprise. Multifacility planning provides a flexible method for planning supply and resupply activities.

In multifacility planning you must set up a table of supply and demand relationships among your facilities. The system uses these relationships to generate and maintain multifacility plans.

Topics

- Setting up supply and demand relationships
- Reviewing branch relationships

Before You Begin

- Verify that DRP or MPS is set up.
- Understand the concepts and terms described in *Master Production Scheduling.*
- Understand the concepts and terms described in *Material Requirements Planning.*

See Also

- *Setting Up the Planning Systems* for information about how to define DRP or MPS data that the system uses during processing

Setting Up Supply and Demand Relationships

Use Branch Relationships Revisions to set up supply and demand relationships for any level of detail that you choose, including:

- Branch/plant
- Product group
- Master planning family
- Individual item number

This approach allows you to maintain supply and demand relationships in one central location and reduce inventory errors caused by complex facility relationships. In addition, when you set up supply and demand relationships, you can use the following optional features:

Markup You can have the system automatically mark up the cost of an item when you create a transfer order. The system can adjust the cost by a fixed amount or percentage.

Availability checking You can ensure that the branch from which you are ordering has enough inventory in stock to fill the order. If the required quantity is not available, the system checks subsequent facilities in the sequence that you define.

Effectivity dates Use effectivity dates to control the demands that are placed on your supply branches. If an effectivity date that was assigned to a supply branch has expired, the system checks for another facility.

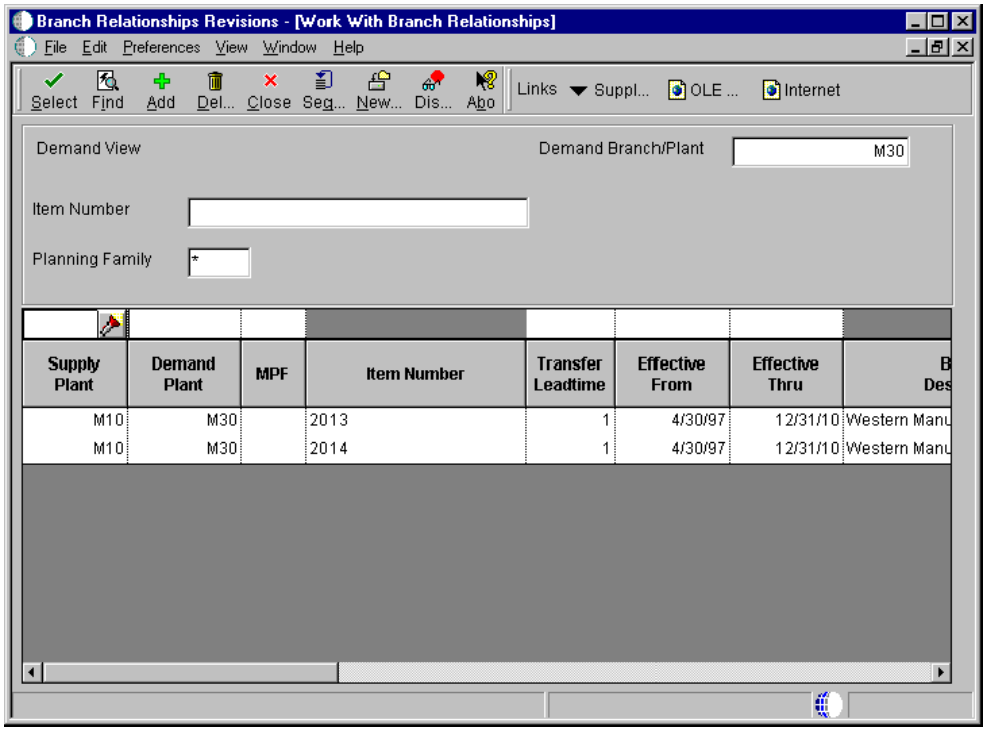
The MRP Branch Relationship Revisions program and the DRP/MPS Branch Relationship Revisions program use the same processing options. You can vary the settings in the processing options to accommodate the different requirements for a material requirements plan.

Caution

When you delete a supply and demand relationship, the system deletes the entire record.

► To set up supply and demand relationships

From the Multi-plant Setup menu (G3443), choose Branch Relationships Revisions.



1. On Work With Branch Relationships, complete one of the following fields:

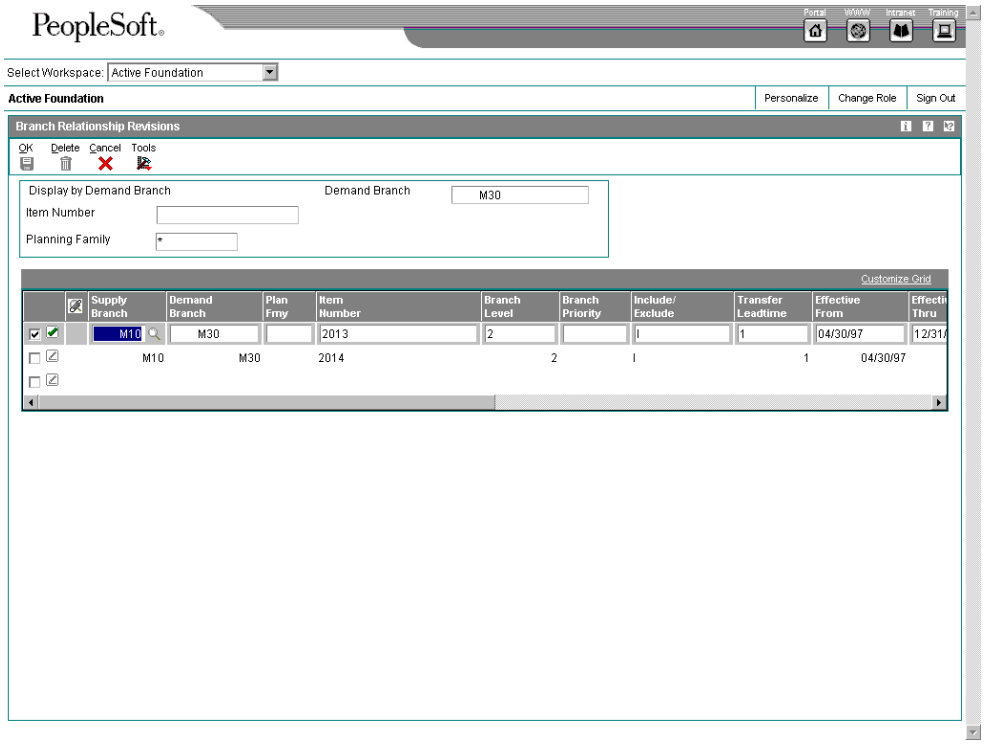
   - Supply Branch/Plant
   - Demand Branch/Plant

   Use the View menu to switch from viewing the supply branch/plant to viewing the demand branch/plant. A processing option controls which branch/plant is the default.

2. To narrow your search, complete one of the following fields and click Find. Enter an item number to display all branch/plants that either supply or demand a certain part. Enter the planning family to display all branch/plants that either supply or demand parts that belong to a specific master planning family.

   - Item Number
   - Planning Family

3. Choose the record and click Select.



4. On Branch Relationship Revisions, complete the following fields:

    - Effective From
    - Include/ Exclude
    - Source Percent
    - Percent To Fill
    - Percent Markup
    - Fixed Markup
    - Unit/ Extended

5. Complete the following optional fields, then click OK:

    - Transfer Leadtime
    - Branch Level
    - Branch Priority
    - Availability Check

Processing Options for Branch Relationship Revisions (P3403T)

Defaults
Enter the default Branch Relationship display mode.
1. 'D' = Demand branch 'S' = Supply branch
Enter a '1' to automatically update the Branch Level field.
2. Branch Level update

Note

You must set this processing option to ensure that the level of the component branch is one level higher than the header for the source branch. The branch level on the Defaults tab, along with the branch priority, determines the sequence in which the system processes supply and demand plants. The system processes the branches with the highest numerical branch levels first.

Reviewing Branch Relationships

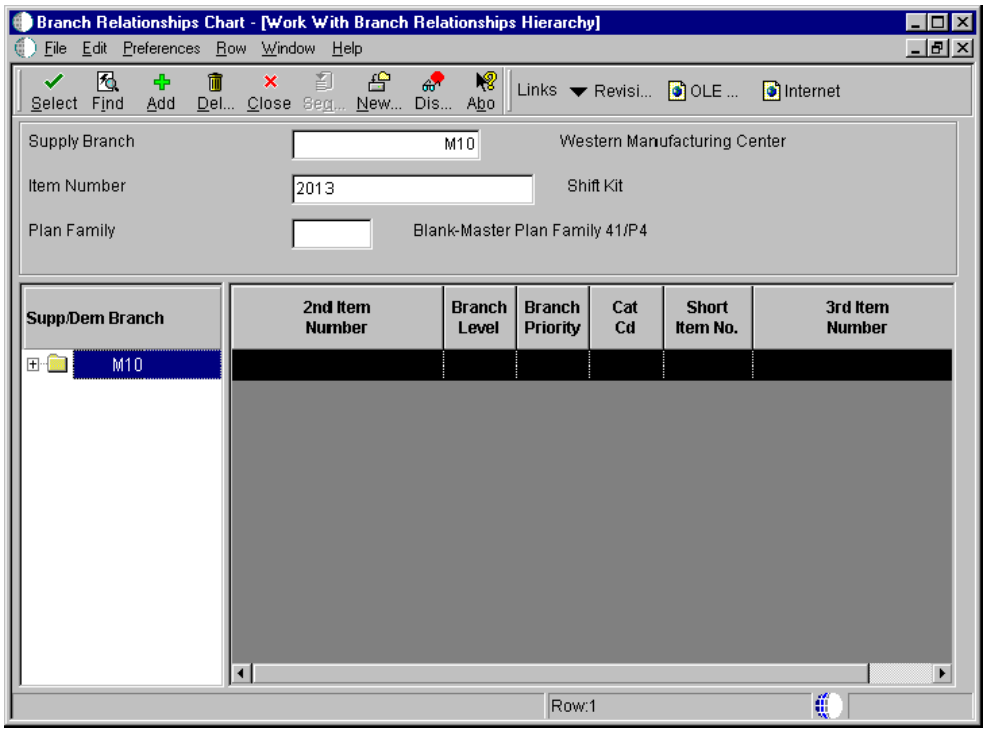
Use the Branch Relationships Chart to review supply and demand relationships in a graphical, hierarchical format. The Branch Relationships Chart displays the following:

- Branch
- Level of the branch
- Supply branches for the corresponding demand branch

The MRP Branch Relationships Chart program and the DRP/MPS Branch Relationships Chart program use the same processing options. You can vary the settings in the processing options to accommodate the different requirements for a material requirements plan.

► To review branch relationships

From Multi-Plant Setup (G3443), choose Branch Relationships Chart.



1. On Work With Branch Relationships Hierarchy, complete the following field to locate the branch/plant for which you want to display supply and demand relationships:

    - Supp/Dem Branch

2. To narrow your search to a specific level of detail, complete one of the following optional fields and then click Find:

    - Item Number
    - Plan Family

Generating Multifacility Plans

From the Periodic Multi-Facility Planning menu (G3483), choose MPS Regeneration or MRP Regeneration.

After you have set up the supply and demand relationships among your branch/plants, you can use DRP/MPS/MRP Regeneration to generate a multifacility plan. Alternatively, you can use DRP/MPS/MRP Net Change to generate a multifacility plan.

When you generate a multifacility plan, the system evaluates selected information, performs calculations, and recommends a time-phased plan for all selected items.

You can use MRP parallel processing once the standard tasks have been completed in system setup. In the parallel processing method, the system plans items simultaneously using multiple processors. This method takes place when a system executes a batch program on a server that has more than one processor. The parallel processing method

achieves significant performance gains, which are limited only by the number of processors that are available on your server.

The system creates a separate subsystem version to use parallel processing. In this version, the system uses a processing option that indicates the number of configured processors. The system uses these processors to execute the subsystem version.

Note

Transfer orders are not supported for configured items. Issues of stocked configured items will not be costed correctly if your company builds a configured subassembly in a different branch/plant than the configured parent.

Before You Begin

- Set up DRP/MPS multifacility planning. See *Setting Up Multifacility Planning.*

See Also

- *Understanding Parallel Processing* for additional information on how parallel processing works

Processing Options for Master Planning Schedule – Multiple Plant (R3483)

Horizon Tab

These processing options specify dates and time periods the program uses when creating the plan.

1. Generation Start Date

Use this processing option to specify the date the program uses to start the planning process. This date is also the beginning of the planning horizon.

2. Past Due Periods

3. Planning Horizon Periods

Number of planning days

Use this processing option to specify the number of days to be included in the plan. For example, when you view the time series, you see daily data for the number of planning days, then weekly data for the number of planning weeks, then monthly data for the number of planning months.

Number of planning weeks

Use this processing option to specify the number of weeks to be included in the plan. For example, when you view the time series, you see daily data for the number of planning days, then weekly data for the number of planning weeks, then monthly data for the number of planning months.

Number of planning months

Use this processing option to specify the number of months to be included in the plan. For example, when you view the time series, you see daily data for the number of planning days, then weekly data for the number of planning weeks, then monthly data for the number of planning months.

Parameters Tab

Use these processing options to define processing criteria. Please note the following about your choice of generation type.

Generation Type 1 = single-level MPS/DRP. This generation type can be used either in a distribution environment for purchased parts with no parent/component relationship, or in a manufacturing environment with parent/component relationships.

- The program produces a time series for each item specified in the data selection with a Planning Code of 1 on the Plant Manufacturing Data tab of the Work with Item Branch form. This code will indicate whether the item is manufactured or purchased.
- For manufactured items, no demand is exploded down to the components. Use generation type 1 if you want to process only the master scheduled end items first. Thus you can stabilize the schedule before placing demand on the components.
- No pegging records are created.

Generation Type 3 = multi-level MPS. This generation type is an alternative to generation type 1 and performs a complete top-to-bottom processing of master scheduled items. The program explodes demand for all parent items you specify in the data selection down to the components. You must specify all items to be processed in the data selection, not just the parent items. The program also creates pegging records.

Generation Type 4 = MRP with or without MPS. This generation type has the same functionality as generation type 3. If you have done a complete generation and stabilized your master schedule, you can limit data selection to MRP items (with Planning Codes of 2 or 3), thereby reducing processing time. This is possible because demand from the master

scheduled items is still stored in the MPS/MRP/DRP Lower Level Requirements (Pegging) table.

Generation Type 5 = MRP with frozen MPS. This generation type freezes the master schedule after it has been stabilized. Before running this generation type, you should make all necessary adjustments to master scheduled items and release orders to cover the demand. This generation type freezes the entire planning horizon similar to the way the freeze fence freezes a part of the horizon. Running this generation type has the following results which apply to MPS items only:

- No new orders will be planned.
- No messages for existing orders will be created.
- The Adjusted Ending Available quantity is allowed to go negative.
- Demand is only exploded down to components from existing work orders. There is no -PWO demand from parent items, only -FWO demand.

---

1. Generation Mode

1 = net change

2 = gross regeneration

A gross regeneration includes every item specified in the data selection. A

net change includes only those items in the data selection that have changed

since the last time you ran the program.

Valid values are:

1 net change

2 gross regeneration

2. Generation Type

1 = single level MPS/DRP

3 = multi-level MPS

4 = MRP with or without MPS

5 = MRP with frozen MPS

Please see the help for the Parameters tab for detailed information.

Valid values are:

1 single-level MPS/DRP

3 multi-level MPS

4 MRP with or without MPS

5 MRP with frozen MPS

3. UDC Type

Use this processing option to specify the UDC table (system 34) that contains the list of quantity types to be calculated and written to the Time Series table (F3413). Default = QT.

4. Version of Supply/Demand Inclusion Rules

Use this processing option to define which version of supply/demand inclusion rules the program reads. These rules define the criteria used to select orders for processing.

On-Hand Data Tab

These processing options define how the program calculates on-hand inventory.

1. Include Lot Expiration Dates

blank = do not include

1 = include

Use this processing option to specify whether the system considers lot expiration dates when calculating on-hand inventory. For example, if you have 200 on-hand with an expiration date of August 31, 2005, and you need 200 on September 1, 2005, the program does not recognize the expired lot and creates

a message to order or manufacture more of the item to satisfy demand.

Valid values are:

blank do not consider lot expiration dates when calculating on-hand inventory

1 consider lot expiration dates when calculating on-hand inventory

2. Safety Stock Decrease

blank = do not decrease

1 = decrease

Use this processing option to specify whether to plan based on a beginning available quantity from which the safety stock quantity has been subtracted.

Valid values are:

blank do not decrease

1 decrease

3. Receipt Routing Quantities

Quantity in Transit

blank = do not include in on-hand inventory

1 = include in on-hand inventory

In a manufacturing environment, sometimes it is necessary to establish where stock is, in order to determine whether or not it is available for immediate use. Enter 1 if you want quantities in transit to be included in the Beginning Available calculation on the time series. Otherwise, the program includes these quantities in the In Receipt (+IR) line of the time series. The quantities are still considered available by this program. The difference is

only in how you view the quantities in the time series.

Valid values are:

blank do not include in on-hand inventory

1 include in on-hand inventory

Quantity in Inspection

blank = do not include in on-hand inventory

1 = include in on-hand inventory

In a manufacturing environment, sometimes it is necessary to establish where stock is, in order to determine whether or not it is available for immediate use. Enter 1 if you want quantities in inspection to be included in the Beginning Available calculation. Otherwise, the program includes these quantities in the In Receipt (+IR) line of the time series. The quantities are still considered available by this program. The difference is only in how you view the quantities in the time series.

Valid values are:

blank do not include in on-hand inventory

1 include in on-hand inventory

User Defined Quantity 1

blank = do not include in on-hand inventory

1 = include in on-hand inventory

In a manufacturing environment, sometimes it is necessary to establish where stock is, in order to determine whether or not it is available for immediate use. Enter 1 if you want these user defined quantities (defined on Receipt

Routings Revisions in the Update Operation 1 field) to be included in the Beginning Available calculation. Otherwise, the program includes these quantities in the In Receipt (+IR) line of the time series. The quantities are still considered available by this program. The difference is only in how you view the quantities in the time series.

Valid values are:

blank do not include in on-hand inventory

1 include in on-hand inventory

User Defined Quantity 2

blank = do not include in on-hand inventory

1 = include in on-hand inventory

In a manufacturing environment, sometimes it is necessary to establish where stock is, in order to determine whether or not it is available for immediate use. Enter 1 if you want these user defined quantities (defined on Receipt Routings Revisions in the Update Operation 2 field) to be included in the Beginning Available calculation. Otherwise, the program includes these quantities in the In Receipt (+IR) line of the time series. The quantities are still considered available by this program. The difference is only in how you view the quantities in the time series.

Valid values are:

blank do not include in on-hand inventory

1 include in on-hand inventory

4. Lot Hold Codes (up to 5)

blank = include no held lots in calculation of on-hand inventory

*** = include all held lots in calculation of on-hand inventory**

Use this processing option to specify the lots to be included in the

calculation of on-hand inventory. You can enter a maximum of 5 lot hold codes (41/L).

blank include no held lots in calculation of on-hand inventory

* include all held lots in calculation of on-hand inventory

Forecasting Tab

These processing options serve two purposes:

- To determine what forecast types the program reads as demand
- To initiate special logic for forecast consumption

1. Forecast Types Used (up to 5)

Forecasts are a source of demand. You can create forecasts using 12 different forecast types (34/DF) within the Forecasting system. One is considered the Best Fit (BF) type compared to an item's history of demand. Use this processing option to define which forecast quantities created by which forecast type are included in the planning process. Enter multiple values with no spaces, for example: 0102BF.

2. Forecast Consumption Logic

blank = do not use

1 = use

If you use forecast consumption, any sales order due in the same period as the forecast is included as part of the forecast for that period. It is not an additional source of demand.

To use forecast consumption, an item's Planning Fence Rule must be H and the Planning Fence must be 999. These values are set on the Plant Manufacturing Data form.

Valid values are:

blank do not use forecast consumption

1 use forecast consumption

3. Interplant Demand Consumes Forecast

blank = do not use

1 = use

When using forecast consumption, use this processing option to specify whether to use interplant demand to consume forecast. When using any other planning rule, you can use this option to specify whether to consider interplant demand as customer demand. When the option is set, the system considers interplant demand for firm and planned transfer orders.

When the option is blank, the system ignores interplant demand by forecast consumption or planning rules and considers interplant demand as a separate source of demand. Valid values are:

Blank Do not consider interplant demand as customer demand.

1 Consider interplant demand as customer demand.

Document Types Tab

These processing options establish default document types.

---

1. Purchase Orders

When you receive messages related to purchase order creation, this document type will appear as the default. The default value is OP.

2. Work Orders

When you receive messages related to work order creation, this document type will appear as the default. The default value is WO.

---

3. Rate Schedules

When you receive messages related to rate schedule creation, this document type will appear as the default. The default value is AC.

Leadtimes Tab

Use safety leadtimes to allow extra time for delays in receipt or production. Use damper days to filter out unwanted messages.

---

1. Purchased Item Safety Leadtime

For items with stocking type P, the program adds the value you enter here to the item's level leadtime to calculate the total leadtime.

2. Manufactured Item Safety Leadtime

For items with stocking type M, the program adds the value you enter here to the item's level leadtime to calculate the total leadtime.

3. Expedite Damper Days

Expedite messages are suppressed, starting on the generation start date and continuing for the number of days you enter here.

4. Defer Damper Days

Defer messages are suppressed, starting on the generation start date and continuing for the number of days you enter here.

Performance Tab

These processing options define output, and increase or decrease processing time.

---

1. Clear F3411/F3412/F3413 Tables

blank = do not clear tables

1 = clear tables

Use this processing option with extreme caution! If you enter 1, all records

in the MPS/MRP/DRP Message table (F3411), MPS/MRP/DRP Lower Level Requirements

(Pegging) table (F3412), and MPS/MRP/DRP Summary (Time Series) (F3413) table

are purged.

Access to this program should be limited. If multiple users run this program

concurrently with this processing option set to 1, a record lock error results

and prevents complete processing.

Valid values are:

blank do not clear tables

1 clear tables

2. Initialize MPS/MRP Print Code

blank = do not initialize the Item Branch file

1 = initialize the Item Branch file

If you enter 1 in this processing option, the program initializes every record

in the Item Branch table (F4102) by setting the Item Display Code (MRPD) to

blank.

If you leave this field blank, processing time is decreased. The system will

not clear the records in the Item Branch table (F4102).

Regardless of how you set this processing option, for each item in the data

---

selection the MRPD field is updated as follow:

- 1 if messages were not created
- 2 if messages were created

The Print Master Production Schedule program (R3450) allows you to enter data selection based on the MRPD field.

Valid values are:

blank Do not initialize the Item Branch file.

1 Initialize the Item Branch file.

3. Messages And Time Series for Phantom Items

blank = do not generate

1 = generate

Use this processing option to specify whether the program generates messages and time series for phantom items.

Valid values are:

blank do not generate

1 generate

4. Ending Work Order Status

blank = all messages exploded

Use this processing option to specify the work order status at which messages are no longer exploded to components. If you leave this field blank, all messages are exploded to components.

5. Extend Rate Based Adjustments

blank = do not extend

1 = extend

Use this processing option to specify whether adjustments for rate based items are exploded to components, thereby creating messages for the components.

Valid values are:

blank do not extend

1 extend

6. Closed Rate Status

Use this processing option to specify the status of closed rates. When you plan for a rate-based item, the system does not process rate orders that are at a closed-rate status or a higher status.

Process Mfg Tab

If you use process manufacturing, enter 1 to generate the plan based on the forecasts of the co-/by-products for the process. The program then creates messages for the process.

---

1. Process Planning

blank = discrete

1 = process

If you use process manufacturing, enter 1 to generate the plan based on the forecasts of the co-/by-products for the process. The program then creates messages for the process.

Valid values are:

blank discrete

---

1 process

Multifacility Tab

These processing options define criteria in a multi-facility environment.

1. Process Each Branch

blank = do not process each branch

1 = process each branch

If your consolidation method is 2 (branch relationships), use this processing option to process each branch from the Branch Relationships table at each level that branch occurs. This option increases processing time.

Valid values are:

blank do not process each branch

1 process each branch

2. Date Branch

Enter the default branch/plant from which to retrieve the shop floor calendar. If you leave this field blank, the calendar for each branch/plant is used and processing time increases.

3. Consolidation Method

1 = simple consolidation

2 = branch relationships (default)

The simple consolidation method (1) adds the supply and demand for each branch, calculates a new time series, and places the result in the

consolidated branch specified in the Consolidation Branch processing option.

The branch relationships method (2) uses the Branch Relationships table. This is the default.

Valid values are:

1 simple consolidation

2 branch relationships (default)

4. Run Regular Planning

blank = do not include branch/plants being consolidated

1 = include branch/plants being consolidated

If your consolidation method is 1 (simple consolidation), enter 1 to perform the generation on the branch/plants that are being consolidated, thus using the most current data. If you leave this field blank, the program uses existing time series data.

Valid values are:

blank do not include branch/plants being consolidated

1 include branch/plants being consolidated

5. Consolidation Branch

If your consolidation method is 1 (simple consolidation), enter the branch/plant to contain the consolidated results. If the consolidated branch/plant also contains its own time series data, that data is included in the totals.

6. Category Code

1 = 41/P1

2 = 41/P2

3 = 41/P3

4 = 41/P4

5 = 41/P5

If your consolidation method is 2 (branch relationships), enter the category code of the part that is supplied by one branch/plant to another. There are five user defined category code tables.

Valid values are:

1 41/P1

2 41/P2

3 41/P3

4 41/P4

5 41/P5

7. Manufacture At Origin

blank = create transfer orders for manufactured and purchased items

1 = create transfer orders only for purchased items

Enter 1 if there are manufactured and purchased items in the same category code, but you only want to obtain the purchased items from another branch/plant. Transfer order messages are created for purchased items, and work order messages are created for manufactured items.

Valid values are:

blank create transfer orders for manufactured and purchased items

1 create transfer orders only for purchased items

8. Transfer Order Document Type

blank = OT

When you receive messages related to transfer order creation, this document type will appear as the default. The default value is OT.

Parallel Tab

These processing options specify the number of processors that the system uses during parallel processing. These options also specify whether the system runs preprocessing during parallel processing.

---

1. Number of Subsystem Jobs

0 = Default

Use this processing option to specify the number of subsystems in a server.

The default is 0 (zero).

2. Pre Processing

blank = Do not perform pre processing

1 = Perform pre processing

Use this processing option to specify whether the system runs preprocessing during parallel processing. During preprocessing, the system checks supply and demand and plans only the items within supply and demand. Preprocessing improves performance when you run MRP and is valid only when the number of items actually planned is less than the total number of items in the data selection. Valid values are:

Blank The system does not run preprocessing.

1 The system runs preprocessing.

Working with Multifacility Plans

Multifacility planning output consists of information in the time series and transfer order messages. Use the time series information to either accept or override the planning that the system suggests. You should review the transfer order messages for individual item numbers to determine which action, if any, that you need to take.

Topics

- Reviewing the time series for the multifacility schedule
- Processing transfer order messages for the multifacility schedule

Reviewing the Time Series for the Multifacility Schedule

Use Time Series Inquiry to review the times series for the multifacility schedule. The multifacility schedule is a record of time-phased supply and demand for selected items. This data is derived from the most recent regeneration or net change run. Processing options in the DRP/MPS regeneration program enable you to set up daily, weekly, or monthly time periods (buckets).

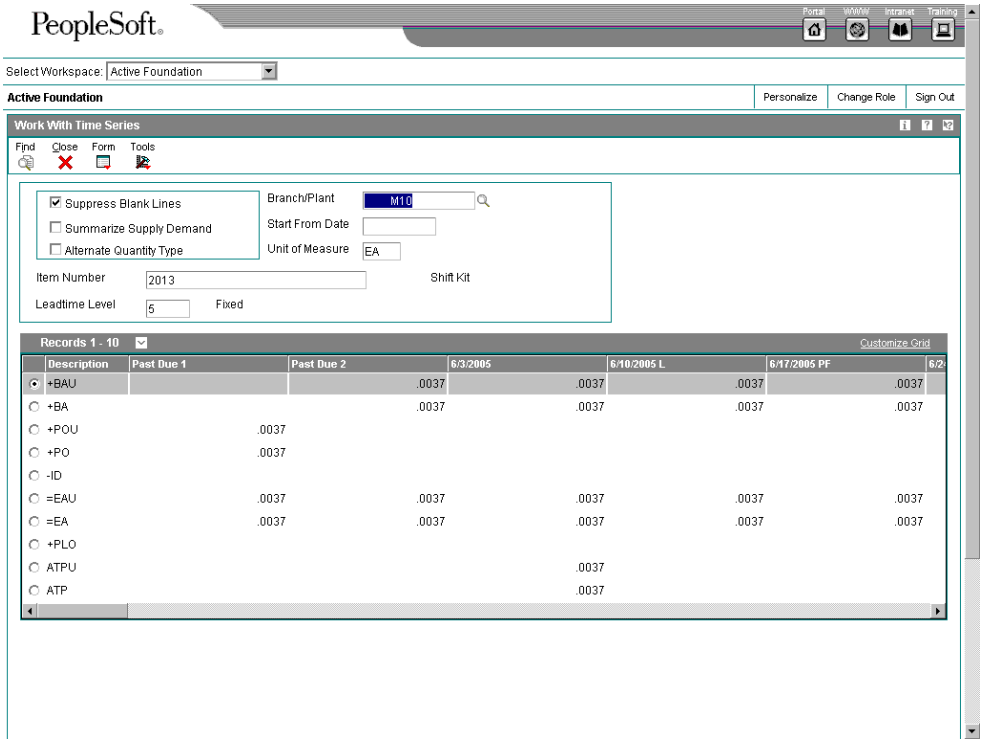
In multifacility planning, the system uses the following quantity types in the time series:

+PLO Represents the recommended replenishment orders for an item. This quantity type appears on the demand branch's time series.

-ID Interplant demand. This quantity type indicates the net demand that the system transfers to the supply branch/plant for all demand branch/plants.

► To review the multifacility time series

From the Multi-Facility Planning Daily Operations menu (G3414), choose Time Series/ATP Inquiry.



On Work With Time Series, complete the following fields and click Find to locate the time series for an item:

- Branch/Plant
- Item Number

See Also

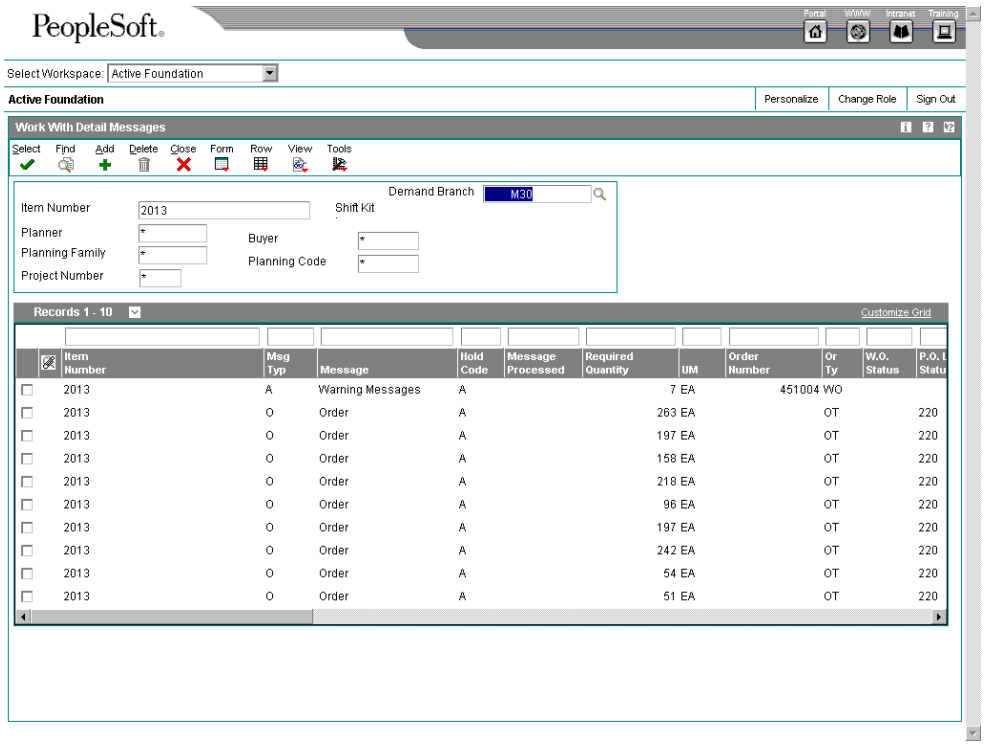
- *Reviewing the Time Series*

Processing Transfer Order Messages for the Multifacility Schedule

Use Detail Message Review to review the transfer order messages for the multifacility schedule. Multifacility scheduling creates messages that are appropriate to the demand and supply facilities. If you process the messages, the system automatically creates transfer orders. You can transfer items between facilities either at cost or at a markup.

► To process multifacility transfer order messages

From the Multi-Facility Planning Daily Operations menu (G3414), choose Detail Message Review.



1. On Work With Detail Messages, complete the following fields and click Find to locate the transfer order messages for an item:
    - Demand Branch
    - Item Number
2. Choose the transfer order messages that you want to process.
3. From the Row menu, choose Process Message to create the following:
    - Transfer order for the item
    - Purchase order number for the demand plant
    - Sales order number for the supply plant
4. Review the information for the new orders in the following fields:
    - Request Date
    - Recmd'd Complete
    - Recmd'd Start Date

- Start Date
- Order Number
- Demand Branch
- Supply Branch

Multifacility Forecast Consumption

Multifacility forecast consumption in Material Requirements Planning (MRP) is a process to reduce the forecast quantity through the number of sales orders and shipped orders. The goal of forecast consumption is to have your forecast quantity be greater than the total of sales orders and shipped orders. The forecast quantity is consumed either fully or partially. For example, when the sales order quantity is greater than the forecast quantity, then the forecast quantity is fully consumed.

Time Series Quantity Types

The system uses the following quantity types (34/QT) for multifacility consumption:

-FIDU Firm interplant (unadjusted). This quantity type represents orders for transfer sales that the system generates. This quantity does not use planning messages to increase, decrease, expedite, or defer the orders.

-FID Firm interplant demand. This quantity type represents orders for transfer sales that the system generates. This quantity uses planning messages to increase, decrease, expedite, or defer the orders.

-TIU Total independent demand (unadjusted). This quantity type represents the total quantity that the system uses to consume forecast when you use forecast consumption. When you compare customer demand to forecast quantity, for example the G or the C planning rule, -TIU is the quantity that the system uses as customer demand. This quantity might or might not include interplant demand (-ID and -FID). Interplant demand depends on the Interplant Demand processing option for the Master Planning Schedule program (R3483).

-TI Total independent demand. This quantity type represents the quantity for customer demand after the system runs forecast consumption logic.

-ID Interplant demand. This quantity type represents the quantity of demand that the system generates to support another facility's requirements.

Calculations

If the Interplant Demand processing option for the Master Planning Schedule - Multiple Plant program (R3483) is on, the transfer orders consume the supply plant's forecast. The system does not plan the transfer orders again. The system uses the following calculations when the Interplant Demand processing option is on:

- -TIU = (-SOU) + (-ID) + (-FID)
- +PLO = (-FSCT) + (-TI)

If the Interplant Demand processing option is off, the system processes the transfer orders as additional demand for the supply plant. The system uses the following calculations when the Interplant Demand processing option is off:

- (TIU) = (-SOU)
- +PLO = (-FSCT) + (-FID) + (-TI) + (-ID)

Additional Options for Multifacility Forecast Consumption

To have interplant demand consume forecast, you need to add your transfer order type to UDC table 40/CF. The system then accumulates ship-confirmed transfer orders to accumulate in the -SHIP quantity type, while still using the orders to consume forecast. Also, regardless of the Interplant Demand processing option, the system processes interplant demand consistently whether the order is planned demand or firm demand. For example, interplant demand either consumes or does not consume forecast.

If you do not want to use the new quantity types, you can make a copy of the 34/QT table with the necessary quantity types. The system completes the the calculations, but does not display them on the time series. The system displays the following results when you remove the following quantity types:

-FIDU The system does not write the orders to the time series.

-FID The system adds the orders to the -ID quantity type.

-TIU The system does not write the orders to the time series.

-TI The system writes the orders to the -SO quantity.

Supplier Scheduling

Setting up supplier schedules provides your suppliers with consistent shipping information and advanced demand profiles to support your goal of just-in-time production and delivery. Using supplier schedules enables you to convert your DRP/MPS/MRP plans into a realistic shipping schedule.

The supplier schedule identifies both short- and long-term needs for purchased items at your facility. Your buyers maintain timely information to monitor contract terms against your current supply and demand needs. Suppliers can then use your supplier schedule to plan their production and shipping schedules.

You set up and maintain supplier schedules to:

- Support item-specific relationships for scheduled shipments at the supplier's site
- Set up blanket purchase orders and material shipping arrangements with each supplier
- Generate a shipping schedule for all supplier-scheduled demand within your release horizon
- Generate multiple supplier schedules for a single item
- Adjust the shipping schedule for unplanned events and create blanket order releases

You can use the J.D. Edwards Procurement system to place purchase or blanket orders with your suppliers.

What is a blanket order?

A blanket order is a standing purchase order that you issue to a supplier for a large quantity of goods with no specific delivery date. The process of scheduling supplier items begins in the J.D. Edwards Procurement system with the creation of a blanket order. You must create a blanket order for every item that you want to schedule for supplier delivery. Use Enter Blanket Order in the Procurement system to enter blanket orders from items. You can review all blanket orders for a single item when you set up a supplier schedule. Supplier release scheduling allows you to set up multiple blanket orders for the same supplier. The system uses a technique similar to effectivity dates to determine the active order. The system uses the blanket order date as the start date and the requested date as the end date.

What is blanket order release?

You use a blanket order release for suppliers to whom you periodically release orders for delivery of some, but not all, of the goods on a purchase order. For example, you might issue a blanket order release for 16,000 items from a supplier. In addition, you might have an agreement to take delivery of up to 2,000 units of the item each month until the order is filled. When the Supplier Scheduling program processes the order suggestions, the system generates a purchase order against the blanket order. Receipts for the generated orders reduce the total quantity that remains open on the blanket order.

What are order effective dates?

The effective date range for a blanket order is specified by the beginning order entry date and the expiration requested date.

The following example outlines the steps that you follow to create a supplier schedule:

5. **Blanket Order Entry**

   Enter an order for specified items from a particular supplier for a specific date range. See *Entering Blanket Orders* in the *Procurement Guide*.

6. **Define Supplier Contract**

   Define the details of your contract with the supplier on the Enter/Change Supplier Information form. See *Defining Supplier Contracts.*

7. **Define Shipment Patterns**

   Define which days are valid to receive a shipment. See *Defining Shipment Patterns.*

8. **Run DRP/MPS/MRP**

   Run DRP/MPS/MRP to plan order quantities in terms of time and quantity. See *Generating Material Requirements Plans.*

9. **Review Messages from MRP**

   Review, expedite, defer, or cancel any of the MRP messages. See *Working with Messages for MRP.*

10. **Supplier Split Percentage (Optional)**

    Define necessary split percentages between suppliers by item. See *Defining Supplier Split Percentages*.

11. **Generate Supplier Schedule**

    Generate a draft of your supplier schedule prior to committing to a final schedule. See *Generating Supplier Schedules.*

12. **Review and Revise Supplier Schedule**

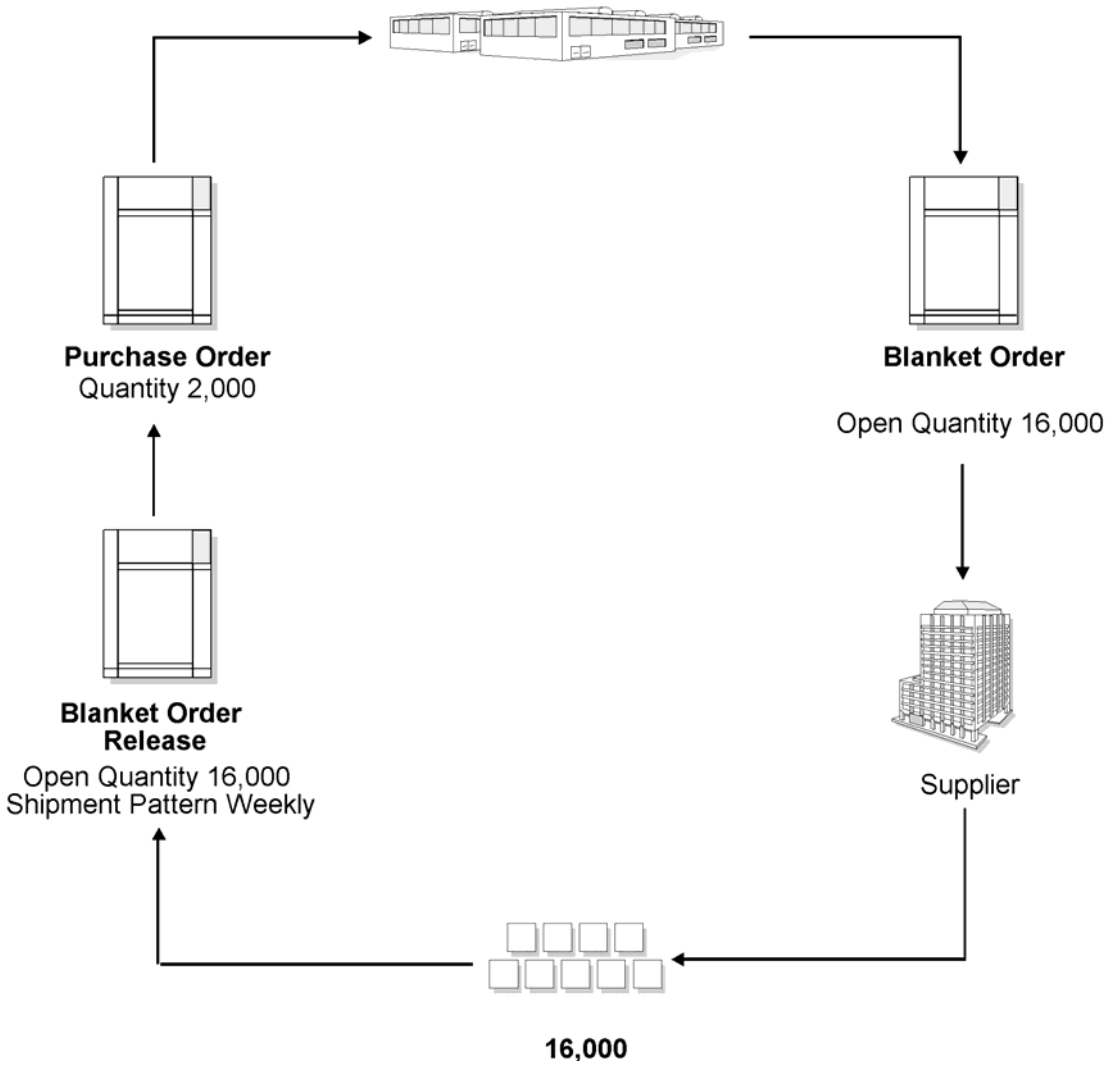
    Update system-scheduled quantities to compensate for last-minute changes to the schedule. See *Revising Supplier Schedules.*

13. **Approve and Release Supplier Schedule**

    Release quantities from the blanket order and create purchase orders for all quantities within the releasable time fence. See *Releasing Supplier Schedules.*

14. **Print Supplier Schedule (Optional)**

    Print a report showing the shipment schedule and the releasable quantities. See *Printing Supplier Schedules.*



Topics

- Defining supplier contracts
- Generating supplier schedules
- Revising supplier schedules
- Releasing supplier schedules
- Printing supplier schedules (optional)

Defining Supplier Contracts

You must enter the terms of your contract with each of your suppliers. The system uses these contract terms to generate and maintain supplier schedules.

In addition, if you want to generate multiple supplier schedules for a single item, you must define necessary split percentages between the suppliers by item.

Topics

- ❑ Define supplier contract information
- ❑ Define shipment patterns
- ❑ Define supplier split percentages

Defining Supplier Contract Information

When you define a supplier contract, you can also define time fence periods, or rules, for freezing delivery quantities, releasable schedule days, and future requirements.

When you generate a schedule, the system:

- Sorts blanket order releases that are outstanding into appropriate time periods.
- Accumulates past due quantities and quantities that you received prior to the requested date.
- Expresses past due amounts as positive numbers in the Past Due field.
- Expresses early receipt amounts in the Early Receipt field and adds the amounts to the cumulative received quantity.

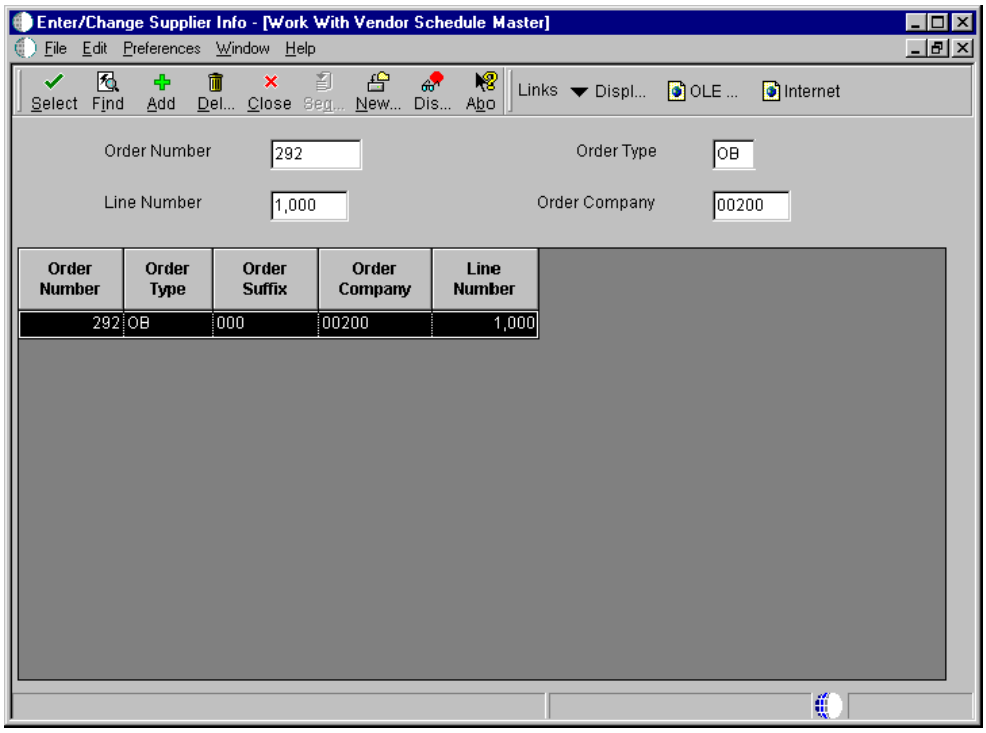
When you regenerate the schedule, the system displays the quantities in the Past Due and Early Receipt fields on Vendor Schedule Master Revisions. When you delete supplier information, the system deletes the entire record, including the history.

Before You Begin

- ❑ Create a blanket order for every item that you want to schedule through supplier scheduling. See *Entering Blanket Orders* in the *Procurement Guide.*

► To define supplier contract information

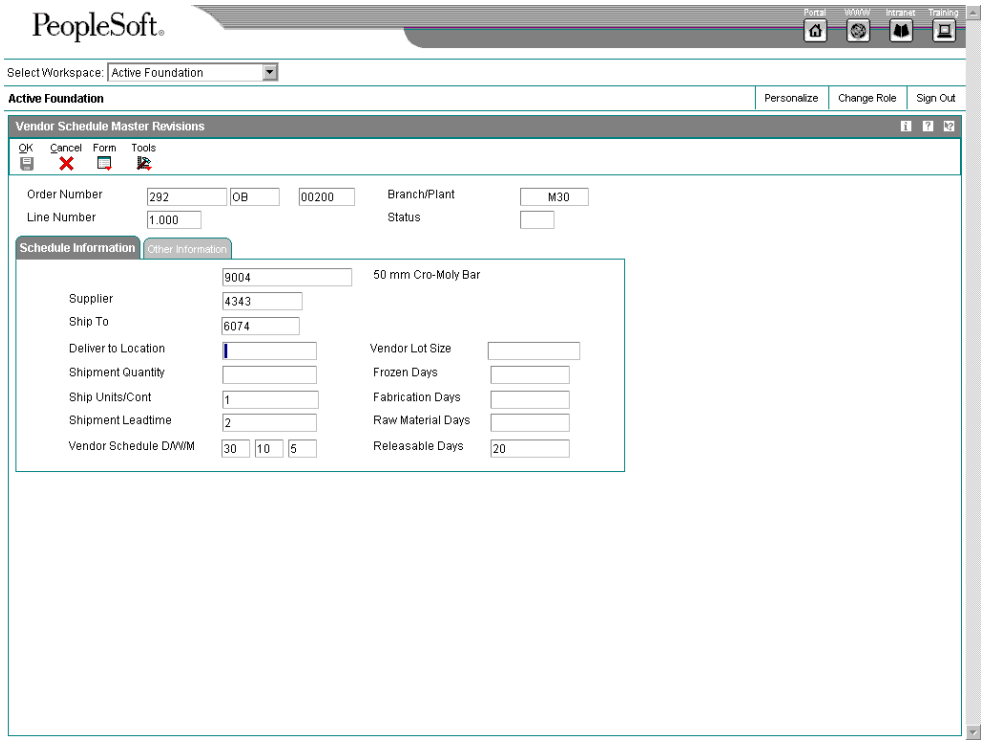
From the DRP or MRP Daily Operations menu (G3411 or G3413), choose Enter/Change Supplier Information.



1. On Work With Vendor Schedule Master, complete the following fields and click Find to add schedule information for each line on the blanket order:

    - Order Number
    - Line Number
    - Order Company
    - Order Type

2. Click Add.



3. On Vendor Schedule Master Revisions, complete the following fields:

    - Vendor Schedule D/W/M
    - Releasable Days

    Identify the period of time from the generation start date that purchase orders will be created for blanket orders. Any quantities that are scheduled outside of this period are still considered in planning status and do not produce actual purchase orders.

4. Complete the following optional fields and click OK:

    - Deliver to Location
    - Shipment Quantity
    - Ship Units/Cont
    - Frozen Days

    Specify the time frame from the generation start date within which deliveries are frozen.

    - Fabrication Days

    Identify the time period from the generation start date, within which the customer guarantees fabrication costs for the quantities they ordered on the schedule, even if the order is canceled. This rule is optional.

- Raw Material Days

  Identify the time period from the generation start date, within which raw material costs are guaranteed by the customer, even if the order is canceled. This rule is optional.

- Vendor Lot Size

Processing Options for Supplier Schedule Master Revisions (P4321)

Versions
Enter the version of each program.
If left blank, ZJDE0001 will be used.
1. Purchase Order Header, Purchase Order Header (P4310)
2. Purchase Orders, Work With Purchase Order Detail (P4310)
3. Supplier Schedule (P34301)
4. Supplier Split Percentage (P43211)

Defaults
1. Enter the Document Type to display.

Defining Shipment Patterns

You must define which days are valid to receive a shipment. You can define a pattern that governs the frequency of supplier deliveries. For example, you can define one of the following shipment patterns:

- All workdays
- Every Monday
- Monday through Friday of the first and third weeks of the month

Topics

- ❑ Creating shipment patterns
- ❑ Revising shipment patterns

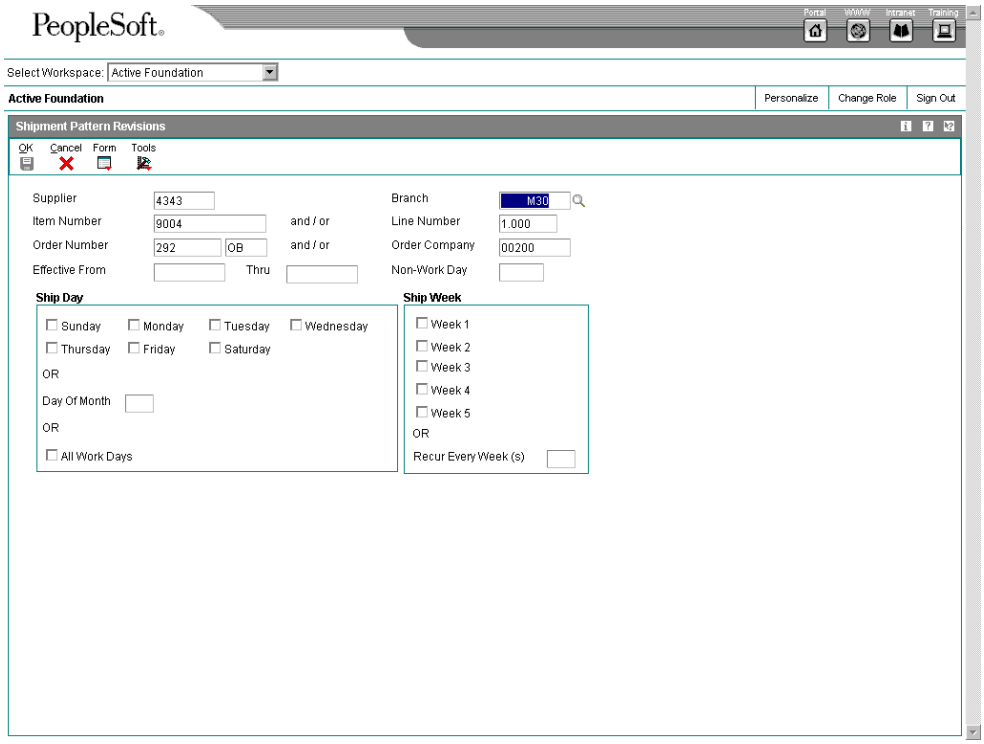
► To create shipment patterns

From the DRP or MRP Daily Operations menu (G3411 or G3413), choose Enter/Change Supplier Information.

1. On Work With Vendor Schedule Master, complete the following fields and click Find to locate a line on the blanket order:

   - Order Number
   - Line Number

2. Choose a record and click Select.
3. On Vendor Schedule Master Revisions, choose Shipment Pattern from the Form menu.



4. On Shipment Pattern Revisions, complete the following field:
    - Effective From
5. Choose one or more of the following options under Ship Day:
    - Sunday
    - Monday
    - Tuesday
    - Wednesday
    - Thursday
    - Friday
    - Saturday
6. Alternatively, choose one of the following options under Ship Day:
    - Day Of Month
    - All Work Days

7. Choose one or more of the following optional fields under Ship Week:

    - Week 1
    - Week 2
    - Week 3
    - Week 4
    - Week 5

    Note
    Week 1 begins with the first day of the month. For example, a week might be Wednesday through Tuesday.

8. Alternatively, complete the following optional field under Ship Week:

    - Recur Every Week (s)

9. Click OK.

    Note
    The system generates a shipment pattern, which you can review by taking a Form exit to Shipment Dates. Modifications to the newly generated shipment pattern are made from the Work With Shipment Dates form.

When you re-enter the Shipment Patterns Revisions form, all values are blank. You can do one of the following:

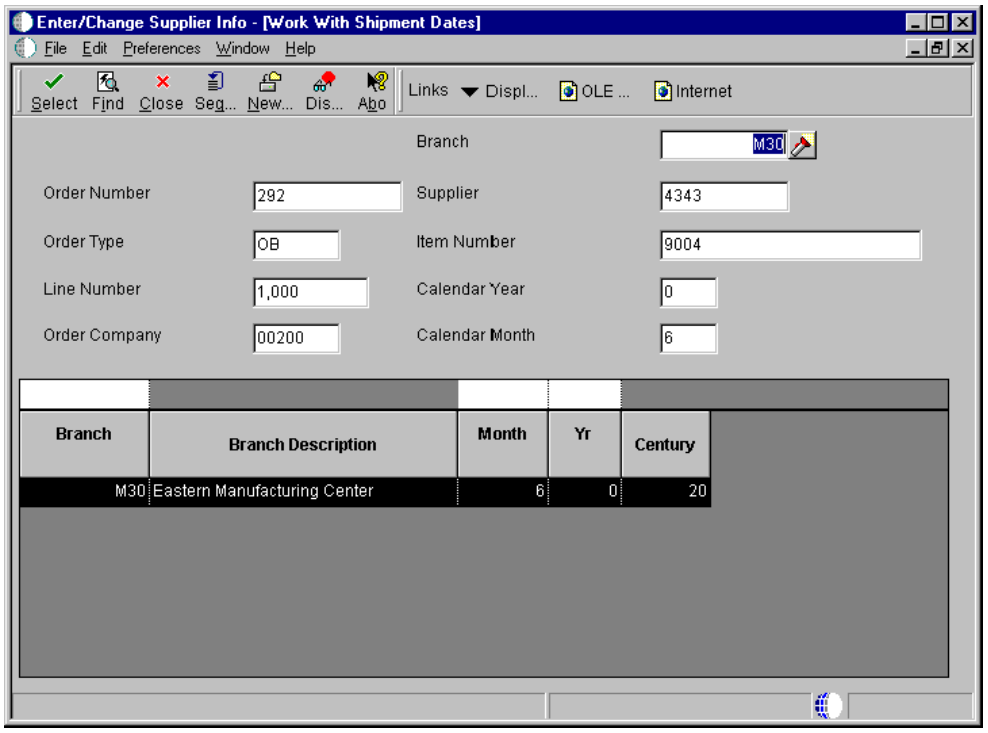
- Enter new values and generate a new shipment pattern
- Use the Work With Shipment Dates form to display the correct shipment pattern

► To revise shipment patterns

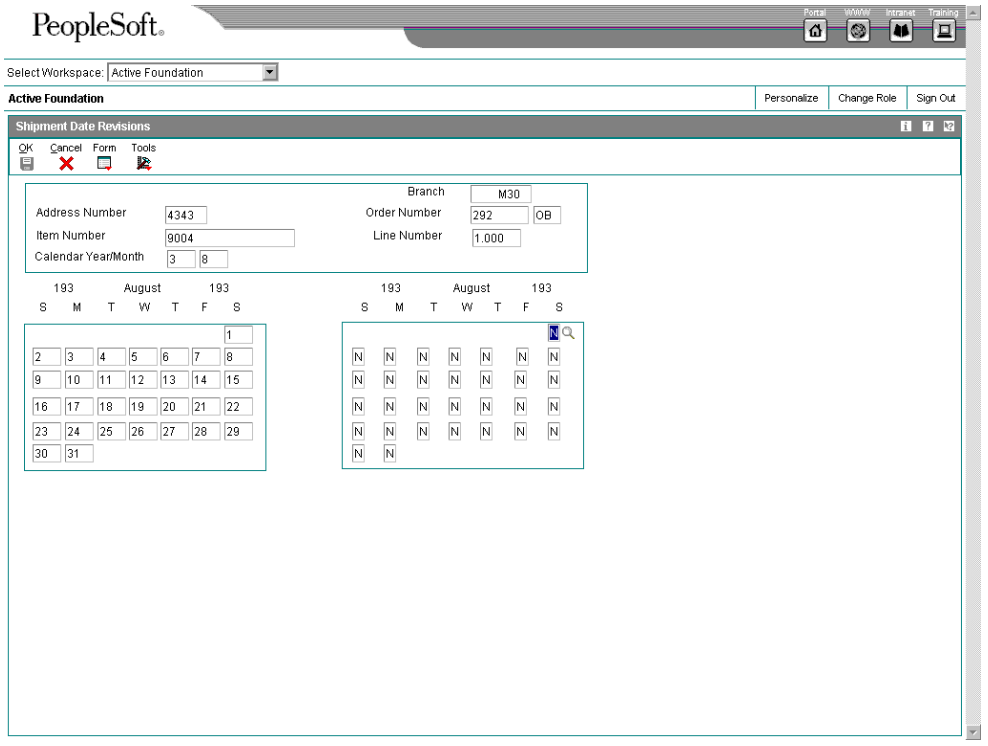
From the DRP or MRP Daily Operations menu (G3411 or G3413), choose Enter/Change Supplier Information.

1. On Work With Vendor Schedule Master, complete the following fields and click Find to locate a line on the blanket order:

    - Order Number
    - Line Number



2. Choose a record and click Select.



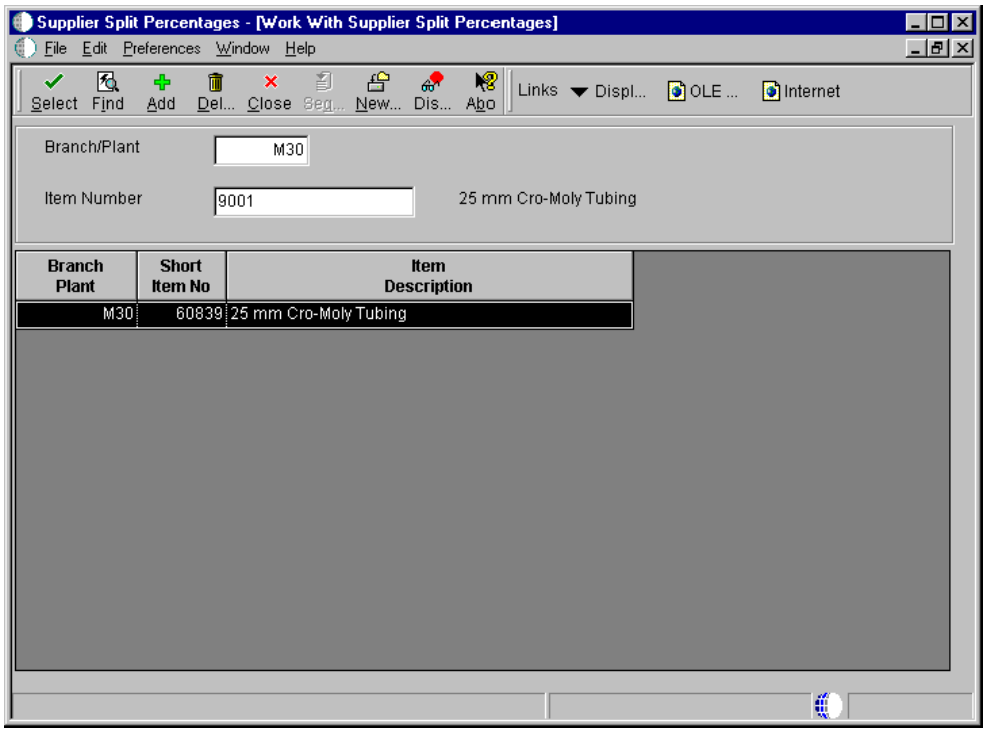
3. On Vendor Schedule Master Revisions, choose Shipment Dates from the Form menu.
4. On Work With Shipment Dates, choose a record and click Select.
5. On Shipment Date Revisions, review the shipment pattern. If necessary, revise the pattern.

Defining Supplier Split Percentages

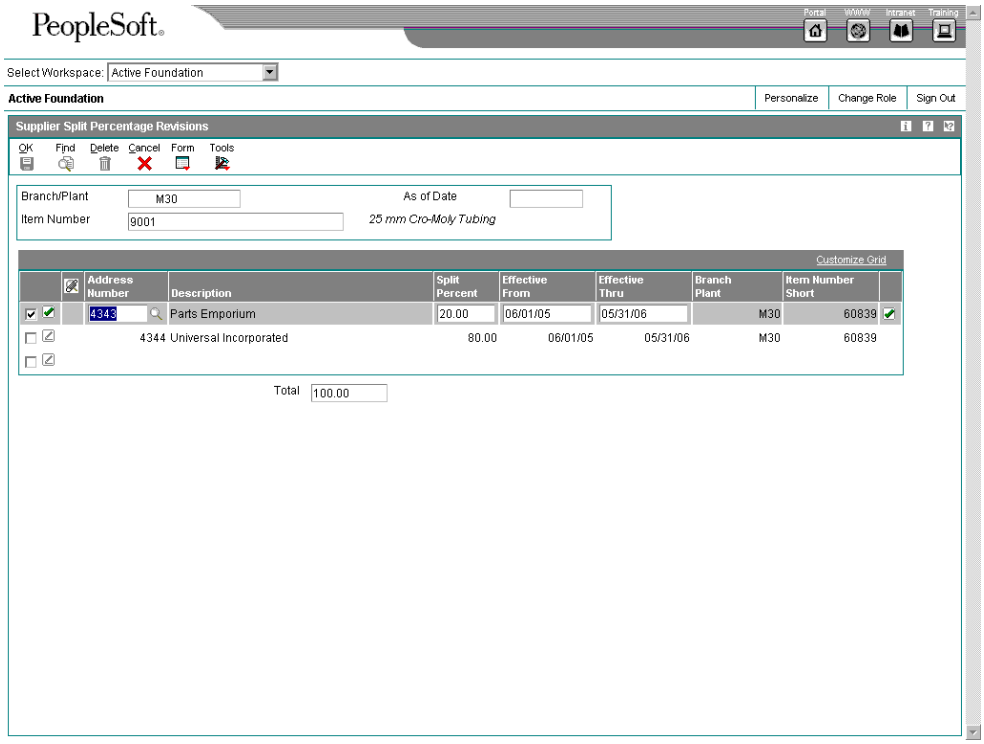
Buyers often order the same item from multiple suppliers to avoid relying on a single supplier. Supplier scheduling allows multiple suppliers to supply a single item based on a predetermined split percentage. Use Supplier Split Percentages to define the split percentages among the suppliers.

▶ To define supplier split percentages

From the DRP or MRP Daily Operations menu (G3411 or G3413), choose Supplier Split Percentages.



1. On Work With Supplier Split Percentages, complete the following fields and click Find to define split percentages among suppliers:
    - Branch/Plant
    - Item Number
2. Choose a record and click Select.



3. On Supplier Split Percentage Revisions, complete the following fields:
    - Address Number
    - Description
    - Split Percent
    - Effective From
    - Effective Thru
4. Complete the following optional fields and click OK:
    - As of Date
    - Branch Plant

Generating Supplier Schedules

From the Single Site Periodic Planning Operations menu (G3422), choose Generate Supplier Schedule.

Use the Generate Supplier Schedule to process O (order) type messages on the MRP. If you do not use the Generate Supplier Schedule program, you can process purchase orders manually. The system does not display the orders you enter manually to the supplier.

When you generate the supplier schedule, the system uses the messages from the most recent MRP generation, blanket orders, and the information defined in the Supplier Schedule Master table to create a supplier schedule. The system determines demand from the MRP messages.

You can set the appropriate processing option on Supplier Schedule Generation to clear MRP messages after schedule generation. The system clears only those messages inside the releasable time fence.

Caution

Do not change the messages once the system has generated them from MRP.

When you generate a supplier schedule, the system creates a draft of your supplier schedule and prints a report that details any discrepancies that might make your supplier schedule ineffective. You can review the draft of your supplier schedule using Enter/Change Schedule and make any necessary revisions prior to committing to a final schedule.

If you use multiple suppliers, the system creates multiple supplier schedules for a single item. It does so by splitting the MRP messages by the percentages that you defined in the Supplier Split Percentages table (F43211).

Your company might have completed setup for parallel processing. In the parallel processing method, the system plans items simultaneously by using multiple processors. This method takes place when a system executes a batch program on a server that has more than one processor. The parallel processing method achieves significant performance gains, which are limited only by the number of processors that are available on your server.

A separate subsystem version is created to use parallel processing. In this version, the system uses a processing option that indicates the number of configured processors. The system uses these processors to execute the subsystem version.

Before You Begin

- Verify that the following information has been set up:
  - The DRP or MPS system
  - An active blanket order for the item
  - Associated supplier information for the order
  - The blanket order, order type, line type, and status in the version of supply/demand inclusion rules that are used during supplier schedule generation
- Run the MPS/MRP/DRP generation so that the system can:
  - Create order messages for supplier scheduled items
  - Produce a time-series material plan so you can analyze the impact of choosing to accept or reject planning suggestions
- Review messages from the Message Detail form

See Also

- *Understanding Parallel Processing*
- *Setting Up the Planning Systems*
- *Generating Single-Level Master Schedules*

- *Working with Messages*
- *Reviewing MRP Time Series*
- *Revising Supplier Schedules*
- *R34400, Supplier Schedule Generation* in the Reports Guide for a report sample

Processing Options for Supplier Schedule Generation (R34400)

Defaults Tab

These processing options allow you to specify the generation start date, document type, and which version of the supply/demand inclusion rules that the system uses when you generate a supplier schedule.

1. Generation Start Date

Use this processing option to specify the date that the system uses to start the Supplier Schedule Generation process. If you do not specify a date, the system uses the current date.

---

1. Generation Start Date

Default = Today.

Use this processing option to specify the date that the system uses to start the Supplier Schedule Generation process. If you do not specify a date, the system uses the current date.

2. Document Type

Default = OB.

Use this processing option to specify the document type that the program uses to search for an item blanket order when you run the Supplier Schedule Generation program (R34400). If you leave this processing option blank, the system uses OB (blanket order).

3. Supply/Demand Inclusion Rule

Use this processing option to specify which version of the supply/demand inclusion rules the system reads. This rule defines the criteria that the program uses to select blanket orders to run the supplier scheduling process.

Process Tab

These processing options allow you to specify how the system clears messages and updates the schedule. In addition, you can specify the manner in which the system uses messages.

---

1. Supplier Schedule Status

Use this processing option to specify the schedule status after the system runs the Supplier Schedule Generation program. If you leave this option blank, the system does not update the schedule.

2. Clear Messages

Blank = Do Not Clear Messages.
1 = Clear Messages.

Use this processing option to specify whether the system clears MPS/MRP/DRP messages after it runs the Supplier Schedule Generation program (R34410). Valid values are:

Blank The system does not clear messages after the Supplier Schedule Generation program runs.

1 The system clears messages after the Supplier Schedule Generation program runs.

3. Regeneration Flag

Blank = Do Not Use Cleared Messages.
1 = Use Cleared Messages.

Use this processing option to specify whether the system re-runs the Supplier Schedule Generation program when the system uses previously cleared MPS/MRP/DRP messages. The system displays messages only after the MRP Regeneration program has run. Valid values are:

Blank The system uses cleared messages.

1 The system does not use cleared messages.

---

4. Frozen Days Flag

Blank = Do Not Ignore Frozen Time Fence.
1 = Ignore Frozen Time Fence.

Use this processing option to specify whether the system ignores the frozen time fence for supplier release and allows normal operations within the frozen time fence. If the system ignores the frozen time fence, it places quantities within the frozen time fence. Valid values are:

Blank The system does not ignore the frozen time fence.

0 The system ignores the frozen time fence.

5. Transfer Order Messages Flag

Blank = Do Not Ignore Transfer Order Messages.
1 = Ignore Transfer Order Messages.

Use this processing option to specify whether the system ignores the transfer order messages while generating the schedule. If the system ignores the transfer order messages, it schedules quantities only for the purchase order messages. Valid values are:

Blank The system does not ignore the transfer order messages.

0 The system ignores the transfer order messages.

Revising Supplier Schedules

You can review and revise the supplier schedule that you generated. For example, you might need to override system-scheduled quantities to compensate for last-minute changes to the schedule.

After you review the schedule and make any necessary revisions, you must accept the information on Enter/Change Schedule to commit to a final schedule.

Enter/Change Schedule allows you to:

- Review planned, released, and historical quantity information
- Display the current supplier schedule
- Review cumulative quantity information

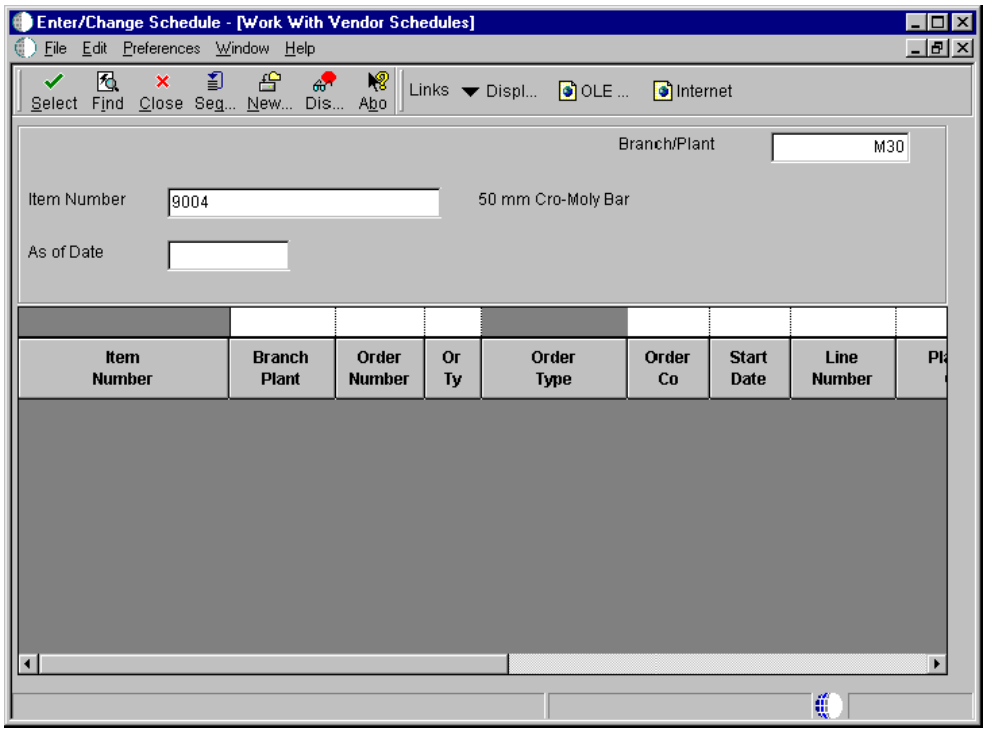
- Update planned quantities in the schedule before you release them
- Finalize the supplier schedule

The Planned field is the only field that you can change on the Vendor Schedule Revisions form. The system recalculates the quantities in the Cumulative Frozen, Cumulative Fabricate, and Cumulative Raw Material fields when a change is made.

Any changes that you make to the schedule will not affect the most recent MPS, MRP, or DRP generation. After you release the supplier schedule and create purchase orders for the blanket order releases, the next MPS, MRP, or DRP generation treats the purchase orders as available supply items.

▶ To revise a supplier schedule for a single item

From the MRP Daily Operations menu (G3413), choose Enter/Change Schedule.



1. On Work With Vendor Schedules, complete the following fields and click Find to display one or more blanket orders that exist for the selected item:
   - Item Number
   - Branch/Plant
   - Today's Date
2. Choose a record and click Select.
3. On Vendor Schedule Revisions, review the following information:

- Supplier
- Carrier Number
- Deliver to
- Status
- F.O.B.
- Last Rls P.O.
- Last Receipt
- Receipt Qty
- Cum Receipt
- Cum Frozen
- Cum Fabricate
- Cum Raw Mat.

4. Accept the record by clicking OK, or complete the following field to update planned quantities in the schedule and then click OK:
    - Planned QTY

Processing Options for Supplier Schedule Revisions (P34301)

Versions
Enter the version for each program. If left blank, version ZJDE0001 will be used for 1 through 7.
1. Open Order Inquiry (P4310)
2. Supply/Demand Inquiry (P4021)
3. Purchase Order Entry (P4310)
4. Vendor/Blanket Information (P4321)
5. Pegging Information (P3412)
6. Supplier Schedule Release Generation (R34410)
7. Item Branch (P41026B)
8. Enter the version of Supply/Demand Inclusion Rules to use for active Blanket Order selection
9. Purchase Order Inquiry Self Service (P4310SS)
Defaults
1. Enter the Document Type to filter on the form
Document Order Type
2. Supplier Self Service Functionality
blank = Bypass Supplier
1 = Activate Supplier Self Service functionality for use in JAVA/HTML

3. Enter Cross Reference Type for Supplier Item Number (used only in web mode)
Item Cross-Reference Type Code
4. Allow changes to the schedule
blank = Allow changes to the schedule
1 = Do not allow changes to the schedule
Status Update
1. Enter Status for Vendor Schedule Update
Vendor Schedule Status

2. Enter status beyond which changes cannot be made to the Vendor Schedule. If left blank, the schedule will always be open to change.
To Status

Releasing Supplier Schedules

From the Single Site Periodic Planning Operations menu (G3422), choose Release Supplier Schedule.

After you finalize a schedule using Enter/Change Schedule, you can release the current supplier schedule. After the schedule is processed, the system updates the planned quantities inside the time fence.

The Release program uses outstanding purchase orders, existing blanket orders, and supplier release information that is specific to each blanket order to create:

- Purchase orders generated from blanket orders releases for all quantities that are needed inside the time fence
- A shipping schedule based on when you need the items, the shipping leadtime, and other defined variables
- A single purchase order with multiple lines for each different release date and multiple lines for each item released for the supplier

Your company might have completed setup for parallel processing. In the parallel processing method, the system plans items simultaneously by using multiple processors. This method takes place when a system executes a batch program on a server that has more than one processor. The parallel processing method achieves significant performance gains, which are limited only by the number of processors that are available on your server.

The system creates a separate subsystem version to use parallel processing. In this version, the system uses a processing option that indicates the number of configured processors that the system uses to execute the subsystem version.

Before You Begin

- Generate a current supplier schedule. See *Generating Supplier Schedules.*

See Also

- *Understanding Parallel Processing* for more information on how parallel processing works
- *R34410, Supplier Schedule Release Generation* in the *Reports Guide* for a report sample

Processing Options for Supplier Schedule Release Generation (R34410)

Defaults Tab

These processing options allow you to specify a default value for line type, beginning status, document type, and tax area.

---

1. Line Type (Required)

Use this processing option to specify a default line type. Line types control how the system processes lines on a transaction. The line type affects the systems with which the transaction interfaces, such as General Accounting, Job Cost, Accounts Payable, Accounts Receivable, and Inventory Management. The line type also specifies the conditions for including a line on reports and in calculations. The following are examples of valid values that the system has defined on the Line Type Constants Revisions program:

S Stock item

J Job cost, subcontracts, or purchasing to the General Ledger

B G/L account and item number

N Non stock item

F Freight

T Text information

M Miscellaneous charges and credits

W Work Order

The system uses line type values to create purchase orders when you run the Supplier Schedule Release Generation program.

2. Beginning Status (Required)

Use this processing option to indicate the initial status of a purchase order that the system generates.

3. Document Type

Default = OP

Use this processing option to indicate the document type for a purchase order that the system generates. If you leave this option blank, the systems uses the document type for a purchase order (OP).

4. Default Tax Area

Blank = Default From Supplier.

1 = Default From Ship To.

Use this processing option to specify the default tax area. You can use the tax area that is set up in the address book for the number in the Ship To field or the address book number for the supplier. Valid values are:

Blank The system uses the tax area from the supplier address book number.

1 The system uses the tax area for the ship to address book number.

Process Tab

These options allow you to specify the processing the system uses to generate the supplier schedule release.

1. Supplier Schedule Status

Use this processing option to specify the supplier schedule status that the system assigns after you run the Supplier Schedule Release program (R34410). If you leave this option blank, the system does not update the supplier schedule status.

2. Clear Messages

Blank = Do Not Clear Messages.
1 = Clear Messages.

Supplier scheduling uses the messages from the most recent MRP generation to

determine demand. Use this processing option to specify whether to clear MPS/MRP/DRP messages after the system runs the Supplier Schedule Release program (R34410). The system clears only the messages that are inside the release fence. Valid values are:

Blank The system does not clear messages.

1 The system clears messages.

3. Blanket Order Release

Blank = No Automatic Release.
1 = Automatic Release.

Use this processing option to specify whether the system automatically releases blanket orders during the Supplier Schedule Release program (R34410). Valid values are:

Blank The system does not automatically release blanket orders.

1 The system automatically releases blanket orders.

4. Price Control

Blank = Default From Blanket Order.
1 = Retrieve Price from Procurement System.

Use this processing option to specify whether the system retrieves the price from a blanket order or the Procurement Price Management system. Valid values are:

Blank The system retrieves the price from a blanket order.

1 The system retrieves the price from the Procurement Price Management system.

Printing Supplier Schedules

From the Single Site Periodic Planning Operations menu (G3422), choose Print Supplier Release.

You can use Print Supplier Release to print a report of the supplier schedule. The system uses the information that you have entered on the other forms along with the version of supply/demand inclusion rules that you select to create the report. This report shows the shipment schedule, releasable quantities, and all purchase orders that the system generates from the Blanket Order Releases.

Your company might have completed setup for parallel processing. In the parallel processing method, the system plans items simultaneously by using multiple processors. This method takes place when a system executes a batch program on a server that has more than one processor. The parallel processing method achieves significant performance gains, which are limited only by the number of processors that are available on your server.

The system creates a separate subsystem version to use parallel processing. In this version, the system uses a processing option that indicates the number of configured processors that the system uses to execute the subsystem version.

Before You Begin

- Run the Release Supplier Schedule batch process. See *Releasing Supplier Schedules.*

See Also

- *Understanding Parallel Processing*

Processing Options for Supplier Schedule Print

Process
1. Enter the document type to use when retrieving an item's blanket order. If left blank, 'OB' will be used.
Blanket Order Type
2. Enter the status to use for updates to the supplier schedule. If left blank, no change will be made to the schedule's current status.
Supplier Schedule Status
Versions
1. Enter the version of Supply/Demand Inculsion rules to use for active blanket order selection.
Supply/Demand Inculsion Rules Version
Associated Text
1. Enter a '1' to print associated blanket order text. If left blank, no associated text will be printed.
Print Associated Blanket Order Text

Appendices

Action Messages

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

Action Messages in DRP/MPS/MRP				
Type	**Description**	**Planner Remarks**	**Action that the System Takes When Message is Processed**	
			Work Orders	**Purchase Orders**
A	Warning message	WO missing part list	Displays work order. You can copy the bill of material to create a parts list.	N/A
A	Warning message	BOM does not exist for item	Error message, record invalid.	N/A
A	Warning message	Cancel parts list	Error message, record invalid. You must clear or delete the message.	N/A
A	Warning message	Defer parts list	Error message, record invalid. You must clear or delete the message.	N/A
A	Warning message	Leadtime is zero	Clears message. Displays work order.	N/A
B	Order & Expedite	Blank	Clears message and creates a firm order message. Creates a work order.	Clears message and creates a firm order message. Creates purchase order.
C	Cancel	Blank	Clears message. The system deletes the work order parts list if there are no outstanding issues. Changes status to 99.	Clears closed message on purchase order line item. Changes status to 999.
D	Defer	Blank	Clears message and changes work order item required date.	Clears message and changes purchase order line item required date.
E	Expedite	Blank	Clears message and changes work order start date.	Clears message and changes purchase order line item start date.
F	Frozen order	Frozen order	No action required. The message remains until deleted or cleared.	No action required. The message remains until deleted or cleared.
G	Increase order quantity	Blank	Displays work order with updated quantity. Click OK to accept the change. The system recalculates and changes the number of required components.	Displays purchase order with updated quantity. Click OK to accept the change.

H	Decrease rate quantity	Blank	Displays the rate schedule. You must manually change the rate quantity for the suggested date.	N/A
I	Increase rate quantity	Blank	Displays the rate schedule. You must manually change the rate quantity for the suggested date.	N/A
L	Decrease order quantity	Blank	Displays work order with updated quantity. Click OK to accept the change. The system recalculates and changes the number of required components.	Displays purchase order with updated quantity. Click OK to accept the change.
M	Manual reminder	User entered text	No action required. The message remains until deleted or cleared.	No action required. The message remains until deleted or cleared.
N	Create rate	Blank	Clears message and creates the rate schedule. Displays rate schedule revisions.	N/A
O	Order	Blank	Clears message and creates a firm order message. Creates work order.	Clears message and creates a firm order message. Creates purchase order.
P	Firm order	Firm order	No action required. The message remains until deleted or cleared.	No action required. The message remains until deleted or cleared.
S	FPO adjustment suggestion	Increase Parts List Decrease Parts List Expedite Parts List Defer Part List	No action required. The message remains until deleted or cleared. Action is taken on the parent item's message.	No action required. The message remains until deleted or cleared. Action is taken on the parent item's message.
T	Past due order	Blank	No action required. The message remains until deleted or cleared.	No action required. The message remains until deleted or cleared.

SynQuest Interface

The interface between OneWorld solutions in Manufacturing Planning and SynQuest Manufacturing Manager (MM) helps you to synchronize and optimize the planning and execution phases of the shop floor in the manufacturing environment. This interface lets you simulate constraints and define a model that optimizes manufacturing plans within those known constraints.

The interface shares the following information with the SynQuest MM:

- Work order data, including parts list, routing, and instructions

- Data for purchase orders and receipts
- Data for sales orders and ship confirmations
- Inventory balances
- Item branch/plant data
- Bills of material and routing data
- Planned order data from MRP/MPS/DRP planned order messages
- Recommendations from SynQuest MM
- Event updates from SynQuest MM

The interface for item branch/plant data also supports the definition of the following resources and support item data:

- Tools
- Machines
- Labor
- Support Items

The system defines these resources as inventory items in OneWorld and exports them to SynQuest MM as specific tools, machines, and labor. In addition, the bills of material and routing data and the work order parts list and routing data support resource requirement data for SynQuest MM. The system attaches the resource requirements to a bill of material or work order parts list as component requirements in OneWorld. The system then exports them to SynQuest MM as specific tool, machine, and labor requirements for a manufactured item or a work order.

The system also defines support items as inventory items in OneWorld and exports them to SynQuest as support items. The support items can be attached to bills of material and parts lists and the system exports the data as support item requirements to SynQuest.

Based on the shared information, the SynQuest MM recommends date and quantity adjustments to work order and purchase order systems in OneWorld. The SynQuest MM also updates OneWorld with the operation status in the work order routing, data about hours and quantities, and data about work order completions. This interface is based on the J.D. Edwards Interoperability Model that accommodates inbound and outbound transactions to providers of third-party solutions such as SynQuest. This document describes how to set up the SynQuest Manufacturing Manager interface.

Inbound Messages

When you accept a production plan in SynQuest, the system updates the J.D. Edwards tables and automatically processes MRP messages, as if you manually processed them from the Detail Message Review program (P3411). The system generates and processes the following types of messages:

D Defer

E Expedite

G Increase order quantity

L Decrease order quantity

Inbound Synchronizer Events

When the system uses the SynQuest MM to report data for the shop floor, the interface receives events back from SynQuest MM through the following programs:

- Inbound Hours and Quantities (R31122Z1I)
- Inbound Work Order Completions (R31114Z1I)

The following table describes the events and programs that you run manually to update the shop floor control systems in OneWorld. The left column describes the SynQuest event; the right column describes the OneWorld transaction and the program that you must run.

Changing the status of a routing operation	A change to the status of a work order routing within SynQuest that updates the status of the routing operation in OneWorld. When you run the Inbound Hours and Quantities Processor program (R31122Z1I), the system updates the status of a work order routing.
Reporting hours and quantities to the routing operation	A report of the hours and quantities updates for a routing operation within SynQuest updates the hours and quantities of a routing operation in OneWorld. When you run the Inbound Hours and Quantities Processor program (R31122Z1I), the system reports hours and quantities against a routing operation.
Reporting work order completions	A report of the work order completions within SynQuest updates the work order completed quantity or work order status or both for a work order header. When you run the Inbound Completion Processor program (R31114Z1I), the system reports work order completions.

Topics

- ❑ Setting up data export controls
- ❑ Setting up flat file cross-references
- ❑ Setting up processing options
- ❑ Setting up UDC mappings
- ❑ Setting up Generic Data Item mappings

- Setting up requirements for resource definition export
- Launching outbound subsystem UBEs
- Exporting planned orders to the SynQuest MM
- Running outbound item balances
- Reviewing the processing log

Setting Up Data Export Controls

You define the export information for the interface.

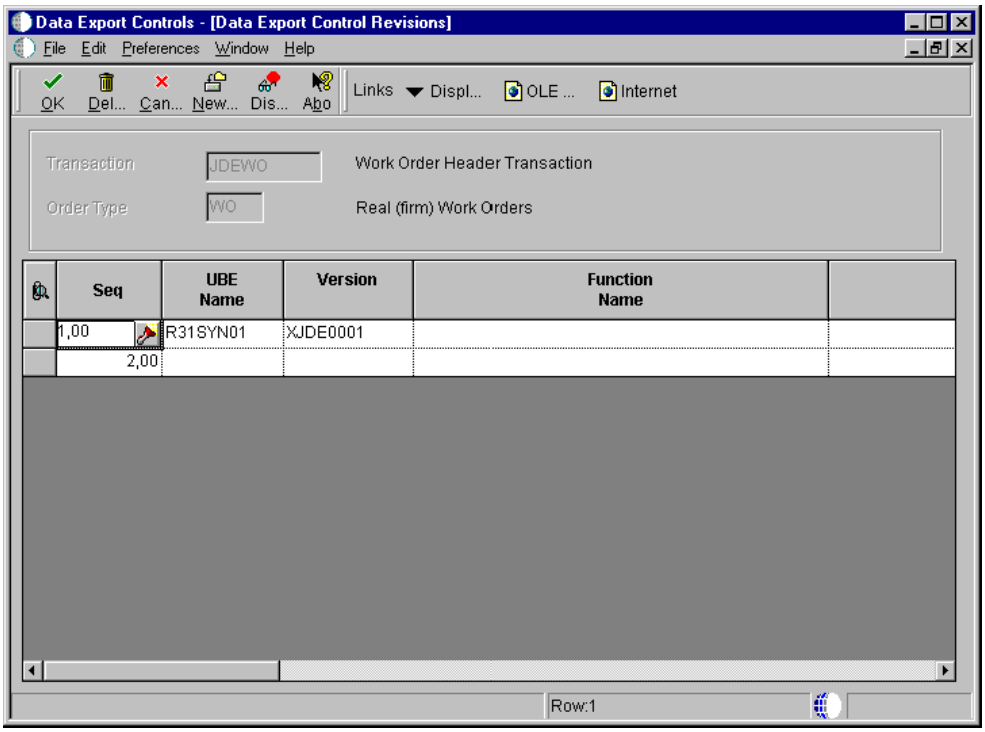
Topics

- Setting up data export controls for work order headers
- Setting up data export controls for work order parts lists
- Setting up data export controls for work order routing instructions
- Setting up data export controls for purchase orders
- Setting up data export controls for bills of material
- Setting up data export controls for routings
- Setting up data export controls for item branch data
- Setting up data export controls for purchase order receipts
- Setting up data export controls for sales orders
- Setting up data export controls for ship confirmations

► To set up data export controls for work order headers

From the Shop Floor Management Interoperability menu (G31311), choose Data Export Controls.

1. On Work With Data Export Controls, click Add.



2. On Data Export Control Revisions, type JDEWO in the following field:
   - Transaction
3. Type WO in the following field:
   - Order Type
4. Type R31SYN01 in the following field:
   - UBE Name
5. Type XJDE0001 in the following field:
   - Version
6. Type 1 in the following fields:
   - Execute For Add
   - Execute For Upd

- Execute For Del
- Ext DB Exp Mode
- Launch Immediately

7. Type 0 in the following fields:
    - Execute For Inq
    - Flat File Exp Mode
    - Ext API Exp Mode

► To set up data export controls for work order parts lists

From the Shop Floor Management Interoperability menu (G31311), choose Data Export Controls.

1. On Data Export Control Revisions, type JDEPL in the following field:
    - Transaction
2. Type WO in the following field:
    - Order Type
3. Type R31SYN01 in the following field:
    - UBE Name
4. Type XJDE0001 in the following field:
    - Version
5. Type 1 in the following fields:
    - Execute For Add
    - Execute For Upd
    - Execute For Del
    - Ext DB Exp Mode
    - Launch Immediately
6. Type 0 in the following fields:
    - Execute For Inq
    - Flat File Exp Mode
    - Ext DB Exp Mode

► To set up data export controls for work order routing instructions

From the Shop Floor Management Interoperability menu (G31311), choose Data Export Controls.

1. On Data Export Control Revisions, type JDERTG in the following field:
    - Transaction
2. Type WO in the following field:
    - Order Type
3. Type R31SYN01 in the following field:
    - UBE Name
4. Type XJDE0001 in the following field:
    - Version
5. Type 1 in the following fields:
    - Execute For Add
    - Execute For Del
    - Execute For Upd
    - Ext DB Exp Mode
    - Launch Immediately
6. Type 0 in the following fields:
    - Execute For Inq
    - Flat File Exp Mode
    - Ext API Exp Mode

► To set up data export controls for purchase orders

From the Shop Floor Management Interoperability menu (G31311), choose Data Export Controls.

1. On Data Export Control Revisions, type JDEPOOUT in the following field:
    - Transaction
2. Type OP in the following field:
    - Order Type
3. Type R31SYN03 in the following field:

- UBE Name

4. Type XJDE0001 in the following field:
    - Version
5. Type 1 in the following fields:
    - Execute For Add
    - Execute For Upd
    - Execute For Del
    - Ext DB Exp Mode
    - Launch Immediately
6. Type 0 in the following fields:
    - Execute For Inq
    - Flat File Exp Mode
    - Ext API Exp Mode

► To set up data export controls for bills of material

From the Shop Floor Management Interoperability menu (G31311), choose Data Export Controls.

1. On Data Export Control Revisions, type JDEBOM in the following field:
    - Transaction
2. Leave the following field blank:
    - Order Type
3. Type R30SYN01 in the following field:
    - UBE Name
4. Type XJDE0001 in the following field:
    - Version
5. Type 1 in the following fields:
    - Execute For Add
    - Execute For Upd
    - Execute For Del

- Ext DB Exp Mode
- Launch Immediately

6. Type 0 in the following fields:
    - Execute For Inq
    - Flat File Exp Mode
    - Ext API Exp Mode

► To set up data export controls for routings

From the Shop Floor Management Interoperability menu (G31311), choose Data Export Controls.

1. On Data Export Control Revisions, type JDEROU in the following field:
    - Transaction
2. Leave the following field blank:
    - Order Type
3. Type R30SYN01 in the following field:
    - UBE Name
4. Type XJDE0001 in the following field:
    - Version
5. Type 1 in the following fields:
    - Execute For Add
    - Execute For Upd
    - Execute For Del
    - Ext DB Exp Mode
    - Launch Immediately
6. Type 0 in the following fields:
    - Execute For Inq
    - Flat File Exp Mode
    - Ext API Exp Mode

► To set up data export controls for item branch data

From the Shop Floor Management Interoperability menu (G31311), choose Data Export Controls.

1. On Data Export Control Revisions, type JDEITEM in the following field:
    - Transaction
2. Leave the following field blank:
    - Order Type
3. Type R41SYN01 in the following field:
    - UBE Name
4. Type XJDE0001 in the following field:
    - Version
5. Type 1 in the following fields:
    - Execute For Add
    - Execute For Upd
    - Execute For Del
    - Ext DB Exp Mode
    - Launch Immediately
6. Type 0 in the following fields:
    - Execute For Inq
    - Flat File Exp Mode
    - Ext API Exp Mode

► To set up data export controls for purchase order receipts

From the Shop Floor Management Interoperability menu (G31311), choose Data Export Controls.

1. On Data Export Control Revisions, type JDER in the following field:
    - Transaction
2. Type OP in the following field:
    - Order Type
3. Type R43SYN01 in the following field:

- UBE Name

4. Type XJDE0001 in the following field:
    - Version
5. Type 1 in the following fields:
    - Execute For Add
    - Ext DB Exp Mode
    - Launch Immediately
6. Type 0 in the following fields:
    - Execute For Upd
    - Execute For Del
    - Execute For Inq
    - Flat File Exp Mode
    - Ext API Exp Mode

► To set up data export controls for sales orders

From the Shop Floor Management Interoperability menu (G31311), choose Data Export Controls.

1. On Data Export Control Revisions, type JDESOOUT in the following field:
    - Transaction
2. Type SO in the following field:
    - Order Type
3. Type R42SYN01 in the following field:
    - UBE Name
4. Type XJDE0001 in the following field:
    - Version
5. Type 1 in the following fields:
    - Execute For Add
    - Execute For Upd
    - Execute For Del

- Ext DB Exp Mode
- Launch Immediately

6. Type 0 in the following fields:
    - Execute For Inq
    - Flat File Exp Mode
    - Ext API Exp Mode

► To set up data export controls for ship confirmations

From the Shop Floor Management Interoperability menu (G31311), choose Data Export Controls.

1. On Data Export Control Revisions, type JDESC in the following field:
    - Transaction
2. Type SO in the following field:
    - Order Type
3. Type R42SYN02 in the following field:
    - UBE Name
4. Type XJDE0001 in the following field:
    - Version
5. Type 1 in the following fields:
    - Execute For Add
    - Execute For Upd
    - Execute For Del
    - Ext DB Exp Mode
    - Launch Immediately
6. Type 0 in the following fields:
    - Execute For Inq
    - Flat File Exp Mode
    - Ext API Exp Mode

Setting Up Flat File Cross-References

You define cross-reference information for the interface for inbound and outbound processes.

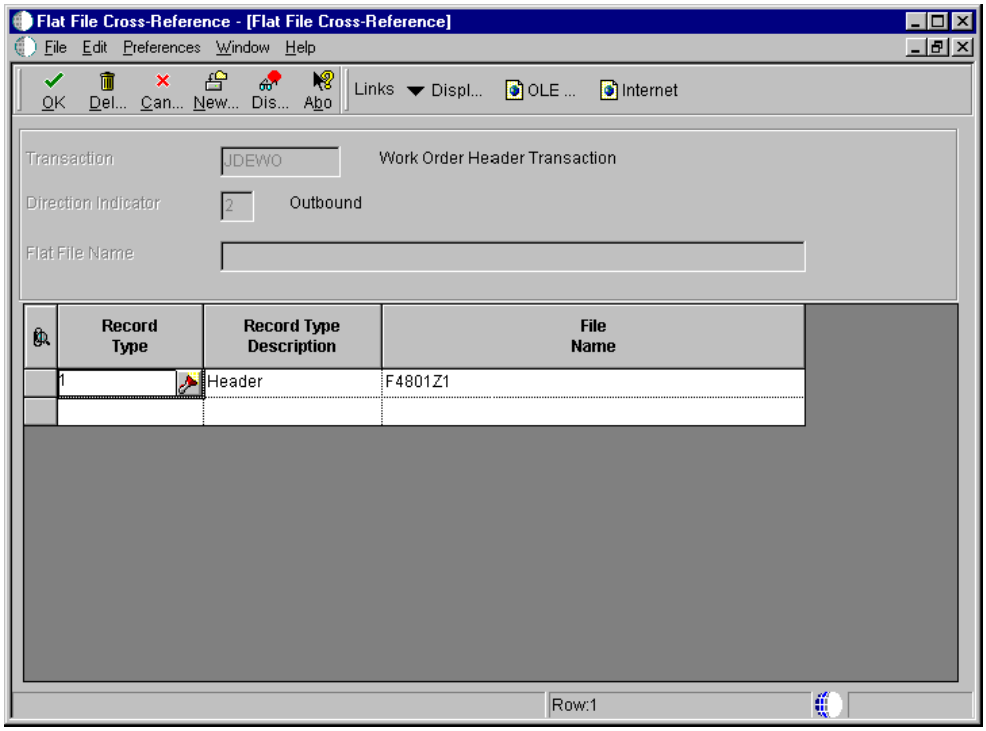
Topics

- Setting up cross-references for work order headers
- Setting up cross-references for work order parts lists
- Setting up cross-references for work order routing instructions
- Setting up cross-references for purchase orders
- Setting up cross-references for bills of material
- Setting up cross-references for routings
- Setting up cross-references for item branch data
- Setting up cross-references for purchase order receipts
- Setting up cross-references for sales orders
- Setting up cross-references for ship confirmations

► To set up cross-references for work order headers

From the Shop Floor Management Interoperability menu (G31311), choose Flat File Cross-Reference.

1. On Work With Flat File Cross-Reference, click Add.



2. On Flat File Cross-Reference, type JDEWO in the following field:

- Transaction

3. Type 2 in the following field:

    - Direction Indicator

4. Type 1 in the following field:

    - Record Type Description

5. Type F4801Z1 in the following field:

    - File Name

► To set up cross-references for work order parts lists

You set up two lines of information, one for the header and one for the detail.

From the Shop Floor Management Interoperability menu (G31311), choose Flat File Cross-Reference.

1. On Flat File Cross-Reference, type JDEPL in the following field:

    - Transaction

2. Type 2 in the following field:

    - Direction Indicator

3. On the first grid line, type 1 in the following field:

    - Record Type Description

4. Type F4801Z1 in the following field:

    - File Name

5. On the second grid line, type 2 in the following field:

    - Record Type Description

6. Type F3111Z1 in the following field:

    - File Name

► To set up cross-references for work order routing instructions

You set up two lines of information, one for the header and one for the detail.

From the Shop Floor Management Interoperability menu (G31311), choose Flat File Cross-Reference.

1. On Flat File Cross-Reference, type JDERTG in the following field:

- Transaction

2. Type 2 in the following field:
    - Direction Indicator
3. On the first grid line, type 1 in the following field:
    - Record Type
4. Type F4801Z1 in the following field:
    - File Name
5. On the second grid line, type 2 in the following field:
    - Record Type
6. Type F3112Z1 in the following field:
    - File Name

► To set up cross-references for purchase orders

You set up two lines of information, one for the header and one for the detail.

From the Shop Floor Management Interoperability menu (G31311), choose Flat File Cross-Reference.

1. On Flat Cross-Reference, type JDEPOOUT in the following field:
    - Transaction
2. Type 2 in the following field:
    - Direction Indicator
3. On the first grid line, type 1 in the following field:
    - Record Type
4. Type F4301Z1 in the following field:
    - File Name
5. On the second grid line, type 2 in the following field:
    - Record Type
6. Type F4311Z1 in the following field:
    - File Name

► To set up cross-references for bills of material

From the Shop Floor Management Interoperability menu (G31311), choose Flat File Cross-Reference.

1. On Flat File Cross-Reference, type JDEBOM in the following field:
    - Transaction
2. Type 2 in the following field:
    - Direction Indicator
3. Type 1 in the following field:
    - Record Type
4. Type F3002Z1 in the following field:
    - File Name

► To set up cross-references for routings

From the Shop Floor Management Interoperability menu (G31311), choose Flat File Cross-Reference.

1. On Flat File Cross-Reference, type JDEROU in the following field:
    - Transaction
2. Type 2 in the following field:
    - Direction Indicator
3. Type 1 in the following field:
    - Record Type
4. Type F3003Z1 in the following field:
    - File Name

► To set up cross-references for item branch data

You set up two lines of information, one for the header and one for the detail.

From the Shop Floor Management Interoperability menu (G31311), choose Flat File Cross-Reference.

1. On Flat File Cross-Reference, type JDEITEM in the following field:
    - Transaction
2. Type 2 in the following field:

- Direction Indicator

3. On the first grid line, type 1 in the following field:

   - Record Type

4. Type F4101Z1 in the following field:

   - File Name

5. On the second grid line, type 2 in the following field:

   - Record Type

6. Type F4101Z1A in the following field:

   - File Name

► To set up cross-references for purchase order receipts

From the Shop Floor Management Interoperability menu (G31311), choose Flat File Cross-Reference.

1. On Flat File Cross-Reference, type JDER in the following field:

   - Transaction

2. Type 2 in the following field:

   - Direction Indicator

3. Type 1 in the following field:

   - Record Type

4. Type F43121Z1 in the following field:

   - File Name

► To set up cross-references for sales orders

You set up two lines of information, one for the header and one for the detail.

From the Shop Floor Management Interoperability menu (G31311), choose Flat File Cross-Reference.

1. On Flat File Cross-Reference, type JDESOOUT in the following field:

   - Transaction

2. Type 2 in the following field:

   - Direction Indicator

3. On the first grid line, type 1 in the following field:

- Record Type

4. Type F4201Z1 in the following field:

   - File Name

5. On the second grid line, type 2 in the following field:

   - Record Type

6. Type F4211Z1 in the following field:

   - File Name

► To set up cross-references for ship confirmations

You set up two lines of information, one for the header and one for the detail.

From the Shop Floor Management Interoperability menu (G31311), choose Flat File Cross-Reference.

1. On Flat File Cross-Reference, enter JDESC in the following field:

   - Transaction

2. Type 2 in the following field:

   - Direction Indicator

3. On the first grid line, type 1 in the following field:

   - Record Type

4. Type F4201Z1 in the following field:

   - File Name

5. On the second grid line, type 2 in the following field:

   - Record Type

6. Type F4211Z1 in the following field:

   - File Name

Setting Up Processing Options

You set up processing options to indicate the types of transactions that the system exports to SynQuest MM.

Topics

- Setting up processing options for work orders
- Setting up processing options for work order parts lists

- ❑ Setting up processing options for work order routing instructions
- ❑ Setting up processing options for purchase orders
- ❑ Setting up processing options for bills of material
- ❑ Setting up processing options for routings
- ❑ Setting up processing options for item branch data
- ❑ Setting up processing options for purchase order receipts
- ❑ Setting up processing options for sales orders
- ❑ Setting up processing options for ship confirmations
- ❑ Setting up processing options for work order processing

► To set up processing options for work orders

From the System Administration Tools menu (GH9011), choose Interactive Versions.

1. On Work With Interactive Versions, type P48013 in the following field and click Find:
    - Interactive Application
2. Choose version ZJDE0001 and then choose Processing Options from the Row menu.
3. Click the Interop tab and type JDEWO in the Transaction Type field.

► To set up processing options for work order parts lists

From the System Administration Tools menu (GH9011), choose Interactive Versions.

1. On Work With Interactive Versions, type P3111 in the following field and click Find:
    - Interactive Application
2. Choose version ZJDE0001 and then choose Processing Options from the Row menu.
3. Click the Export tab and type JDEPL in the Transaction Type field.

► To set up processing options for work order routing instructions

From the System Administration Tools menu (GH9011), choose Interactive Versions.

1. On Work With Interactive Versions, type P3112 in the following field and click Find:
    - Interactive Application
2. Choose version ZJDE0001 and then choose Processing Options from the Row menu.
3. Click the Export tab and type JDERTG in the Transaction Type field.

► To set up processing options for purchase orders

From the System Administration Tools menu (GH9011), choose Interactive Versions.

1. On Work With Interactive Versions, type P4310 in the following field and click Find:

- Interactive Application

2. Choose version ZJDE0001 and then choose Processing Options from the Row menu.
3. Click the Interop tab.
4. Type 1 in the Before Image field.
5. Type JDEPOOUT in the Transaction Type field.

► To set up processing options for bills of material

From the System Administration Tools menu (GH9011), choose Interactive Versions.

1. On Work With Interactive Versions, type P3002 in the following field and click Find:

   - Interactive Application

2. Choose version ZJDE0001 and then choose Processing Options from the Row menu.
3. Click the Interop tab.
4. Type JDEBOM in the Transaction Type field.
5. Type 1 in the Before/Image Processing field.

► To set up processing options for routings

From the System Administration Tools menu (GH9011), choose Interactive Versions.

1. On Work With Interactive Versions, type P3003 in the following field and click Find:

   - Interactive Application

2. Choose version ZJDE0001 and then choose Processing Options from the Row menu.
3. Click the Interop tab.
4. Type JDEROU in the Transaction Type field.
5. Type 1 in the Before/Image Processing field.

► To set up processing options for item branch data

From the System Administration Tools menu (GH9011), choose Interactive Versions.

1. On Work With Interactive Versions, type P41026 in the following field and click Find:

   - Interactive Application

2. Choose version ZJDE0001 and then choose Processing Options from the Row menu.
3. Click the Interop tab.
4. Type JDEITEM in the Transaction Type field.
5. Type 1 in the Before Image Processing field.

► To set up processing options for purchase order receipts

From the System Administration Tools menu (GH9011), choose Interactive Versions.

1. On Work With Interactive Versions, type P4312 in the following field and click Find:

    - Interactive Application

2. Choose version ZJDE0001 and then choose Processing Options from the Row menu.
3. Click the Interop tab and type JDER in the Transaction Type field.

► To set up processing options for sales orders

From the System Administration Tools menu (GH9011), choose Interactive Versions.

1. On Work With Interactive Versions, type P4210 in the following field and click Find:

    - Interactive Application

2. Choose version ZJDE0001 and then choose Processing Options from the Row menu.
3. Click the Interop tab.
4. Type JDESOOUT in the Transaction Type field.
5. Type 1 in the Before/Image Processing field.

► To set up processing options for ship confirmations

From the System Administration Tools menu (GH9011), choose Interactive Versions.

1. On Work With Interactive Versions, type P4205 in the following field and click Find:

    - Interactive Application

2. Choose version ZJDE0001 and then choose Processing Options from the Row menu.
3. Click the Interop tab.
4. Type JDESC in the Transaction Type field.
5. Type 1 in the Run the Outbound Subsystem UBE field.

► To set up processing options for work order processing

From the Daily Order Preparation - Discrete menu (G3111), choose Order Processing.

1. On Work With Batch Versions, choose the appropriate version of Order Processing (R31410) to run for work order processing, and then choose Processing Options from the Row menu.
2. Click the Interop tab.
3. Type JDEPL in the Parts List Transaction Type field.
4. Type 1 in the Parts List Before Image field.

Setting Up UDC Mappings

You map existing J.D. Edwards user defined codes to SynQuest codes. As mappings are predefined by J.D. Edwards, you can add to or modify them according to your business needs.

For example, you might map J.D. Edwards status codes of 10, 15, and 20 to a SynQuest status code of Firmed. You might map J.D. Edwards status codes of 30, 40, and 50 to a SynQuest status code of Released.

J.D. Edwards Status Code	SynQuest Status Code
10	Firmed
15	
20	
30	Released
40	
50	

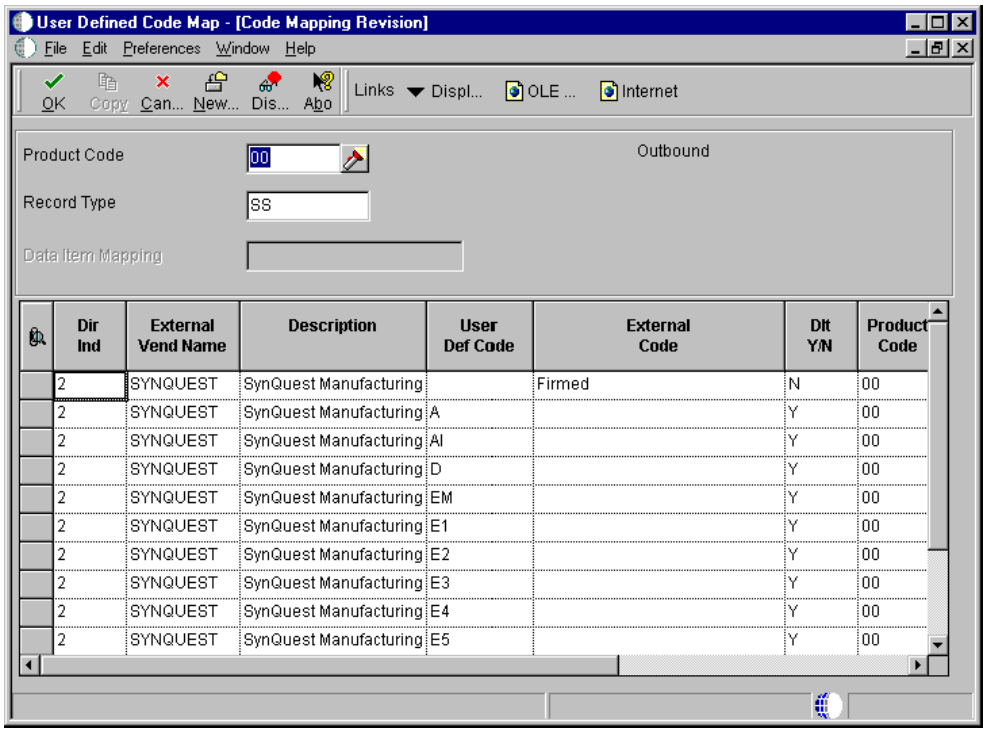
Topics

- Set up UDC Mappings
- Code mappings for the SynQuest interface

► To set up UDC mappings

From the Shop Floor Management Interoperability menu (G31311), choose User Defined Code Map.

1. On Work With Code Mappings, click Add.



2. On Code Mapping Revision, complete the following fields and click OK:

    - Product Code
    - Record Type
    - Dir Ind
    - External Vend Name
    - User Def Code
    - External Code
    - Dlt Y/N

Caution

The default for the Delete Y/N field is N, which means do not delete records, as they are critical to mapping.

Processing Options for Code Mapping Revision (P0048)

Process 1. Enter the default view mode. ' ' - View All Mappings (default). '1' - View Inbound Mappings only.

'2' - View Outbound Mappings only.
2. Enter the Mapping revision mode.
' ' - Enter Mappings for UDC Values.
'1' - Enter Mappings for Data Item Values.

► To code mappings for the SynQuest interface

It is recommended that you verify the code mappings the system uses to ensure that all transactions reference valid values within OneWorld and SynQuest. The system uses following code mappings:

1. Code mapping for Product Code 00 and Record Type DT

   Maps OneWorld sales order document type (DCTO) to SynQuest ship request order type. You can choose to map only sales order document type values that you want exported to SynQuest.

2. Code mapping for Product Code 00 and Record Type PR

   Maps OneWorld work order header priority (PRTS) to SynQuest work order priority.

3. Code mapping for Product Code 00 and Record Type SS

   Maps OneWorld work order header status (SRST) to SynQuest work order release status.

4. Code mapping for Product Code 31 and Record Type OS

   Maps OneWorld work order routing operation status (OPST) to SynQuest work order step status.

5. Code mapping for Product Code 40 and Record Type AT

   Maps OneWorld planned work order status to SynQuest planned work order release status.

   Maps OneWorld planned purchase order status to SynQuest planned outside supply release status.

   Maps OneWorld purchase order status (NXTR) to SynQuest outside supply release status.

   Maps OneWorld sales order status (LTTR) to SynQuest ship request release status. You can choose to map only sales order release statuses that you want exported to SynQuest.

6. Code mapping for Product Code 41 and Record Type I

   Maps OneWorld item branch/plant stocking type (STKT) to SynQuest item procurement method. You can choose to map only item branch/plant stocking type values that you want exported to SynQuest.

7. Code mapping for Product Code H40 and Record Type FO

   Maps OneWorld bill of material component fixed or variable quantity (FORQ) to SynQuest bill of material component fixed or variable flag.

Setting Up Generic Data Item Mappings

You map SynQuest codes that are not readily available from OneWorld using generic data item mappings. In addition, default values for data items in SynQuest are also defined here.

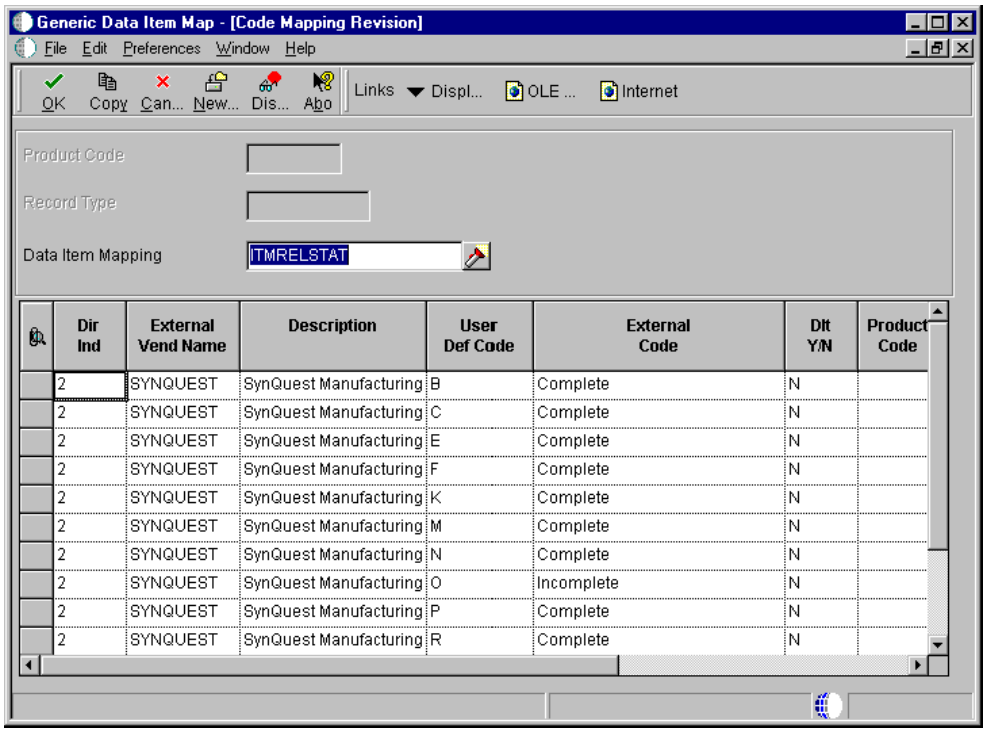
Topics

- Set up generic data item mappings
- Verify generic data item mappings

▶ To set up generic data item mappings

From Shop Floor Management Interoperability menu (G31311), choose Generic Data Item Map.

1. On Work With Code Mappings, click Add.



2. On Code Mapping Revision, complete the following fields and click OK:
    - Data Item Mapping
    - Dir Ind
    - External Vend Name
    - User Def Code
    - External Code

- Dlt Y/N

Processing Options for Code Mapping Revision (P0048)

Process
1. Enter the default view mode.
' ' - View All Mappings (default).
'1' - View Inbound Mappings only.
'2' - View Outbound Mappings only.
2. Enter the Mapping revision mode.
' ' - Enter Mappings for UDC Values.
'1' - Enter Mappings for Data Item Values.

► To verify generic data item mappings

It is recommended that you verify the generic data item mappings the system uses to ensure that all transactions reference valid values within OneWorld and SynQuest. The system uses the following mappings:

1. Generic data item mapping for data item ITEM_TYPE.

   Maps OneWorld item branch/plant stocking type (STKT) to SynQuest item type.

2. Generic data item mapping for data item ITM_CRIT and user defined code MAP.

   Maps OneWorld item branch/plant category code field to SynQuest item critical flag. This special map defines the field name within item branch/plant that stores the item critical flag value.

3. Generic data item mapping for data item ITM_ALERT and user defined code MAP.

   Maps OneWorld item branch/plant category code field to SynQuest item alert days. This special map defines the field name within item branch/plant that stores the item alert days value.

4. Generic data item mapping for data item ITM_DEF and user defined code BUYER.

   If the item branch/plant buyer number (BUYR) is zero or blank, the system uses the value defined in this map to default the SynQuest item buyer code.

5. Generic data item mapping for data item ITM_DEF and user defined code FAMILY.

   If the item branch/plant planning family (PRP4) is blank, the system uses the value defined in this map to default the SynQuest item product family code.

6. Generic data item mapping for data item ITM_DEF and user defined code PLANNER.

   If the item branch/plant planner number (ANPL) is zero or blank, the system uses the value defined in this map to default the SynQuest item planner code.

7. Generic data item mapping for data item ITMRELSTAT.

   Maps OneWorld item branch/plant stocking type (STKT) to SynQuest item release status.

8. Generic data item mapping for data item R_LIMR and user defined code MAP.

Maps OneWorld item branch/plant category code field to SynQuest resource limited reporting flag. This special map defines the field name within item branch/plant that stores the resource limited reporting value.

9. Generic data item mapping for data item R_LOC and user defined code MAP.

   Maps OneWorld item branch/plant category code field to SynQuest resource location flag. This special map defines the field name within item branch/plant that stores the resource location flag.

10. Generic data item mapping for data item R_SCHED and user defined code MAP.

    Maps OneWorld item branch/plant category code field to SynQuest resource scheduled flag. This special map defines the field name within item branch/plant that stores the resource scheduled flag.

11. Generic data item mapping for data item R_TRAC and user defined code MAP.

    Maps OneWorld item branch/plant category code field to SynQuest resource tracked flag. This special map defines the field name within item branch/plant that stores the resource tracked flag.

12. Generic data item mapping for data item RES_DEF and user defined code DEPT.

    This default value is used to map all new resources from OneWorld to a SynQuest resource department value.

13. Generic data item mapping for data item RES_DEF and user defined code MGC.

    This default value is used to map all new resources from OneWorld to a SynQuest resource manufacturing calendar value.

14. Generic data item mapping for data item RES_DEF and user defined code PLC.

    This default value is used to map all new resources from OneWorld to a SynQuest resource planning calendar value.

15. Generic data item mapping for data item SHIP_DEF and user defined code OP.

    This default value is used to map all new resources from OneWorld to a SynQuest ship request step operation.

16. Generic data item mapping for data item SHIP_DEF and user defined code PRT.

    This default value is used to map all new resources from OneWorld to a SynQuest ship request priority code.

17. Generic data item mapping for data item SHIP_DEF and user defined code RT.

    This default value is used to map all new resources from OneWorld to a SynQuest ship request step run time value.

18. Generic data item mapping for data item SUP_DEF and user defined code CTR.

    This default value is used to map all new resources from OneWorld to a SynQuest support center.

19. Generic data item mapping for data item SUP_DEF and user defined code TYP.

    This default value is used to map all new resources from OneWorld to a SynQuest support item type.

Setting Up Requirements for Resource Definition Export

You define resources that consist of tools, machines, and labor in OneWorld as inventory items in the Item Master and Item Branch/Plant applications. The interface only recognizes events from the item branch/plant. In OneWorld, the interface includes basic information about a resource such as a name or description and a flag that is scheduled, tracked, or located. In the SynQuest Manufacturing Manager, the user manually maintains capacity effectivity dates.

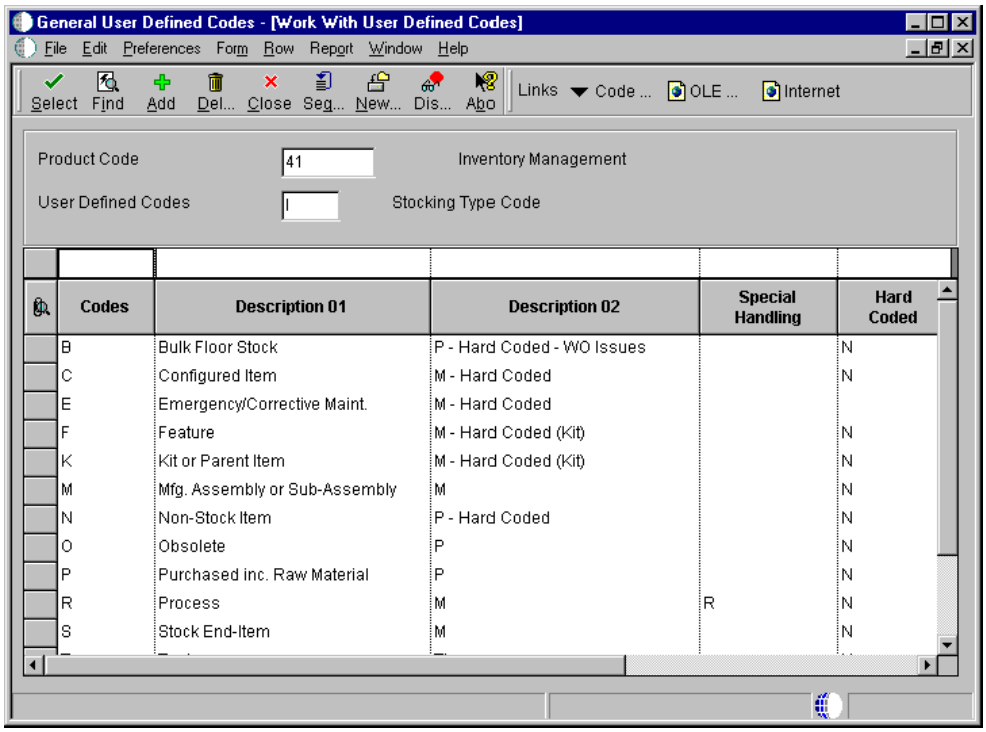
When the user defines the resources in an inventory system, you can attach them as components to a bill of material or a work order parts list. The system stores the capacity requirement in the Quantity Per field for the bill of material and also in the Quantity Required field for the parts list.

You define support items in a similar fashion as resources. You define items in OneWorld as inventory items. Support items only need basic information, such as a description. After you define the support items in the inventory system, you can attach them to bills of material or parts lists as components. Note that new support items that you define in the inventory system are not immediately available in SynQuest. When you attach the new support item to a work order parts list and the system exports the work order to SynQuest, the SynQuest system automatically creates the support item in its data base.

► To set up requirements for resource definition export

From the General Systems menu (G00), choose General User Defined Codes.

1. On Work With User Defined Codes (P0004A), type 41 in the following field:
    - Product Code
2. Type I in the following field and click Find:
    - User Defined Codes
3. Click Add.
4. On User Defined Codes, scroll to the bottom of the grid and complete the following values:
    - Codes
    - Description 01
    - Description 02



Note

The value of the first two characters in Description 2 is hard coded. The interface recognizes these values as resources.

The following are three new stocking types that the interface defines in the user defined code table in OneWorld.

- TL - tool resource
- AC - machine resource
- LB - labor resource
- SI - support items

When you define these stocking types, you can add new items in the inventory system and use the appropriate new stocking type to identify the item as a resource or support item. To use these resources and support items correctly in the SynQuest Manufacturing Manager interface, J.D. Edwards recommends the following:

- Assigning the planning code of the new resource to "non-planned" to make sure OneWorld does not plan it during MPS/MRP/DRP
- Assigning an issue type code of an item to a "non-issue" code to make sure OneWorld does not issue an item
- Assigning an item's time basis code to a "unit-based" code to make sure OneWorld calculates the required capacity per item

- Assigning an item's stocking type to a "stocked" code to make sure OneWorld attaches the item as a regular item

Launching Outbound Subsystem UBEs

The Batch Versions program does the following:

- Creates processing log records based on data export controls for each transaction type.
- Launches the processes that perform data transfers to the SynQuest MM.

You cannot run the Batch Versions program locally, as it must be submitted to the server. Unless you experience system failures, you need to run this program only once.

► To launch outbound subsystem UBEs

From the System Administration Tools menu (GH9011), choose Batch Versions.

1. On Work With Batch Versions - Available Versions, enter R00460 in the following field and click Find:

    - Batch Application

2. Run Version XJDE0001.

Exporting Planned Orders to the SynQuest MM

To send planned order messages to SynQuest, perform the export when MRP is completed.

► To export planned orders to the SynQuest MM

From the Material Planning Advanced and Technical Operations menu (G3444), choose MPS/MRP Planned Order Extraction for Export.

1. On Work With Batch Versions - Available Versions, select version XJDE0001, Export Planned Orders to SynQuest.
2. Choose Processing Options from the Row menu.
3. Click the Process tab.
4. Type 1 in processing option 1.
5. Type 2 in processing option 2.
6. Type SYNQUEST in processing option 3.
7. Type P in processing option 4.
8. Option 5 = P (or a status that is mapped to the SynQuest Planned status)

    P is a status that is mapped to the SynQuest Planned status.

9. Click OK.

    The program runs the default version XJDE0001.

Processing Options for Planned Order Extraction

Process
1. Enter a '1' to automatically attach Parts List and Routing data to the Planned Order.
2. Enter a '1' to export Planned Purchase Orders only; '2' to export Planned Work Orders only; or '3' to export both types of Planned Orders.
3. Enter the Vendor Name (UDC 00/VN) that will import the Planned Orders. If left blank, the UBE will end immediately.
4. Enter the Purchase Order Status that the system will use when exporting Planned Purchase Orders. (Required)
5. Enter the Work Order Status that the system will use when exporting Planned Work Orders. (Required)
SynQuest
Only one of the following parameters must be specified. If the Data Source Name is given, the Environment Name will be ignored. If the Data Source Name is left blank, the Environment Name must be supplied.
1. Enter the OneWorld Data Source Name where the SynQuest Exchange Repository resides.
2. Enter the OneWorld Environment Name which is configured to connect to the SynQuest Exchange Repository.
3. Enter a '1' to export Planned Orders using the Add Work Order transaction or '2' to export Planned Orders using the Add End Item Demand transaction.

Running Outbound Item Balances

From the Shop Floor Management Interoperability menu (G31311), choose Item Balance Extraction.

Before planning, you update SynQuest MM with the most current data about available quantities in your inventory. Use the default for this program, the Branch/Plant method (rather than the MRP method) to calculate item availability. You can run this program when you need to perform simulations in SynQuest.

If you want to see a report before updating SynQuest MM, run Version XJDE0001 (proof mode). Then run Version XJDE0002 (final mode) to send updated inventory information to SynQuest MM.

Processing Options for Export Inventory Balances to SynQuest

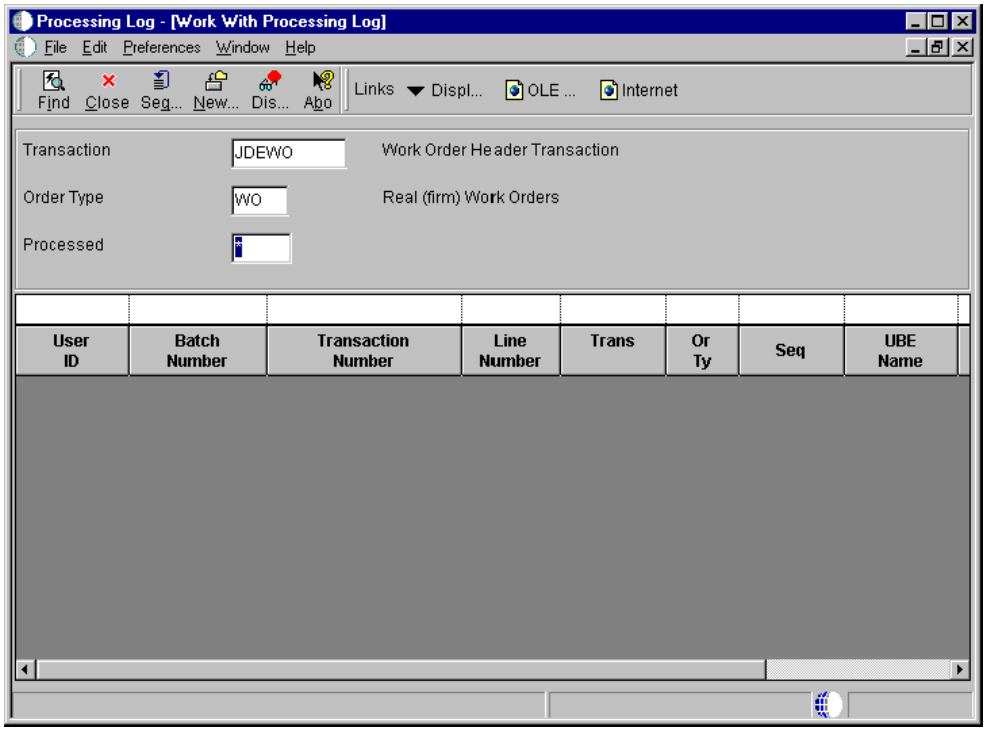
Process 1
1. Enter a '1' to run this UBE in Final mode. If left blank, the UBE will run in Proof mode.
2. Enter a '1' to calculate nettable quantity based on Item Availability in Branch/Plant Constants. If left blank, nettable quantity is calculated using the following options.
3. Enter a '1' to reduce nettable quantity by the Safety Stock of the Item.
4. Enter a '1' to add Quantities in Transit to nettable quantity.
5. Enter a '1' to add Quantities in Inspection to nettable quantity.
6. Enter a '1' to add Quantities in User Defined Bucket 1 to nettable quantity.
7. Enter a '1' to add Quantities in User Defined Bucket 2 to nettable quantity.
8. Enter up to 5 Lot Hold Codes to include in nettable quantity calculations. Enter a "*" to add ALL held lots to nettable quantity. If left blank, no held lots will be added to nettable quantity.
Process 2
Only one of the following parameters must be specified. If the Data Source Name is given, the Environment Name will be ignored. If the Data Source Name is left blank, the Environment Name must be supplied.
1. Enter the OneWorld Data Source Name where the SynQuest Exchange Repository resides.
2. Enter the OneWorld Environment Name which is configured to connect to the SynQuest Exchange Repository.

Reviewing the Processing Log

From the Shop Floor Management Interoperability menu (G31311), choose Processing Log.

For tracking purposes, you can check the processing log to ensure that the interface has processed the appropriate transactions.

▶ To review the processing log



1. On Work With Processing Log, complete the following fields:
   - Transaction
   - Order Type
2. Enter N in the following field and click Find:
   - Processed
3. Verify that the interface processed all transactions.

Caution

A "Y" means that the interface has successfully written a transaction to the SynQuest Exchange Repository. SynQuest might reject this transaction even though the interface wrote the transaction to the exchange repository. For example, if the interface exports an order from a branch plant in another state and you have not manually defined it in SynQuest MM, then Synquest MM will reject this order. In this example, OneWorld successfully wrote a

transaction to the exchange repository, but SynQuest MM rejected it because the branch plant did not exist in SynQuest.