PeopleSoft

EnterpriseOne Requirements Planning 8.9 PeopleBook

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Industry Environment and Concepts for Requirements Planning

This chapter introduces you to the industry concepts that are associated with requirements planning. In addition, this chapter outlines several problems that are inherent in a planning environment and presents J.D. Edwards solutions.

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 to the last fundamental question is simple: planning. The development and the execution of plans, however, is anything but simple. To inform all of the participants of an enterprise's objectives and to spread information across an entire organization is a challenge! In addition, organizations do not operate in a vacuum, and planners must understand how 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 active and 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 that were capable of accomplishing simple calculations to multiple rooms filled with employees, each with his or her 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 upon balancing 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 seek more efficient ways to set up, track, and change business processes. Market activities affect the bottom line 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 in 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 more clear.

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 plans all of its 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 they 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 that is 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 table:

Strategic planning	The highest level of business planning, strategic planning, 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 details 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 company will 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 accomplished later to accommodate future needs of a company. Tactical planning balances supply and demand requirements.

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 offers 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.

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 might 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.

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.

Sales and Operations Planning (S&OP)

Sales and Operations Planning (S&OP) rounds out enterprise planning. S&OP links 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.

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 that are 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.

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 business 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.

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 Master Production Schedule (MPS) plan. An organization might require changes at various levels of the planning system to compensate or correct the imbalance between supply and demand.

Capacity Requirements Planning (CRP) validates the Material Requirements Planning (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 RCCP validates Master Production Scheduling (MPS). Capacity Requirements Planning (CRP) validates MRP while input/output (I/O) reporting systems validate Manufacturing Execution System (MES).

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 that are 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 that are 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, and ensures that the necessary items are available where and when they are needed.

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 that is identified with the priority planning system. Capacity Requirements Planning (CRP) analyzes resources -- such as personnel, equipment, or tooling -- and evaluates imbalances between the required resources and the amount of resources that are available. A planner determines whether sufficient time exists to acquire more resources, based on the evaluation, or to distribute the workload among other existing resources.

Manufacturing Execution System (MES)

The final level of manufacturing planning is the Manufacturing Execution System (MES) phase. MES is a more detailed version of Material Requirements Planning (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.

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 that are 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 that is provided by Requirements 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 might 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.

Project Requirements Planning (PRP)

Project Requirements Planning (PRP) is an option within the MRP/MPS Requirements Planning program (R3482) that you use to generate replenishment schedules for production orders and components for an end item that are used in a project.

PRP recognizes the shippable items from the project as the supply of the end item and uses this supply to drive the demand for its components. Thus, the project supplies its own demand.

The dependent demand is generated by the bill of material (BOM) structure or by the work order parts list that is associated with the end items. Inventory that is acquired either by purchase order receipts or work order completions for these project-specific items should be used only for meeting the project's demand.

Project demand and supply is regarded as *standalone* or *independent* so that any additional demand or supply from forecasts, sales orders, work orders, or purchase orders on that end item does not interfere with the requirement from the project.

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 that 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 might 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 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, greater dependence is 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. Although 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 that 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 that are 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 (TQM) 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 increase corporate visibility and promote flexibility in reacting to unforeseen changes in the marketplace

Requirements Planning: The Competitive Advantage

The following examples are typical problems in the manufacturing industry and the Requirements Planning functionality that resolves each problem. When you use Requirements Planning 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 multifacility planning to define bills of material and routings for each facility for the same item. The system displays material, bills of material (BOM), 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, companies 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 nor 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 Manufacturing Execution Systems (MES) 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.

Requirements Planning Overview

The Requirements Planning system is part of the Supply Chain Management product line. Supply Chain Management (SCM) 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. SCM 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 that is available in critical work centers.

You use RCCP to determine if you should revise the master schedule to create feasible workloads 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 workloads 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
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
Multifacility Planning	Provides centralized control of distribution inventories and creates a coordinated replenishment plan
Project Requirements Planning (PRP)	Uses project work breakdown structures and related bills of materials to create replenishment plans for project items

Requirements Planning System Integration

The Requirements 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
Base Configurator	Supplies information for assemble-to-order and make-to-order items
Forecast Management	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
Engineering Project Management	Supplies information for engineer-to-order and project specific items.

Terms and Concepts for Requirements Planning

Requirements Planning uses the following terms and concepts:

Bills of material

The components and relationships that are 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 that are 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.

Tables Used by Requirements Planning

The following tables are used throughout Requirements 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 File (F4102)	Contains warehouse or plant-level information, such as: • Costs • Quantities • Location • Branch level category codes • Lead times • Planning fences • Order policy codes
Bill of Material Master File (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 Message File (F3311)	Contains the action messages that are generated by the Resource Requirements Planning (RRP), Rough Cut Capacity Planning (RCCP), and Capacity Requirements Planning (CRP) programs.
Forecast File (F3460)	Contains the forecast data that Master Production Scheduling (MPS) uses for calculations and that RRP validate.
Routing Master File (F3003)	Stores routing information, including operation sequence, work center, run, setup, and machine time.
Work Center Resource Units (F3007)	Contains the available capacity for each work center by day, month, and year.
Work Center Master File (F30006)	Contains detail data about all defined work centers.
Capacity Resource Profile (F3303)	Contains all of the resource profiles that are used in Resource Requirements Planning.

Branch Relationships Master File (F3403)	Contains the supply and demand relationship among the branches.
MPS/MRP/DRP Message File (F3411)	Contains the action messages that are generated by MPS, Material Requirements Planning (MRP), or Distribution Requirements Planning (DRP).
MPS/MRP/DRP Lower Level Requirements File (F3412)	Contains the source of gross requirements that are posted to items from parent items.
MPS/MRP/DRP Summary File (F3413)	Contains the time series data for forms and reports.
Supplier Schedule Master File (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 File table for each line item on a blanket order that you use in the supplier scheduling process.
Supplier Schedule Master File (F43211)	Contains the data that identifies predetermined split percentages between suppliers, by item.

Menu Overview

J.D. Edwards software provides access through a menu hierarchy. The hierarchy is organized by system and frequency of use.

Resource & Capacity Planning (G33)

Daily Processing (G3310)

- Daily Resource Requirements Planning (G3311)
- Daily Rough Cut Capacity Planning (G3312)

- Daily Capacity Requirements Planning (G3313)

Periodic Processing (G3320)

- Periodic Resource/Capacity Planning (G3321)
- Periodic Resource/Capacity Planning (G3322)

Resource/Capacity Planning 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)

- DRP Daily Operations (G3411)
- MPS Daily Operation (G3412)
- MRP Daily Operations (G3413)
- Multi-Facility Planning Daily Operations (G3414)

Periodic Processing (G3420)

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

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 field.

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-Facility Planning Daily Operations	G3414	MULTI
		DMP
Single Site Periodic Planning Operations	G3422	PSS
Multi-Facility Planning	G3423	PMP
Material Planning Setup	G3440	SMAT
Material Planning Setup	G3442	MATS
Multi-Facility Setup	G3443	SMP

Requirements Planning Concepts

You must have an understanding of planning concepts before setting up and using the Requirements Planning system. You should also be familiar with how the Requirements Planning system works with other J.D. Edwards systems.

Understanding Supply and Demand

To use the Requirements Planning system successfully, you should understand how the Inventory Management, Sales Order Management, Forecast Management, Work Order Management, and Procurement systems affect material and capacity planning.

Inventory Management and Requirements Planning

Inventory Management has the following significant effects on Requirements Planning:

- Stores item information for the manufacturing systems such as order policies, planning fences, and lead times
- Updates the inventory balances in the item ledger with any change in inventory count, lot availability, or lot movement
- Determines the beginning inventory that is available for planning calculations
- Defines the hours per days that are used for capacity calculations.

Lastly, keep in mind that inventory is a source of supply.

Forecast Management and Requirements Planning

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. Forecasts are a source of demand for your end items.

Forecasts have the following significant effects on Requirements Planning:

- Forecasts are a source of demand for your end items.
- The Forecast File table (F3460) contains forecast quantities and dates that are used by the planning system.
- Multiple user defined forecast types can be used by the planning system.

The Forecast Management 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 that are needed to make a product.

Sales Order Management and Requirements Planning

Sales orders have the following significant effects on Requirements Planning:

- Sales orders are a source of demand for your end items.
- Pick dates and quantities are used for planning.

Both sales orders and forecasts are used by the planning system as sources of demand. Forecasts are usually based on sales order history records in the Sales Order Management system. Planning fence rules in the Inventory Management system determine which source of demand, forecasts or current sales orders, are used by the Requirements Planning system.

Work Order Management and Requirements Planning

Work orders have the following significant effects on Requirements Planning:

- Planned work orders are an output of the planning generation.
- Work orders are a source of supply for parent items and a source of demand for component items.
- Completion dates, quantities, and data in the parts list are used for planning.

Procurement and Requirements Planning

Purchase orders have the following significant effects on Requirements Planning:

- Purchase orders are the output of the planning generation and a source of supply for your end items.
- Promised delivery dates and quantities are used for planning.

Single-Facility versus Multifacility Planning

Single-facility planning encompasses the generation of a distribution or production plan for one facility. All supply and demand data must be within a single branch plant. If an item is available in other branch plants, it is not considered during single-facility planning.

In contrast, multifacility planning is set up to consider supply and demand for the same item across multiple facilities. The objective of multifacility planning is to coordinate the distribution or production plan of several plants that are part of an integrated company. This type of planning is used to provide a number of business solutions, including:

- Demand consolidation to support centralized procurement for multiple branch plants
- Demand fulfillment from an alternate branch plant to minimize inventory
- Demand integration where one plant produces semi-finished items that are shipped to and assembled into end item products at another plant.

By defining supply and demand relationships between branch plants, the system transfers items among the plants using the Sales Order Management and Procurement systems.

Single-level versus Multilevel Planning

Single-level planning is the balance of supply and demand of an end item at the sales and operations planning level. The planning system does not explode down to the lower level components in the bill of material.

Both manufacturing and distribution companies use single-level planning, depending on their process flows. Single-level planning is performed for Master Production Scheduling (MPS) and Distribution Requirements Planning (DRP) to plan end items or families of end items. Single-level planning at the DRP and MPS levels allows flexibility to manage your inventory by specific time buckets, which can be monthly, weekly, or daily.

DRP focuses on processing end items through the planning system. DRP only develops messages for the purchase of end items; no parent/component relationships exist.

For example, a distribution company that sells material building supplies forecasts faucets as a demand, and purchases what is needed to meet the forecast. The company then sells the faucets to home builders.

MPS uses single-level planning to focus on the end item. It is run prior to Material Requirements Planning (MRP) to stabilize and firm up the schedule. Thus, single-level MPS does not explode down to lower level components in the bill of material. MPS can develop both purchase order and work order messages.

For example, a manufacturer of building materials might buy bathtubs and then sell these end items to distributors. The manufacturer uses forecast as demand and purchases bathtubs to meet that demand. They then sell the bathtubs to a distributor. For end items that the manufacturer builds itself, such as faucets, the company would run single-level MPS to produce work order messages for the faucets. By running single-level MPS, the manufacturer has the flexibility to change quantities and dates of the end items before sending the demand to lower level components such as o-rings, washers, handles, and bolts.

Pegging records do not exist at the highest level of the bill of material structure because that is where the demand originates.

Material Requirements Planning (MRP) is multilevel planning. The planning system explodes parent demand from end items down to lower level components in a bill of material. MRP creates messages for both purchased and lower level manufactured work orders.

Pegging can be done to determine the parent source of demand.

Master Production Scheduling and Material Requirements Planning

A Master Production Schedule (MPS) 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 gross demand (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.

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

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
    - Forecast
    - Sales Orders
    - Planned and firm work orders
- Supply
    - Firm work orders
    - Rate schedules
    - Purchase orders
    - Inventory
    - In-receipt routing
- Product data
    - Item Branch File (F4102)
    - Bill of Material Master File (F3002)

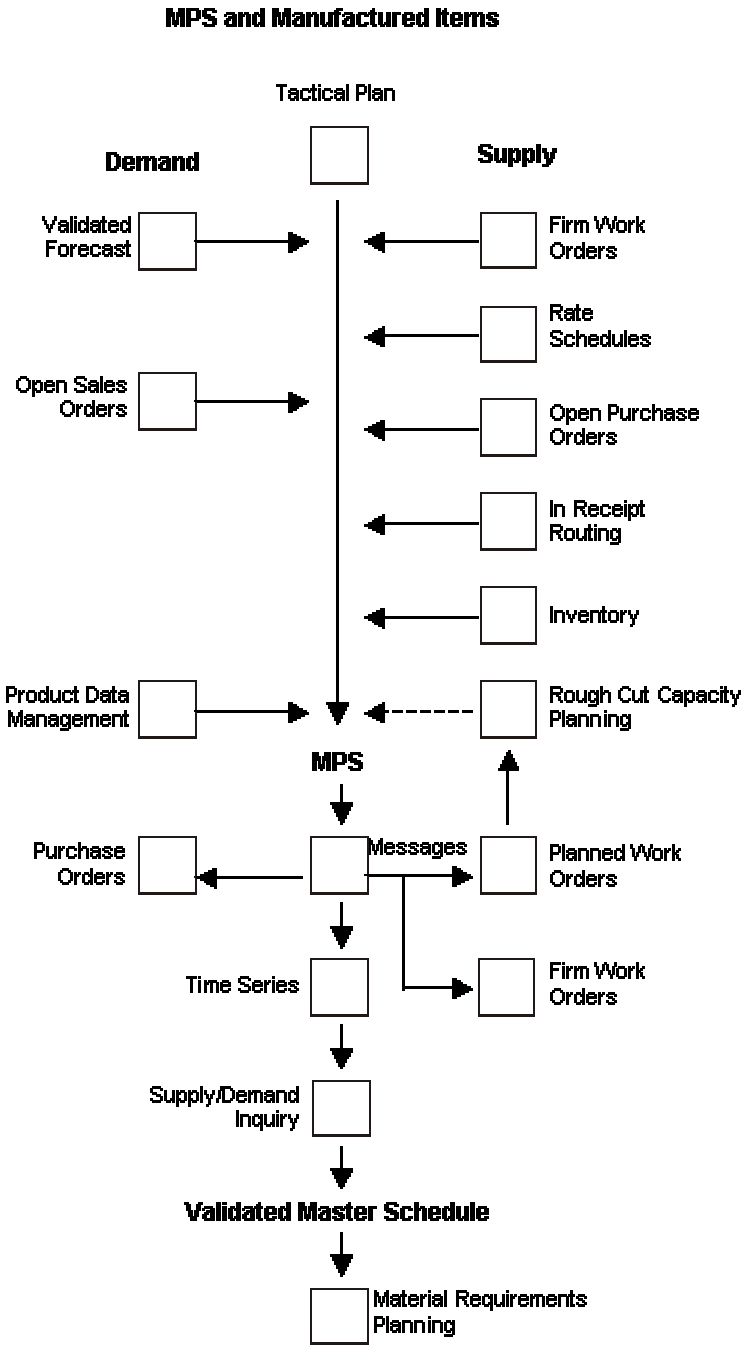
The system generates the following outputs from MRP:

- Action and warning messages
- Time series with calculated quantities for:
  - Ending Available (EA)
  - Available to Promise (ATP)
  - Cumulative Available to Promise (CATP)
  - Planned orders

MPS and Manufactured Items

You use Master Production Scheduling (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.

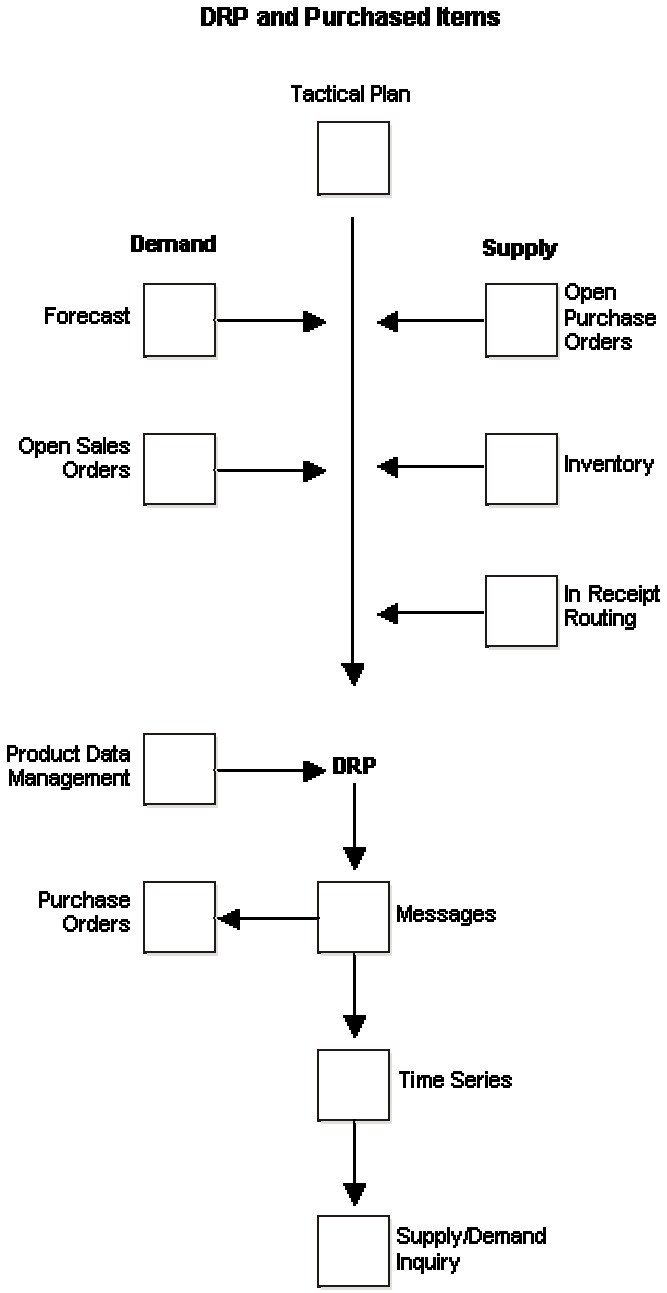
The following graphic illustrates this process:



DRP and Purchased Items

For distribution businesses, Distribution Requirements Planning (DRP) provides replenishment plans for items that are purchased and resold in a distribution environment.

The following graphic illustrates this process:



What Are the Differences between MRP and MPS?

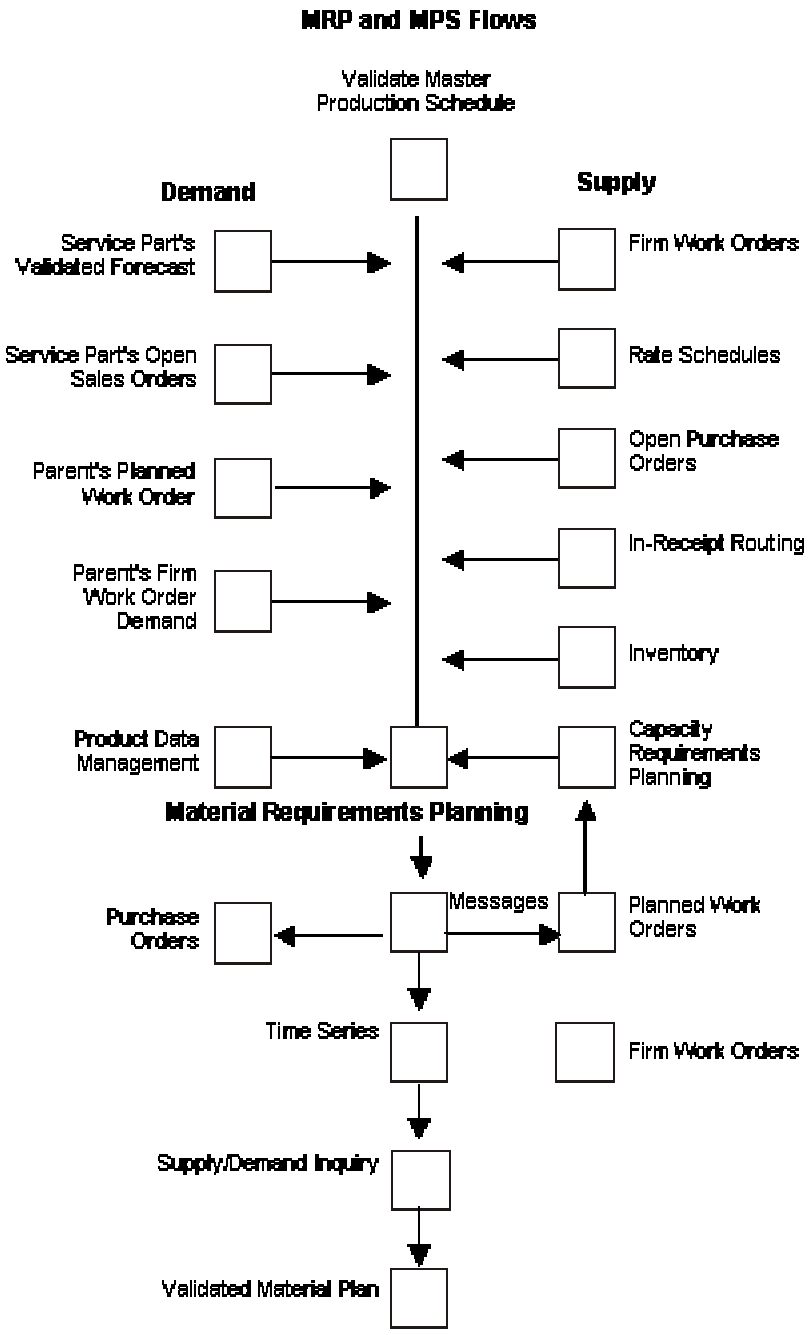
Master Production Scheduling (MPS) generally has independent demand, while Material Requirements Planning (MRP) has dependent demand. Independent demand is demand for an item that is unrelated to the demand for other items, such as demand for finished goods.

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:



Understanding Requirements Planning Output

The primary outputs of requirements planning include messages, time series, and planned orders. You need to know and understand the elements that affect the process and look for the outputs, including planning horizons, quantity types, time fences, and planning message definitions. These elements are common for all types of requirements planning.

Planning Horizons

APICS, the Educational Society for Resource Management, defines a planning horizon as the amount of time that a plan extends into the future. Planning horizons must be long enough to cover the cumulative leadtime for all low-level components. For higher level planning, the horizon must be long enough to allow increased capacity adjustments, if needed. Changes that extend far into the planning horizon can be managed with little disruption to the planning schedule. Changes closer to the current date or delivery due date might have significant schedule and cost impacts to the existing plan.

Cumulative leadtime should include visibility to all aspects of the plan:

- Engineering/Development time
- Purchasing leadtime
- Manufacturing leadtime
- Final assembly leadtime
- Delivery time to customer

Example

The following example illustrates a planning horizon:

- Order raw materials – 20 days
- Produce component items – 20 days
- Subassembly production – 20 days
- Final assembly – 20 days

The planning horizon must be set to include the entire leadtime from raw material through final assembly. Therefore, this planning horizon should be no less than 80 days in length.

Quantity Types (34/QT)

The system uses the Quantity Type user defined code (UDC) 34/QT. Quantity types are predefined codes that define the display data on the time series screens and reports that use the MPS/MRP/DRP Summary File table (F3413). The quantity types are used by the MRP/MPS Requirements Planning program (R3482) and Master Planning Schedule – Multiple Plant program (R3483) to calculate supply and demand.

Quantity types are alpha codes that represent various types of supply or demand on the time series. Any code preceded by a (+) symbol designates supply. Any code preceded by a (-) symbol designates demand or a reduction of supply. Some quantity types are designated as unadjusted. Unadjusted quantity types show the original quantity without planning actions. All other quantity types are displayed as if all planning actions have been processed.

UDC 34/QT codes are hard coded; however, the descriptions explaining the codes are not hard coded. If changes are made to the descriptions, J.D. Edwards strongly recommends that these changes be documented by taking the Row menu to Attachments. Creating an attachment to the code with a changed description provides an audit trail on what was changed and why the change was implemented.

Caution

J.D. Edwards strongly recommends that you do not change the 34/QT UDC because the MRP/MPS Requirements Planning (R3482) and Master Planning Schedule – Multiple Plant (R3483) programs build calculations for supply and demand based on these quantity types.

Time Fences and the Time Series

Planning horizons are divided into time frames that establish operation policies or guidelines for prioritizing activities

The time fences define how priority decisions will be made with respect to scheduling supply to meet demand. Time fences denote where defined planning rules will be applied in balancing the supply to meet existing demand. Time fences apply to sources of demand that will be utilized in planning calculations. Time fence rules stipulate how forecast, customer demand, or a mixture of each will be used during the netting calculations when establishing the schedule.

Time fences are points in time when 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 create or re-plan 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.

Imbalances of supply and demand within the freeze fence are planned outside the freeze fence.

Planning Fence (P)

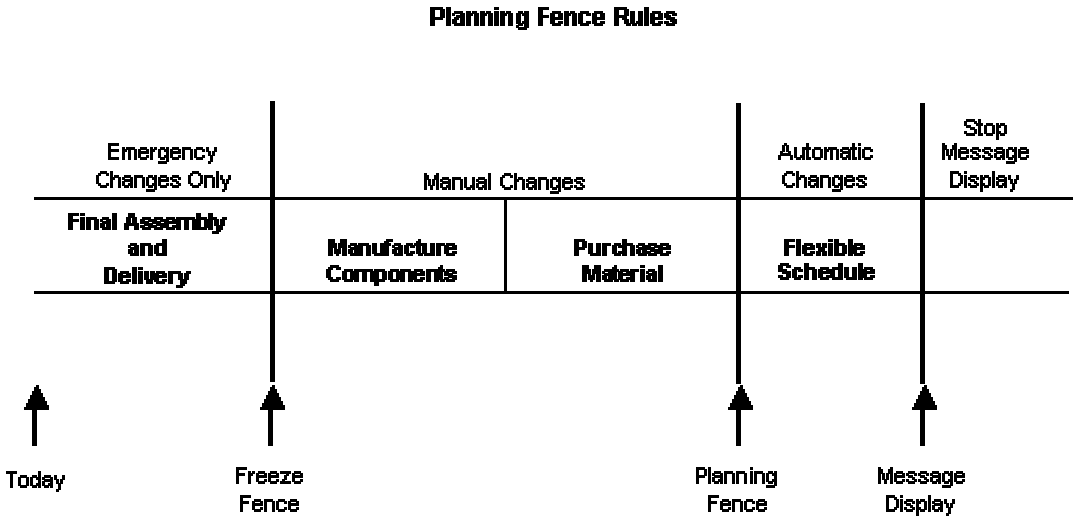
The number of days that the system uses with the time fence rule to determine how demand is used. Enter the number of days after the generation start date when the time fence rule changes from the first rule to the second rule. For example, if the time fence rule is S (customer demand before the time fence, forecast after the time fence), the generation start date is 01/03/05, and the planning time fence is 3 days, then 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 messages. For example, if the generation start date is 01/01/05, the shop calendar is seven days a week 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 start 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.

The following graphic provides an example of a times series:



In the Item Master program (P4101), 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.

Each of the fences is displayed on the time series in their respective bucket. Along with Freeze Fence (F), Planning Fence (P), Message Display Fence (D), you will also find Level Leadtime (L), Manufacturing Leadtime (M), and Cumulative Leadtime (C) displayed.

You can also generate a master schedule for items by 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.

MRP Period Calculations Using Planning Fence Rules

Material Requirements Planning (MRP) supply and demand netting calculations are generated on a period-by-period basis for each MRP defined time bucket. The requirement generation uses the planning fence rule to determine what sources of demand to consider for a given duration.

The following example is based on a G planning fence rule of 20 days. The *greater than* rule will be applied on a period-by-period basis within the planning fence duration.

	Week 1	Week 2	Week 3	Week4	Week 5	Week 6

Forecast	100	100	100	100	100	100
Sales Orders	300					200
PLO	300	100	100	100	100	100

This MRP period-by-period comparison would be more pronounced if the MRP time buckets were in days and the rule duration remained at 20 days.

Note

Planning time fence duration should approximate the replenishment leadtime of the item.

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.

For example, you can use a time fence rule for planning that calculates an ending available amount which is based on the greater of forecast or customer demand. For rules C and G, this situation 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 C is commonly used for make-to-order, assemble-to-order, and engineer-to-order items.

Rule F

Description 1

Forecast

Description 2

Forecast plus customer demand

Rule F is commonly used for make-to-stock items where forecast in Description 2 is insufficient for total demand or business policy supports building of inventory due to volatile demand.

Rule G

Description 1

Whichever is greater: forecast or customer demand

Description 2

Forecast

Rule G is the default.

Rule G is commonly used for make-to-stock items with accurate forecast. Description 1 in Rule G provides a hedge to prevent lost sales or backorders.

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 Manufacturing Data tab on the Additional System Information form in the Item Master program (P4101) to 999.

Rule H is commonly used for make-to-stock items and is used for forecast consumption. Forecast consumption allows you to plan for the entire planning horizon.

Rule S

Description 1

Customer Demand

Description 2

Forecast

Rule S is commonly used for make-to-order, assemble-to-order, and engineer-to-order items. Similar to Rule C. Rule S does not take customer demand into consideration for Description

2.

Rule 1

Description 1

Zero

Description 2

Forecast

Rule 1 is used when you have constraints on your shop floor that dictate your workload. Neither forecast nor customer is considered in Description 1.

Rule 3

Description 1

Zero

Description 2

Forecast plus customer demand

Rule 3 is similar to Rule 1; but Rule 3 is used for schedule constraints, and forecast is typically lower than total demand.

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 Requirements Planning system provides three different time series calculations:

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

See Also

- *Forecast Consumption Calculation* in the *Requirements Planning Guide*

Example: Ending Available Calculation

Ending Available (EA) is the amount of product that is 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 that is available at the end of a time period. Assume that the order policy code = lot for lot, safety stock = 20, time fence rule for planning = C, and leadtime = 1. The planning fence is between periods four and five.

For example:

On hand (80) – safety (20) = Period 1 + BA (60)

Period 1 + BA (60) – 50(20) = EA (40)

	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 order policy code = fixed 60, safety stock = 0, time fence rule for planning = C, and leadtime = 1. The planning fence is between periods four and five.

	Period							
	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

Planning Messages

During planning, the system generates recommendations for the user called Action Messages.

The action messages for Distribution Requirements Planning (DRP), Master Production Scheduling (MPS), and Material Requirements Planning (MRP) are defined in user defined code (UDC) table Message Type 34/MT. The character codes are hard-coded. Do not change the character codes in this UDC table.

When you process action messages, the system is programmed to complete specific events.

After you generate planning schedule output, the system creates action messages that:

- Alert the planner of possible adverse conditions.
- Display action recommendations that the planner can process.

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 message types that the system displays when you generate Distribution Requirements Planning (DRP), Master Production Scheduling (MPS), and so on. Because the character code is hard coded, you can change the description but not the function of the message type.

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

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 no outstanding issues exist. 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	Displays purchase order with updated quantity. Click OK to accept the change.

Action Messages in DRP/MPS/MRP				
Type	**Description**	**Planner Remarks**	**Action that the System Takes When Message is Processed**	
			Work Orders	**Purchase Orders**
			required components.	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.

Understanding Parallel Processing

Parallel processing is a technique that distributes work that an application performs across multiple processors within a CPU. The parallel processing method achieves significant performance gains, which are limited only by the number of processors that are available on

your server. Thus, 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 can 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 Material Requirements Planning (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 the MRP/MPS Requirements Planning and Master Planning Schedule - Multiple Plant programs, 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 equals 1. The system processes all of the 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 the software'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:

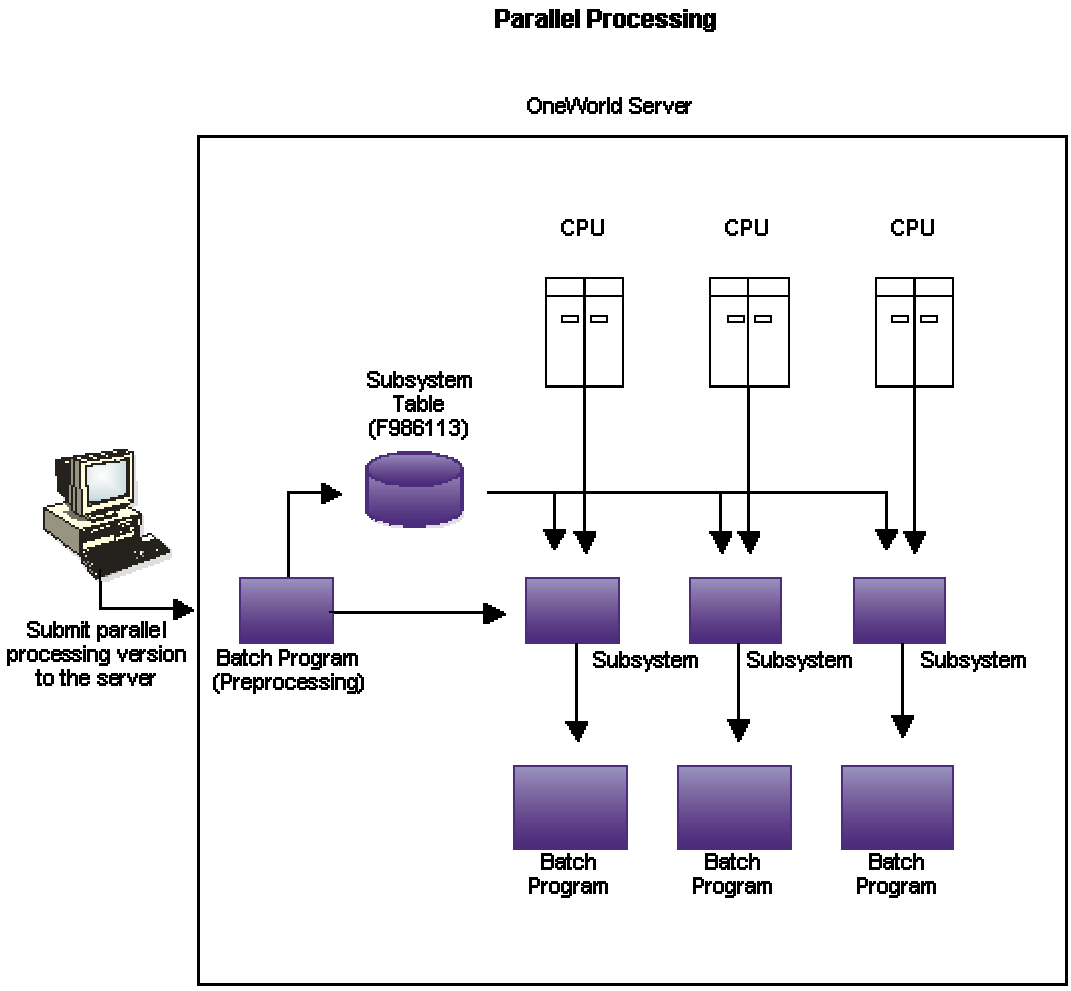
- Indicate the maximum number of the same subsystem jobs that the system can process at the same time. Add or modify the value, UBESubsystemLimit=N, in the UBE section of the jde.ini file. N represents the maximum number of similar subsystem jobs.
- Set up multi-threaded job queues

Note

Technical Support must complete standard tasks in system setup before you can execute the parallel processing method.

The MRP/MPS Requirements Planning and Master Planning Schedule - Multiple Plant programs 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.

The following graphic illustrates parallel processing:



Caution

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

See Also

- *Working with ERP 9.0 Subsystems* in the *System Administration Guide* for more information about parallel processing

Requirements Planning Foundation Setup

You must complete setup tasks to define the information that the system uses prior to using the material and capacity planning systems. You set up information in the Inventory Management, Product Data Management, Shop Floor Management, Sales Order Management, and Requirements Planning systems.

Setup includes such tasks as defining user defined codes, order policy rules, and supply and demand inclusion rules. The Requirements Planning system uses setup information to determine how to select and display data.

Setup Considerations for Single-Level Planning

To successfully create a single-level plan for Master Production Scheduling (MPS) or Distribution Requirements Planning (DRP) you must verify certain system setups.

You must verify that the Planning Code field in the Item Branch program (P41026) on the Additional System Info form is set to a value of 1. This setting indicates that the item is planned by MPS and DRP.

Verify that the Generation Type field on the Parameters tab in the MRP/MPS Requirements Planning program (R3482) is set to a value of 1. The generation types enable you to develop a strategy for the different planning levels for your items. A setting of 1 indicates that the system generates a single-level MPS or DRP plan.

For a single-level DRP run, you must set the Purchase Orders field on the Document Types tab in the MRP/MPS Requirements Planning program (R3482) with the appropriate document type. This type is generally OP.

For a single-level MPS run, you must set both the Purchase Orders and the Work Orders fields on the Document Types tab in the MRP/MPS Requirements Planning program (R3482) with the appropriate document type. These fields are generally set to OP and WO, respectively.

You must also set up the supply and demand inclusion rules via the Supply/Demand Inclusion Rules program (P34004). The system processes the supply and demand to include document types, line types, and status codes per user setup. DRP creates only purchase order messages while MPS creates both purchase order and work order messages.

Once the supply and demand inclusion rules are set up, you must input the rule version in the Version of Supply/Demand Inclusion Rules field on the Parameters tab in the MRP/MPS Requirements Planning program (R3482).

You can set up quantity types that are specific to DRP and MPS. Quantity types are predefined codes that define the display of data on the time series in time-phased buckets. You might want to set up your own quantity types since DRP does not need to see codes for work orders while MPS includes codes for work orders. The DRP quantity types are defined in user defined code (UDC) table 34/DR, and the MPS quantity types are defined in UDC table 34/MS.

Setting Up Supply and Demand Inclusion Rules

You set up supply and demand inclusion rules to define what Order Type, Line Type, and Line Status combinations should be considered as supply or demand for various planning calculations.

For example, a purchase order for a stock item that has already been received, (Order Type = OP, Line Type = S, Line Status = 999) should not be included as supply because the quantity on the purchase order is already in inventory.

A sales order for a stock item that is waiting for a pick slip to be printed (Order Type = SO, Line Type = S, Line Status = 540) should be included as demand because the items have not been picked from inventory yet.

► To set up supply and demand inclusion rules

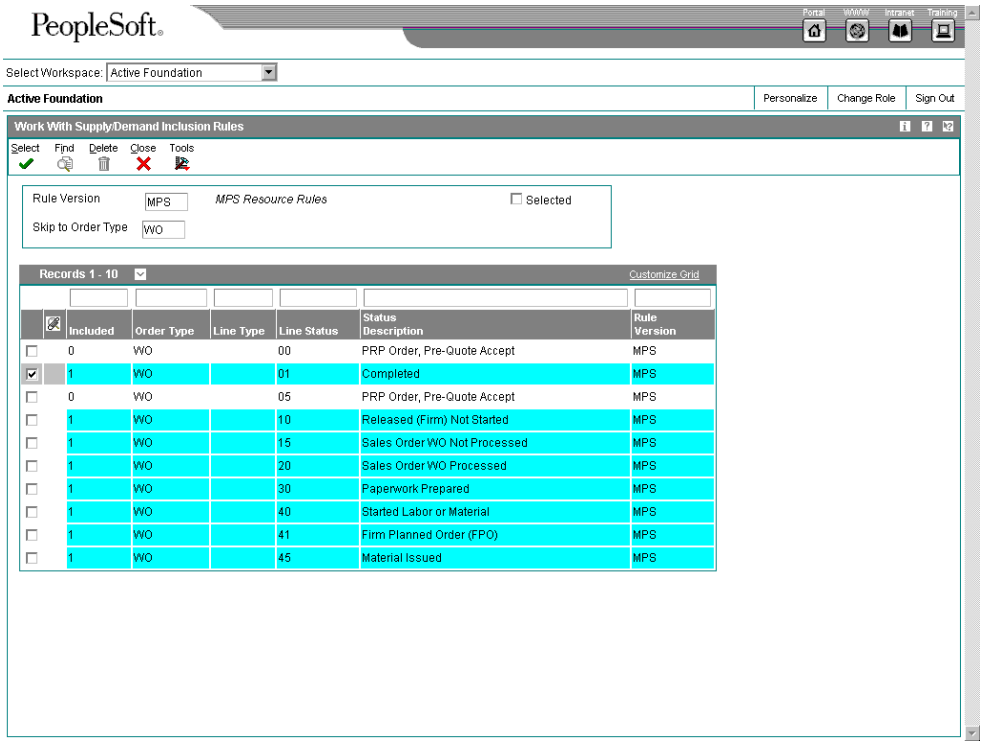
Use one of the following navigations:

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 Inventory Management for Requirements Planning

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

Once your items are defined in the Item Master program (P4101), you can further define your items at the branch/plant level using the Item Branch program (P41026).

Use the Item Branch program to specify the following information for each item. This information is critical to the Requirements Planning system:

- Stocking Type
- Planner
- Buyer
- Supplier

- Lot processing information
- Planning family
- Category codes
- Units of measure
- Order policy codes
- Order policy values
- Planning code
- Planning fence rule
- Planning fence
- Freeze fence
- Message display fence
- Time Basis
- Shrink Factor
- Leadtimes
- Reorder quantities

What You Should Know About Item Setup

Stocking Types

In the distribution systems, the stocking type for each item typically identifies how you stock the item. However, the planning system uses the second description and the special handling code in the stocking type user defined table definition (41/I) to determine if the item is a manufactured, purchased, processed or project specific item.

Order Policy Rules

You must set up order policy rules to control how the planning system calculates dates and quantities. The order policy rules that you set up are:

Planning code The system uses planning codes to process the item when running the MRP/MPS Requirements Planning (R3482) and Master Planning Schedule – Multiple Plant (R3483) programs. Use planning codes 1, 2, or 3 for single level or multilevel 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

Order policy value The system uses this value with order policy codes 1, 2, 4 and 5. For example, purchasing a 90-day supply of V-8 engines requires that the order policy code is set to 4 and the order value policy value = 90.

Lead times

You must set up lead times for items.

Leadtime level for phantom items 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.

See Also

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

- *Entering Item Master Information*
- *Entering Basic Item Information*
- *Assigning Item Responsibility*
- *Enter Item Classification Codes*
- *Entering Item Units 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*

Setting Up Quantity Type Subsets

J.D. Edwards recommends that you do not change the 34/QT; however, you can create a subset or a custom quantity type user defined code table. Since companies like to make decisions on what quantity types appear on the time series, creating a custom quantity type UDC table gives them flexibility. For example, a distribution warehouse does not want to see the quantity types for work orders.

J.D. Edwards has developed multiple subsets of the 34/QT -- for example, the 34/DR for Distribution Requirement Plan and 34/MS for Master Production Schedule.

For the system to access the 34/QT during Distribution Requirements Planning (DRP), Master Production Scheduling (MPS) or Material Requirements Planning (MRP) generation, you must set the UDC Type field on the Parameters tab in the processing options for the MRP/MPS Requirements Planning (R3482) and Master Planning Schedule – Multiple Plant (R3483) programs. Setting this processing option with a value of QT allows the planning system to use all available data and create a time series for every transaction that it is capable of making.

You can use your custom UDC, 34/DR, or 34/MS quantity types by setting the Alternate UDC Type (Optional) field on the Defaults tab in the processing options for the MPS Time Series program (P3413). You can then use the Alternate Quantity Type option on the Work With Time Series form to determine which UDC quantity types that you view in the time series.

Distribution Requirement Plan Quantity Type (34/DR)

The system uses 34/DR as the user defined code for distribution requirement plan quantity types. Quantity types are predefined codes that define the display data on the time series screens and reports that use the MPS/MRP/DRP Summary File table (F3413).

J.D. Edwards has developed the 34/DR as a subset of the 34/QT. Upon review of the 34/DR, notice that the quantity types have been reduced from the original quantity types in the 34/QT. Unadjusted quantity types have been removed and +DRP reflects planned replenish order quantities.

DRP Quantity Types

The following table lists the valid quantity types and descriptions for Distribution Requirements Planning (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

Master Production Schedule Quantity Type (34/MS)

The system uses 34/MS as the user defined code for master production schedule quantity types. Quantity types are predefined codes that define the display data on the time series screens and reports that use the MPS/MRP/DRP Summary File table (F3413).

J.D. Edwards has developed the 34/MS as a subset of the 34/QT. Upon review of the 34/MS, notice that the quantity types have been reduced from the original quantity types in the 34/QT.

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 Distribution Requirements Planning (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 Master Production Scheduling (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 appear. However, the time series calculation is not affected by the quantity types that are not pertinent to the application.

Adjusted Values Only (MPS) (34/AS)

The system uses 34/AS as the user defined code for adjusted values only (MPS) quantity types. Quantity types are predefined codes that define the display data on the time series screens and reports that use the MPS/MRP/DRP Summary File table (F3413).

J.D. Edwards has developed the 34/AS as a subset of the 34/QT. Upon review of the 34/AS, notice that the quantity types have been reduced from the original quantity types in the 34/QT. The 34/AS provides an adjusted view of the time series. This adjusted view shows a planner what the plan will be if all the planning recommendations are acted on.

Unadjusted Values Only (MPS) (34/US)

The system uses 34/US as the user defined code for unadjusted values only (MPS) quantity types. Quantity types are predefined codes that define the display data on the time series screens and reports that use the MPS/MRP/DRP Summary File table (F3413).

J.D. Edwards has developed the 34/US as a subset of the 34/QT. Upon review of the 34/US, notice that the quantity types have been reduced from the original quantity types in the 34/QT. The 34/US provides an unadjusted view of the time series. This unadjusted view shows what the plan would look like if the planner did not act on the messages.

Setting Up Capacity Planning

Capacity planning is the process of validating if you have sufficient resources to complete your requirements plan. Setting up capacity planning is the process of defining your available capacity and critical areas where capacity constraints exist.

Capacity Requirements Planning Display (33/CR)

The system uses 33/CR as the user defined code for the capacity requirements planning display. Use the capacity requirements planning display to specify row descriptions for all Capacity Requirements Planning (CRP) forms and reports.

Rough Cut Capacity Planning Display (33/RC)

The system uses 33/RC as the user defined code for the rough cut capacity planning display. Use the rough cut capacity planning display to specify row descriptions for all Rough Cut Capacity Requirements (RCCP) forms and reports.

Resource Requirements Planning (33/RR)

The system uses 33/RR as the user defined code for resource requirements planning. The resource requirements planning display identifies the types of loads on a work center. You can review these types of loads on the Review Work Center Load form in the Capacity Load program (P3313).

Unit Types (33/UT)

The system uses 33/UT as the user defined code for unit types. You need to identify all of the different types of resource units that can be associated with any work center.

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

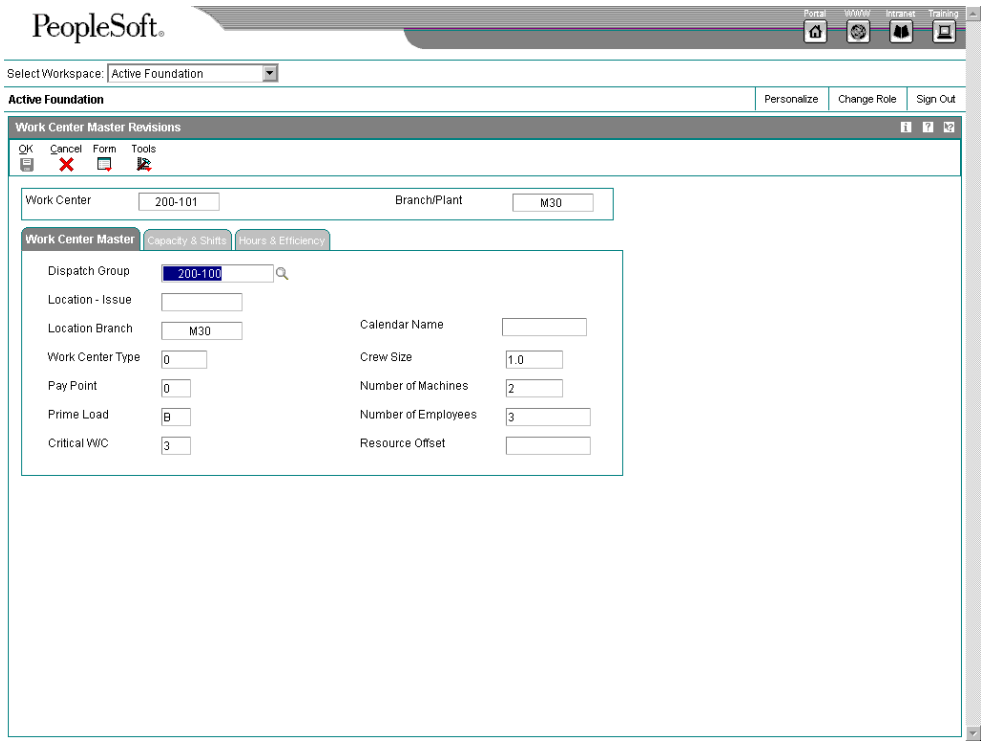
Before You Begin

- ❑ 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 *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
   - 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 Work Center Resource Units Generation program (R3007G) 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 that you need to store items as well as the hours which are needed to produce an item.

Before You Begin

- ❑ Verify that work centers exist for all of the resource units that you enter.
- ❑ Set a default unit of measure in the processing options.

Generating Resource Units Automatically

Run the Work Center Resource Units Generation program (R3007G) to automatically recalculate the work center hours. You can view the results in the Work Center Resource

Units program (P3007) or on the Work Center Resource Unit Revision form (W3007B). 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 (W3009B), the number of machines in a work center, or the number of employees who are 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 File table (F30006)
- Shop floor calendar
- Job Shop Manufacturing Constants table (F3009)

Warning

Any manual changes that you make to the units on Work Center Resource Units is overwritten when you run Work Center Resource Units Generation, based on effectivity dates.

Resource Unit Calculations

The program uses the following resource unit calculations:

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

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

Before You Begin

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

Processing Options for Work Center Resource Units Generation (R3007G)

Defaults Tab

These processing options define default values.

1. From Date

Use this processing option to specify the beginning date that the system uses to generate resource units. Enter the beginning date or select a date from the calendar. The system generates resource units and refreshes them for the month in which the From date falls. For example, if the From Date is 01/10/05 and the Thru Date is 01/15/05, the system generates resource units for January, 2005. The system requires that you enter values for this processing option before you can run the generation.

2. Thru Date

Use this processing option to specify the ending date that the system uses to generate resource units. Enter the ending date or select a date from the calendar. Resource units are generated, refreshed, or both, for the entire month. For example, if the From Date is 01/10/05 and the Thru Date is 01/15/05, the system generates resource units for January, 2005. The system requires that you to enter values for this processing option before you can run the generation.

3. 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.

1. 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.

2. 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.

3. 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.

4. 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.

5. 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.

6. 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.

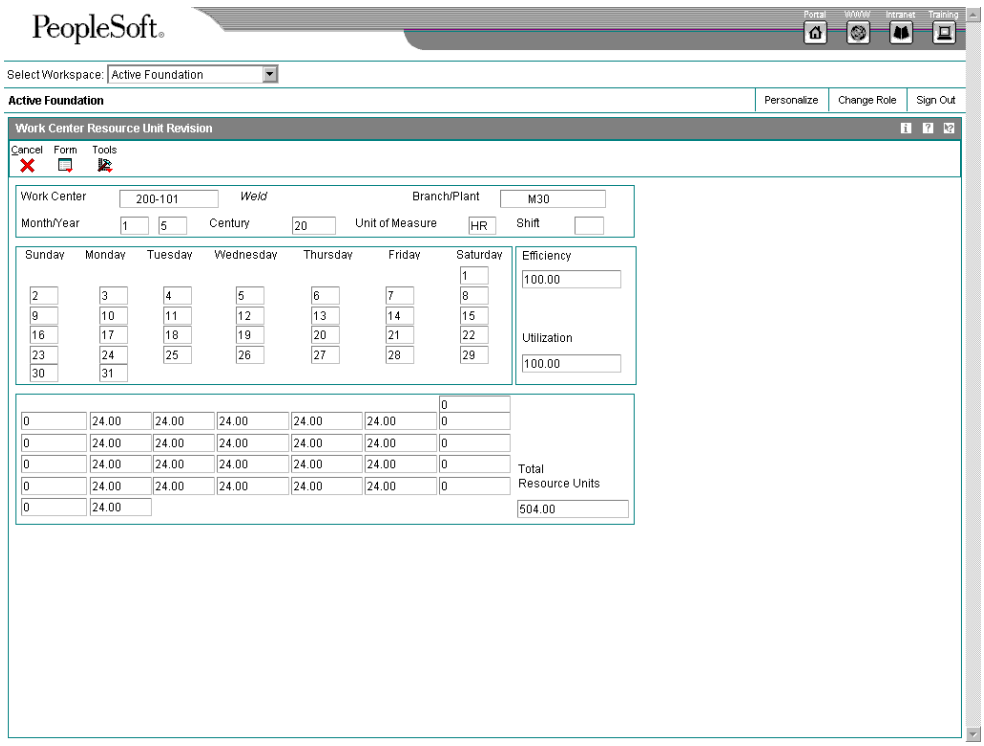
Warning

Each time that you run Work Center Resource Units Generation (R3007G), based on effectivity dates, the program recalculates the form values and overwrites your manual changes, based on information in the Work Center Master File table (F30006), the Workday Calendar program (P00071) (shop floor calendar), and the Job Shop 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:
   - Branch/Plant
   - Work Center
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 that are 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 that are 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 that are 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.

Generating Resource Profiles Automatically

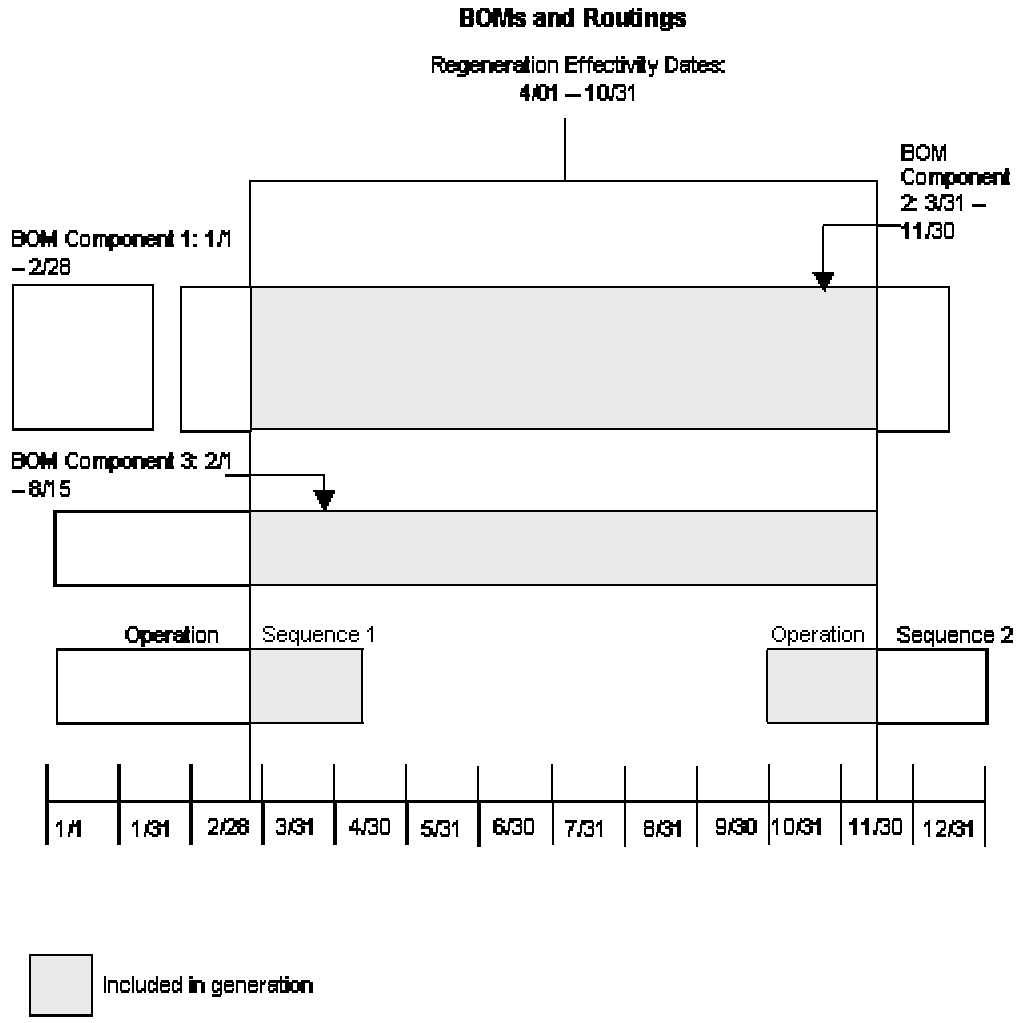
If you have defined bills of material (BOMs) and routings for an end item and all of its subassemblies, you can run the Resource Profile Regeneration program (R3365) to automatically generate the resource profile. The program calculates the load on a work center by extending the hours in the routing by the forecasted quantities for the master-scheduled items.

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

Resource Profile Regeneration changes or updates the resource profile by using components with effectivity dates within the period that you specify. The specific items that are 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 which are 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*:
  - *Entering Bills of Material*
  - *Working With Routing Instructions*
  - *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.

► To define a resource profile manually

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

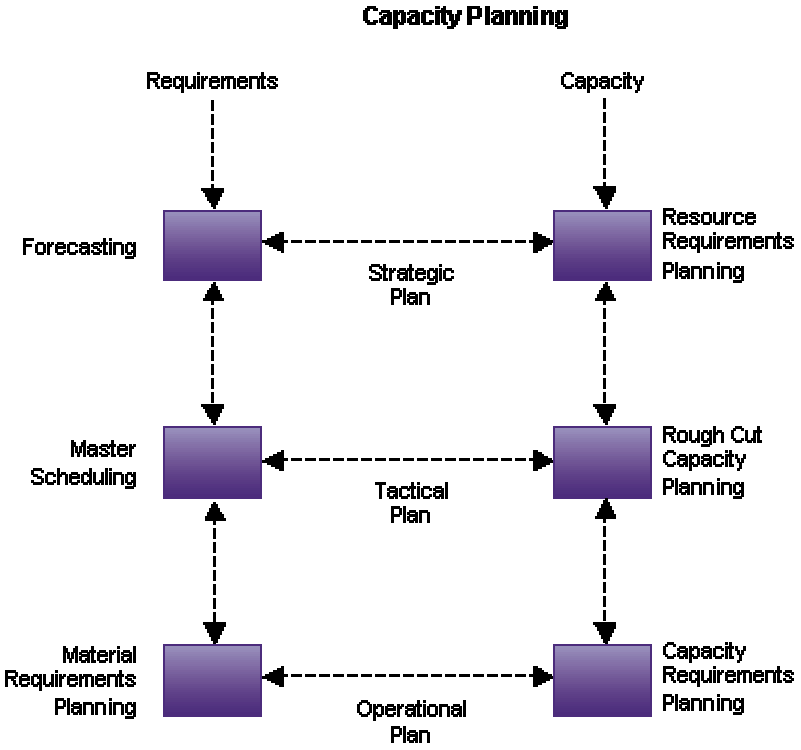
1. On Work With Resource Profile Revisions, complete the following fields:
   - Item Number
   - Branch/Plant
2. Complete the following optional fields and click Find:
   - Skip to Work Center
   - Unit Type
3. Choose the record for which you want to define a resource profile and click Select, or click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

Capacity Planning Processing

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, you must remember that the demand forecast is not the actual plan -- 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 that are 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.

Generating Resource Requirements Plans

After you have entered resource units and resource profiles, you run the Resource Requirements Planning Regeneration program (R3380) to generate 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 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 that is 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 Work Center Resource Units table (F3007)
  - Loaded profile is the forecasted load that is 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 that are 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 choose 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 that are using the RANGE or LIST values, or both

Before You Begin

- ❑ Verify that resource units exist for all of the work centers in your facility.
- ❑ Verify that resource profiles exist for all of the master-scheduled items.
- ❑ Verify that the resource profile is set up with the appropriate units of measure. You can use a maximum of five units of measure.
- ❑ Create a detail forecast for the master-scheduled items using the Forecast Revisions program (P3460). See *Working with Detail Forecasts* in the *Forecast Management Guide*.
- ❑ Determine which forecast types that you want to use in the generation. You can use a maximum of five. See *Setting Up Summary Forecasts* in the *Forecast Management Guide*.
- ❑ Set up the shop floor calendar for all summary time periods for which you want to generate resource requirements plans.

Processing Options for Resource Requirements Planning Regeneration (R3380)

Bucket Info 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 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 Regeneration program (R3380). You can enter up to five forecast types in the system. Forecast types are user-defined and stored in the Forecast File table (F3460).

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 (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).

UOM Tab

These processing options allow you to specify the units of measure that the system processes when you run the Resource Requirements Planning Regeneration 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 the 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. You might have to adjust the forecast or capacity, and then generate the resource requirements plan again.

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 fields:
    - Work Center Branch

- Dispatch Group

2. Click the following option so that a check mark appears in the box:
   - All W/C
3. Complete the following optional fields and click Find:
   - Critical W/C
   - Message Type
   - U/M
4. 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 Resource Requirements Planning Regeneration program (R3380) provides a numerical breakdown, by planning period, of the capacity load that is 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 the Work Center Master Revisions form 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 that is 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 that are available

When the system calculates the demand, it is offset by the Resource Offset value from the Capacity Resource Profile table (F3303). 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 Resource Requirements Plan (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:
   - Work Center
2. Complete the following optional fields and click Find:
   - Unit of Measure
   - Start Date
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 fields:
   - Workcenter Branch
   - Work Center
2. Complete the following optional fields and click Find:
   - Unit of Measure
   - Period From
   - To
3. Review the following fields:
   - Period End
   - 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 with loads that 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 the Capacity Planning Message Revisions program (P3311) to clear, hold, or delete messages. You cannot process capacity messages. You can add remarks for each message to record the actions that 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.

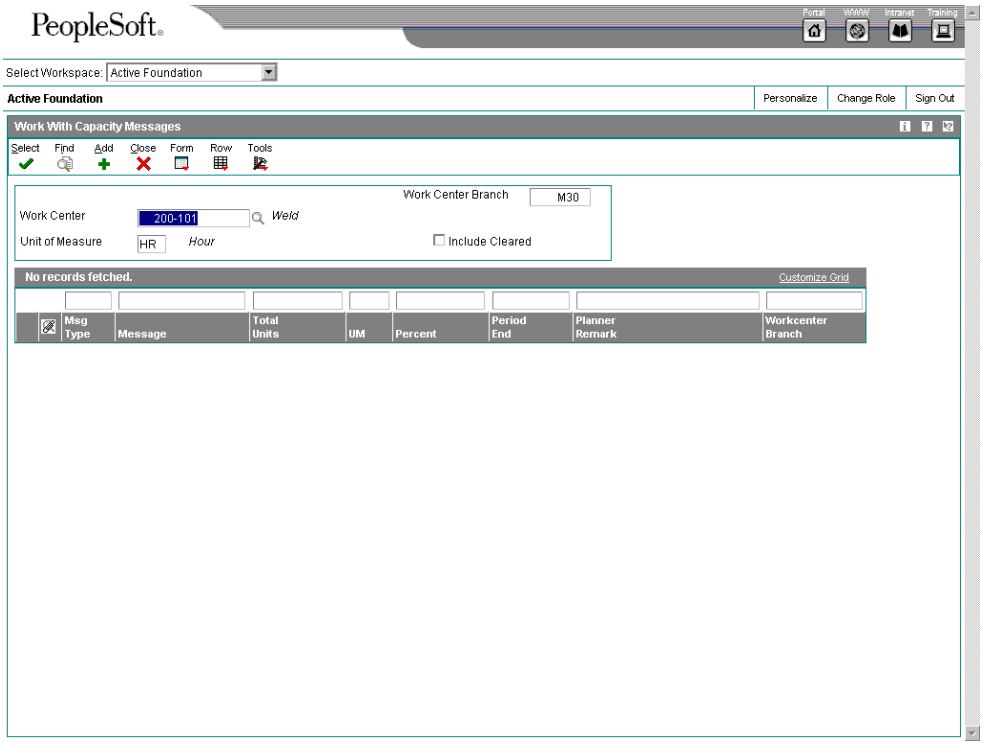
You can generate a plan more than once. When you regenerate a resource requirements plan, the system deletes all messages except the following:

- 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 Branch
   - Work Center



2. Review the following fields:
   - Msg Type
   - Message
   - 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.

Complete the following steps to validate the resource requirements plan:

1. Complete the steps for reviewing the resource requirements plan.
2. Revise the forecast.
3. Complete the steps for regenerating the resource requirements plan.
4. Repeat the steps until all of the loads at each work center are appropriate.

See Also

- *Reviewing Resource Requirements Plans* in the *Requirements Planning Guide*
- *Working with Summarized Detail Forecasts* in the *Forecast Management Guide*

Single-Facility Planning

Single-facility planning encompasses the generation of a distribution or production plan for one facility. All supply and demand calculations occur within a single branch plant. If an item is available in other branch plants, it is not considered during single-facility planning.

Working with Single-Facility Planning Input

Prior to generating a requirements plan, planners should review input data used by the planning system for data accuracy and changes. Data that is used by requirements planning includes reviewing, analyzing, or updating the following information:

Forecasts	Changes in market conditions can require changes to the forecast that is used as an input to the requirements generation.
Bills of Material	Review bills of material for item lead time and parts availability for component items.
Net Change	Review items for net change. For example, when an item record that has been changed. the item is flagged and provides the planner an opportunity to review the item prior to requirements generation or net change generation.

Before You Begin

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

Revising Detail Forecasts

After you generate and review a forecast, you can revise the forecast to account for changes in consumer trends, market conditions, competitors' activities, your own marketing strategies, and so on. When you revise a forecast, you can change information in an existing forecast manually, add or delete a forecast, and enter descriptive text for the forecast.

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

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

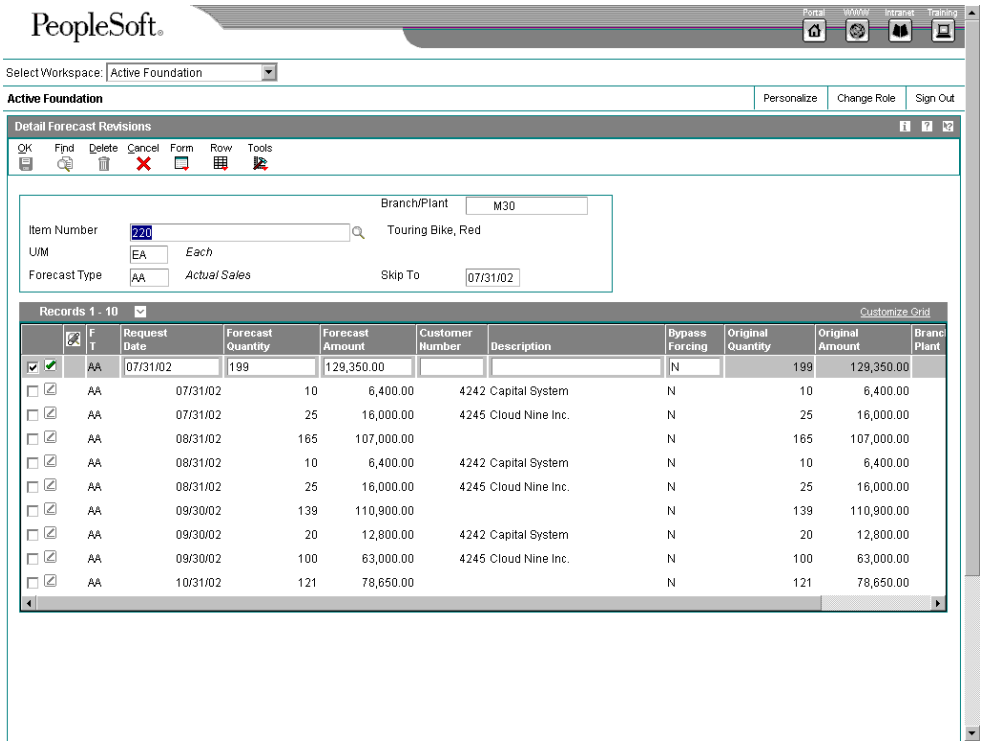
- Forecast type
- Request date
- Customer number

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

► To revise detail forecasts

From the Periodic Forecasting Operations menu (G3421), choose Enter/Change Forecast.

1. On Work With Forecasts, complete the following fields and click Find:
   - Branch/Plant
   - Item Number
   - Unit Of Measure
   - Forecast Type
2. Choose a forecast and click Select.



3. On Detail Forecast Revisions, change the information in one of the following fields:
   - Forecast Quantity
   - Forecast Amount
4. To associate information, such as text or drawings, with a forecast type, choose the row, and then choose Attachments from the Form menu.
5. Click OK.

Reviewing Leadtime for MRP

Use the Leadtime Inquiry version of the Bill of Material Inquiry program (P30200) to review leadtimes for a component or ingredient.

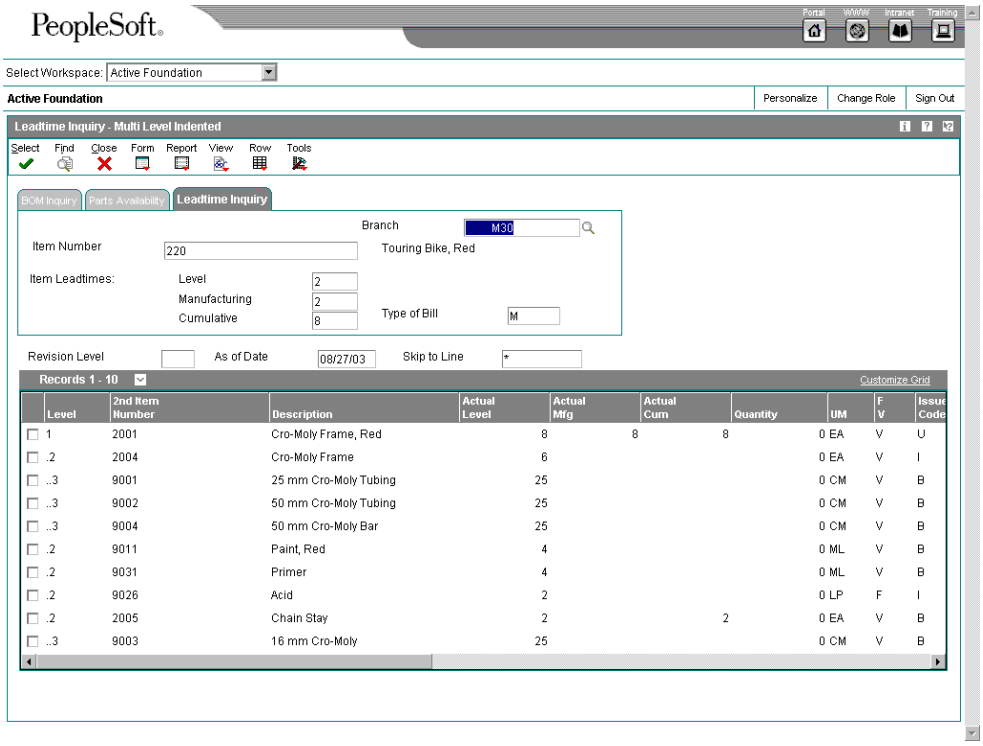
See Also

- The processing options for Bill of Material Inquiry (P30200) in *Locating Bills of Material* in the *Product Data Management Guide*

► 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. Click the Leadtime Inquiry tab and review the information in the following fields:
   - Level
   - Manufacturing
   - Cumulative

Reviewing Part Availability Information

You can determine the availability of the parts that are required to make a certain quantity of a parent item before you create a work order or rate schedule. Use the Part Availability program (P30200) to determine the availability of the parts.

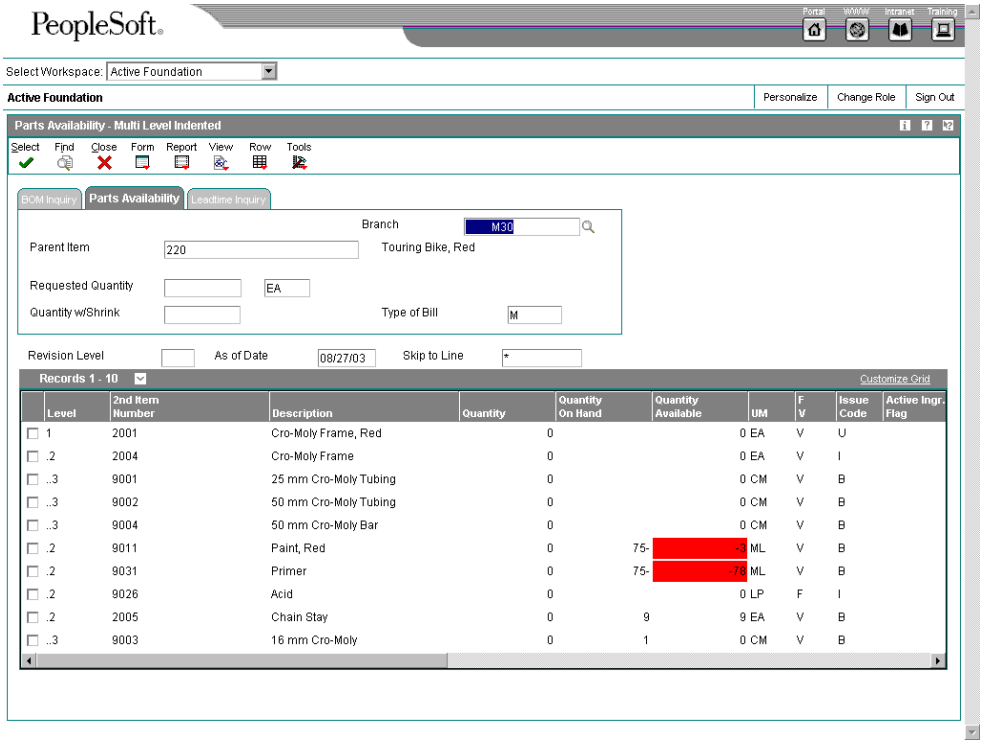
Before you release a work order or rate schedule to the shop floor, you can review the parts list for the work order to determine the availability of the parts that are required to make a certain quantity of a parent item. Use the Parts List Inquiry program (P3121) to determine the availability of a part.

When you specify a soft commitment for the part, the quantities that appear indicate the item's availability at all locations. When you specify a hard-commitment for the part, only quantities from the hard-committed locations appear. You can also display the quantities of each part that have hard- and soft-commitments to work orders and sales orders.

► To review part availability

From the Daily Order Preparation - Discrete menu (G3111), choose Part Availability.

1. On Parts Availability - Multi Level Indented, complete the following fields and click Find:
   - Parent Item
   - Branch



2. Review the following fields and click Close:
   - 2nd Item Number
   - Quantity Available

After you complete these steps, you can review parts list availability.

Reviewing Items for Net Change

Use the Net Change Review program (P3402) to review items that have changed, either through certain planned or unplanned activities throughout the Requirements Planning system. 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 with an adjusted inventory.
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 that is 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 File 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 File 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 so 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.

1. 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

Requirements Planning Generation

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 (P3402) to determine which items to include in the net change generation.

Regenerating a Planning Schedule

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

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

From the Single Site Periodic Planning Operations menu (G3422), choose MRP Regeneration.

DRP Regeneration and MPS Regeneration use versions of the MRP/MPS Requirements Planning (R3482) program to produce a single-level Distribution Requirements Planning (DRP) or Master Production Scheduling (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

The MRP Regeneration version of the MRP/MPS Requirements Planning program explodes planned orders for bill of material items to produce a multilevel material plan.

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

When you set up your versions to generate a planning 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.

Generating a Net Change Planning Schedule

Use one of the following navigations:

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

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

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

DRP Net Change, MPS Net Change, and MRP Net Change are versions of the MRP/MPS Requirements planning program (R3482). 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, MPS Net Change, or MRP 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 (P3402) that are 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.

Processing Options for MRP/MPS Requirements Planning (R3482)

Horizon Tab

These processing options specify dates and time periods that 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.

Note

Consider the following information 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 that is specified in the data selection with a Planning Code of 1 on the Plant Manufacturing Data tab on 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; rather, it is 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 the Additional System Information form, Plant Manufacturing tab
    - The components must have a Planning Code of 5
    - The Feature Planned Percents must be set up correctly in the bill of material

- You must specify in processing options the forecast type to read from the parent, and to create for the components

- Generation Type 3 = multilevel 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 that 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 action is possible because demand from the master scheduled items is still stored in the MPS/MRP/DRP Lower Level Requirements (Pegging) table (F3412).
- 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 of the 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. No -PWO demand from parent items exists -- 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

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

5. Include Past Due Rates as a supply

blank = do not include

1 = include

Use this processing option to specify whether the system considers open quantity from rate orders that are past due as a supply. If you enter a 1 in this processing option, the system includes these quantities in the Rate schedule unadjusted (+RSU) line as well as the Rate schedule adjusted (+RS) line of the Speed Time Entry program (P051121). Valid values are:

Blank

Do not consider past due orders as a supply.

1

Consider past due orders as a supply.

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 Type For Planning Bills/Forecast Consumption By Customer

Use this processing option to specify the forecast type (UDC 34/DF) that the system uses to create forecasts for components when you explode generation type 2 planning bills. This value must equal that of the Forecast Types Used processing option for this functionality.

When you set the Forecast Consumption Logic processing option to 2 (forecast consumption by customer), this processing option specifies the forecast type (34/DF) that is used to create a forecast for the actual daily demand by customer. This value cannot equal the value for the Forecast Types Used processing option.

3. Forecast Consumption Logic

blank = do not use forecast consumption

1 = use forecast consumption

2 = use forecast consumption by customer

Use this processing option to specify whether to use forecast consumption logic during the requirements planning processing. Valid values are:

Blank

Do not use forecast consumption.

1

Use forecast consumption. This value invokes forecast consumption logic applied to aggregate sales order and forecast quantities within the forecast consumption period for selected items with a planning fence rule equal to H.

2

Use forecast consumption by customer. This value invokes forecast consumption logic applied to sales order and forecast quantities for individual customers. Use this value in conjunction with the Forecast Type for Planning Bills / Forecast Consumption by Customer processing option.

4. Default Customer Address Relationship for Forecast Consumption by Customer

1 = Ship to (default)

2 = Sold to

When Forecast Consumption Logic is set to 2, Forecast Consumption by Customer, then this processing option specifies the customer address relationship i.e. the address book number (ship to or sold to) used for calculation purposes.

Valid values are:

1 - Use ship to address book number

2 - Use sold to address book number

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.

Lead Times 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. Input B/P Where Planning Tables Will Be Cleared

3. Initialize MPS/MRP Print Code.

4. 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

5. Ending Firm 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.

6. 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

7. 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.

8. Set Key Definition For Table F3411

Use this processing option to enable the system to run multiple MRP/MPS jobs concurrently. The value that you enter specifies the range for the number of records in the MPS/MRP/DRP Message File table (F3411) and the MPS/MRP/DRP Lower Level Requirements File table (F3412) for a given run. This value must be large enough to include the number of records that will be generated for the table. For example, if you enter a value of 8 for the first run and 10 for the second run, the range of records that the system reserves for two simultaneous MRP/MPS runs would be as follows:

First run:

The system reserves records in the range of [1] to [1*10^8], or 1 through 100,000,000.

Second run:

The system reserves records in the range of [1*10^8 + 1] to [2*10^10], or 100,000,001 through 20,000,000,000.

Note: The values that you enter are the exponents in the calculations above. Enter a value from 7 to 14. If you do not enter a value, the system uses 10.

This processing option is applicable only when a subsequent MRP/MPS job is submitted while an existing job is currently running. The number of records that the MRP/MPS Requirements Planning program (R3482) and Master Planning Schedule - Multiple Plant program (R3483) generate is based on the values that you enter in this processing option. You determine the optimum number of records that the system includes. All values should be the same for all versions. If version settings differ, the system might generate unpredictable results.

9. Set Key Definition For Table F3412

Use this processing option to enable the system to run multiple MRP/MPS jobs concurrently. The value that you enter specifies the range for the number of records in the MPS/MRP/DRP Message File table (F3411) and the MPS/MRP/DRP Lower Level Requirements File table (F3412) for a given run. This value must be large enough to include the number of records that will be generated for the table. For example, if you

enter a value of 8 for the first run and 10 for the second run, the range of records that the system reserves for two simultaneous MRP/MPS runs would be as follows:

First run:

The system reserves records in the range of [1] to [1*10^8], or 1 through 100,000,000.

Second run:

The system reserves records in the range of [1*10^8 + 1] to [2*10^10], or 100,000,001 through 20,000,000,000.

Note: The values that you enter are the exponents in the calculations above. Enter a value from 7 to 14. If you do not enter a value, the system uses 10.

This processing option is applicable only when a subsequent MRP/MPS job is submitted while an existing job is currently running. The number of records that the MRP/MPS Requirements Planning program (R3482) and Master Planning Schedule - Multiple Plant program (R3483) generate is based on the values that you enter in this processing option. You determine the optimum number of records that the system includes. All values should be the same for all versions. If version settings differ, the system might generate unpredictable results.

10. Suppress Time Series

blank = generate time series

1 = do not generate time series

Use this processing option to specify whether the MRP/MPS Requirements Planning program (R3482) generates the time series. Valid values are:

Blank

Generate the time series.

1

Do not generate the time series.

Note: Performance improves if the system does not generate the time series.

Mfg Mode Tab

If you use process manufacturing, enter 1 to generate the plan that is 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

2. Project Planning

blank = do not include

1 = include

Use this processing option to specify whether the system includes supply and demand from items that are associated with a project. Project-specific items have a stocking type of P. Valid values are:

Blank

Do not include items associated with projects.

1

Include items associated with projects.

3. Configurator Components Table

blank = do not process configured components table

1 = process configarator components table

Use this processing option to specify whether the system processes configurator components from the Configurator Component Table (F3215) and adds them to the Sales Order Detail File table (F4211) and the Work Order Parts List table (F3111). If you enter a 1 in this processing option, the system processes the items on the Configurator Components table as demand items.

Blank

Do not process items from the Configurator Component Table.

1

Process items from the Configurator Components table.

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.

Requirements Planning Output

When generating a planning schedule, the planning system evaluates selected supply and demand information, performs calculations, and recommends a time-phased planning schedule for selected items. Planners are presented with action and warning messages that suggest new orders or the rescheduling of existing orders. Other planning tools include supply and demand inquiry and pegging records.

Reviewing the Time Series

The time series is a record of time-phased supply and demand netting for selected items. The system retrieves this data from the most recent generation or net change run.

Use the Distribution Requirements Planning (DRP) or Master Production Scheduling (MPS) versions of the MPS Time Series program (P3413) to review the master schedule and decide

whether to accept the planning that the system suggests or to override it. You should review the action messages for individual item numbers to determine what action, if any, to take.

Use processing options in the MRP/MPS Requirements Planning program (R3482) 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.

Forecast consumption

When you use a planning time fence rule that calculates the ending that is available, 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 type tables 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

The Time Series – MRP inquiry is the same program as used to inquire on the DRP/MPS time series. Use the appropriate version of the MPS Time Series program (P3413) to review the item series for the material requirements plan. You can vary the settings in the processing

options to accommodate the different requirements for Material Requirements Planning (MRP).

Use the MPS/MRP/DRP Key Window program (P34KEY) 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).

Time Fence Display Codes

Item leadtime and time fence days are shown on the time series display. Time fences and leadtimes are noted in their respective time periods as follows:

L Level leadtime

M Manufacturing leadtime

C Cumulative leadtime

F Freeze fence

P Planning fence

D Message Display fence

Before You Begin

- Generate a current material requirements plan that includes the start and end dates for the planning periods that you want to review. See *Generating Material Requirements Plans* in the *Requirements Planning Guide*.

► To review the time series

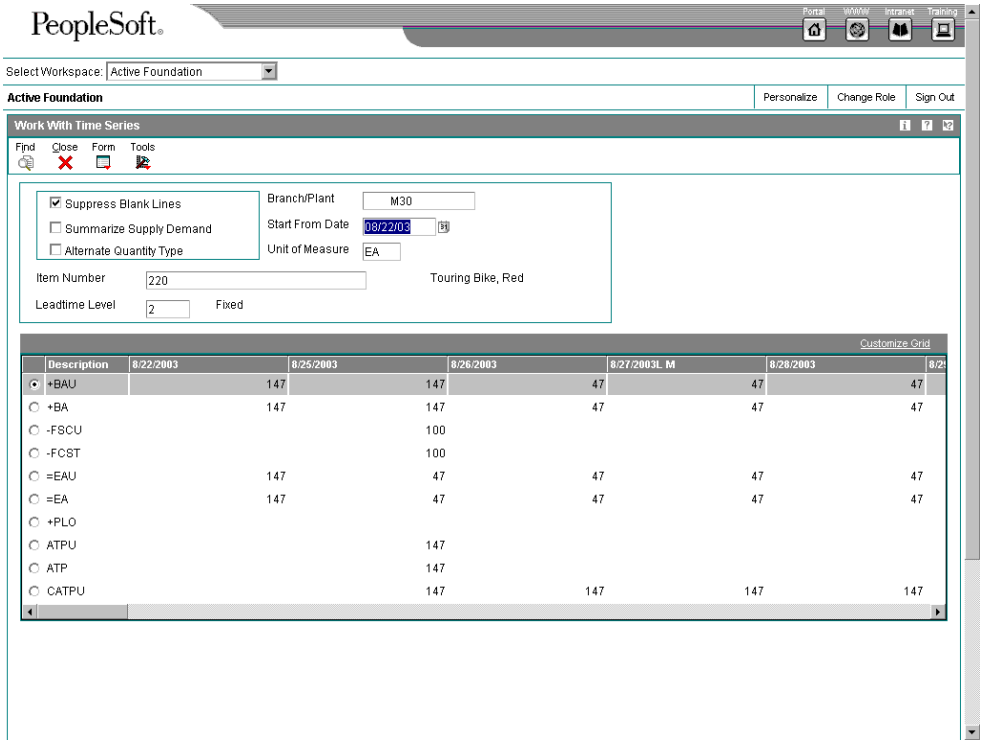
Use one of the following navigations:

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.

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:
   - Suppress Blank Lines
   - Summarize Supply Demand
   - Alternate Quantity Type
3. To change the display, complete the following fields and click Find:
   - Start From Date
   - Unit of Measure
4. To access additional forms, choose the needed 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 MPS 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 appears 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 MRP/MPS Requirements Planning (R3482) and MRP/MPS Detail Message Revisions (P3411) that you access through row and form exits from the MPS 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 Calendar (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.

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

Working with Planning Messages

Use one of the following navigations:

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

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

From the MRP Daily Operations menu (G3413), choose MRP Detail Message Review.

You can manually review and process messages using the MRP/MPS Detail Message Revisions program (P3411) or automatically process the messages using the MRP/MPS Detail Message Processing program (R3411).

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

The action messages for Distribution Requirements Planning (DRP), Master Production Scheduling (MPS), and Material Requirements Planning (MRP) are defined in user defined code (UDC) 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.

Each time that 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 the Message Detail – MRP version of the MRP/MPS Detail Message Revisions program 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.

Processing Messages for a Planning Family

You can process messages for a planning family by using Message Summary (P3401).

► To process messages for a planning family

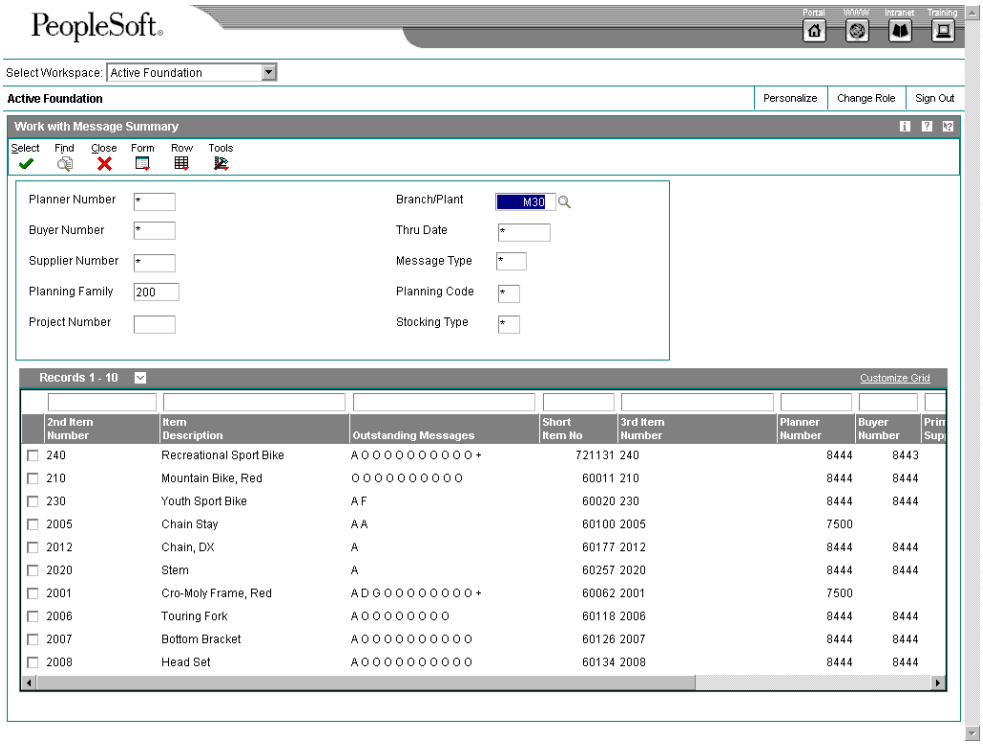
Use one of the following navigations:

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.

1. On Work with Message Summary, complete the following fields and click Find to locate a planning family:
   - Business Unit
   - Planning Family



2. Choose the items with messages that you want to process, and choose Message Detail from the Row menu.

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

Reviewing Detail Messages

Detail messages include all of the messages on Message Summary (P3401). After you generate master schedule output, 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.

Processing Options for MRP/MPS Detail Message Revisions (P3411)

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.

o Enter a document type to release against.

o 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 (P43216)

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.

3. Pegging Inquiry (P3412)

Use this processing option to specify a version of the Pegging Inquiry program. The system calls this version when you access Work with Pegging Inquiry 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 File 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 by 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 MRP/MPS Detail Message Revisions (P3411) with an order type of WO. The master schedule remains firm or does not change from the beginning date through the end date when 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

Use one of the following navigations:

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

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

From MRP Daily Operations (G3413), choose MRP 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(s).
4. To view the messages that you processed, choose Processed Messages from the View menu.

See Also

- *Running Order Processing* in the *Shop Floor Management Guide*

Processing Purchase Order Messages

Purchase order messages appear on MRP/MPS Detail Message Revisions (P3411) with an order type of OP. You can process a purchase order message by 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 by 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 MRP/MPS Detail Message Revisions 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 MRP/MPS Requirements Planning program (R3482), 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.

See Also

See the following topics in the *Requirements Planning Guide*:

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

► To process a single action message

Use one of the following navigations:

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

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

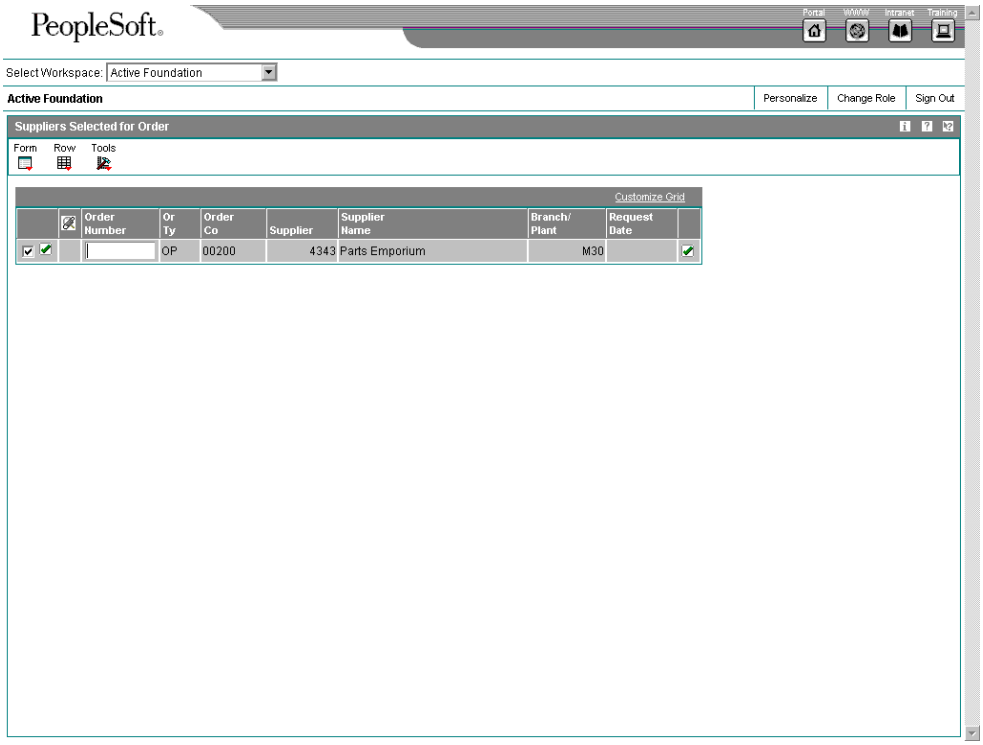
From MRP Daily Operations (G3413), choose MRP Detail Message Review.

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

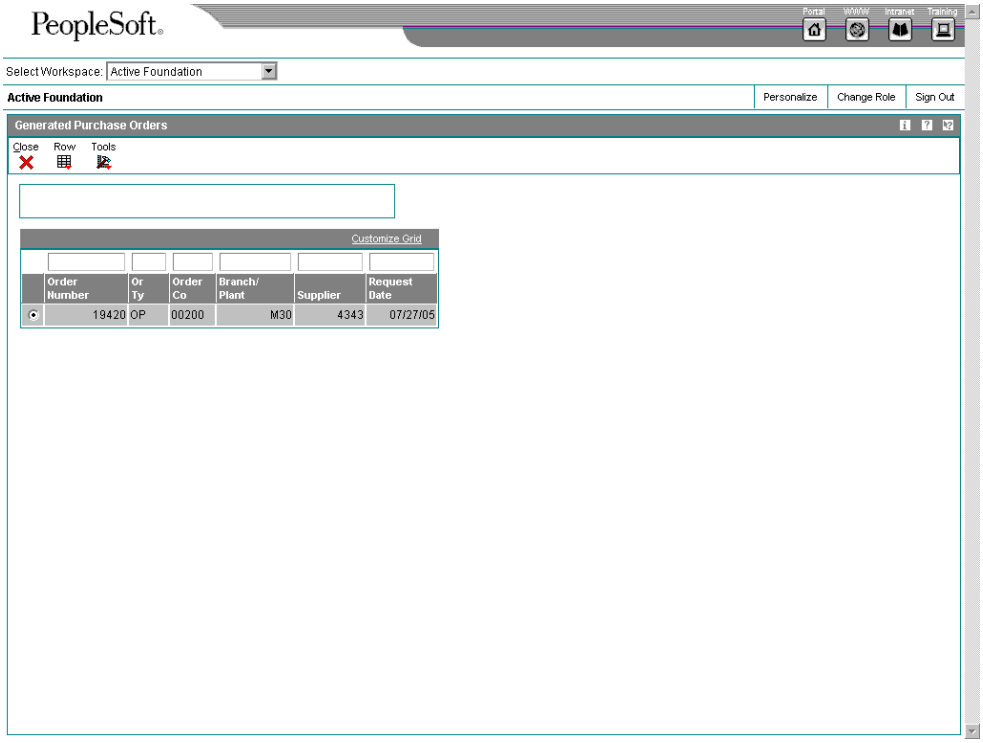
Note

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 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.

Choose one of the following navigations:

From DRP Daily Operations menu (G3411), right-click DRP Detail Message Review.

From MPS Daily Operations menu (G3412), right-click MPS Detail Message Review.

From MRP Daily Operations menu (G3413), right-click MRP Detail Message Review.

1. Choose Prompt For, and then Values.
2. Set the appropriate processing option to consolidate all of the messages for the same supplier into one purchase order, and then click OK.
3. Double click the same program from the menu.
4. On Work With Detail Messages, complete the following fields to locate the messages for the item, and then click Find:
   - Item Number
   - Demand Branch
5. Choose the messages that you want to process, and then choose Process Message(s) 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.

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

► To cancel items on a purchase order

Use one of the following navigations:

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

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

From MRP Daily Operations (G3413), choose MRP 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.

Processing Messages Automatically

Use one of the following navigations:

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

From the MPS Daily Operations menu (G3412), choose MPS Detail Message Processing.

From the MRP Daily Operations menu (G3413), choose MRP Detail Message Processing.

As an alternative to processing messages interactively, you can run MRP/MPS Detail Message Processing (R3411). 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 Work Center (P012501) in the Submitted Jobs Queue. You can view any message that the program did not process on the Work with Detail Messages form.

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

Use one of the following navigations:

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

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

From MRP Daily Operations (G3413), choose MRP Detail Message Review.

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

   The system highlights held messages.

Clearing Messages

You can clear a message from MRP/MPS Detail Message Revisions (P3411) if you choose not to process it.

► To clear a message

Use one of the following navigations:

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

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

From MRP Daily Operations (G3413), choose MRP 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

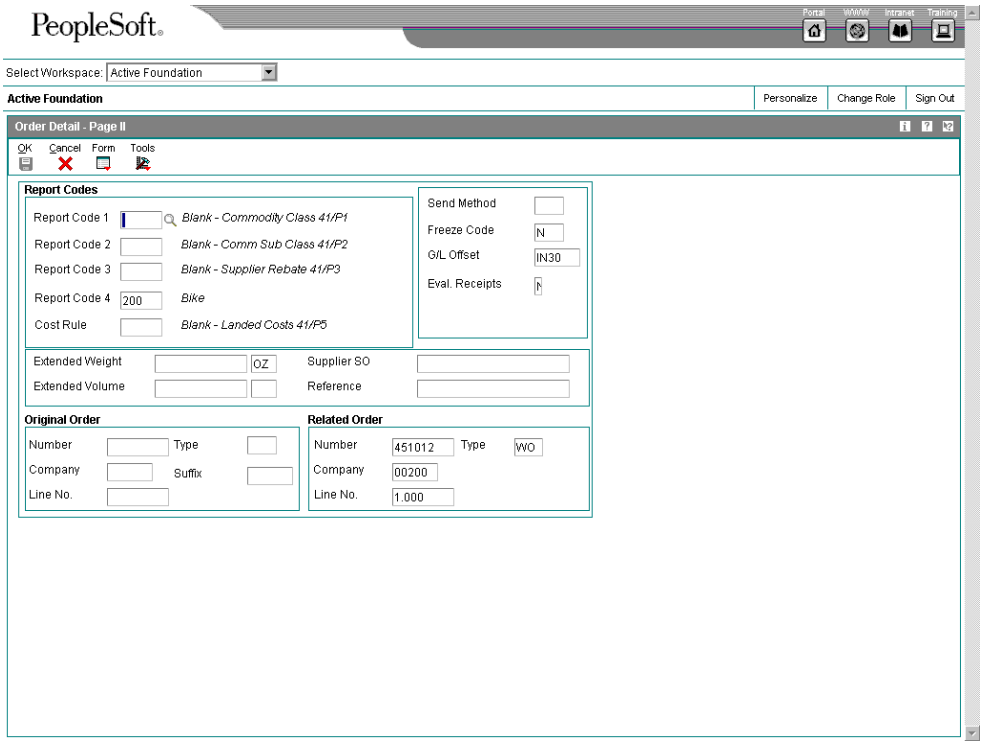
You can freeze the time and quantity values in a purchase order so that Distribution Requirements Planning (DRP) and Master Production Scheduling (MPS) do not generate any action messages to change the order. You freeze purchase orders before negotiations are final or when a purchasing contract has been 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 2 from the Row menu.

   If you are using Engineering Project Management, the Project Number field appears in the grid.



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

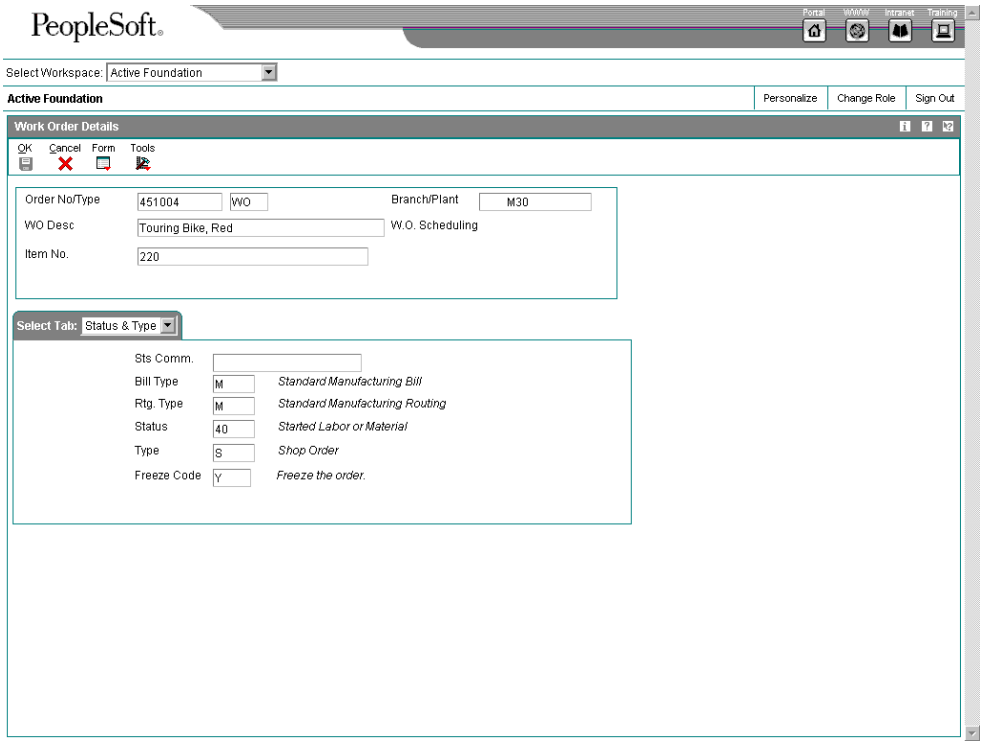
Adding a Freeze Code to a Work Order

You can freeze the time and quantity values in a work order so that Distribution Requirements Planning (DRP) and Master Production Scheduling (MPS) do 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

Note
Master Production Scheduling (MPS) and Material Requirements Planning (MRP) do not suggest changes for frozen orders.

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.

Before You Begin

- 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*.

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.

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.

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.

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

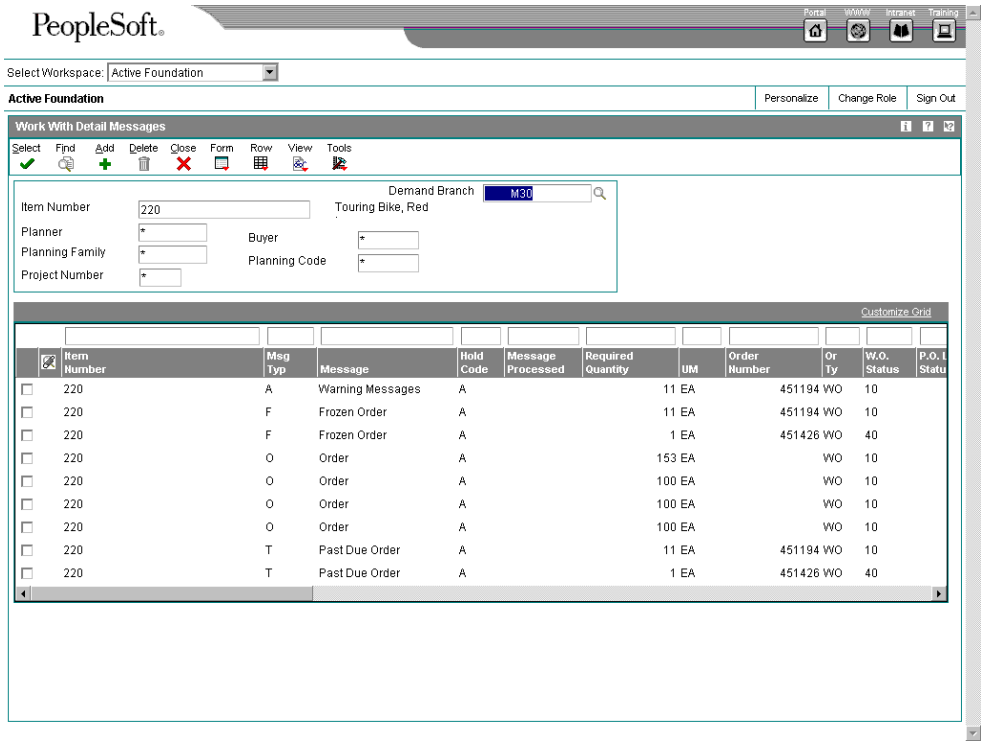
Document Type (Time Series)	Other Codes	Description	Component Demand

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 not always equal +WOU in schedule dates or quantities)	Status = 10 (firm)	Firm orders. A header is in the Work Order 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.	-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 = 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.

► 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

Reviewing MRP Pegging Demand

Use Pegging Inquiry (P3412) 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:

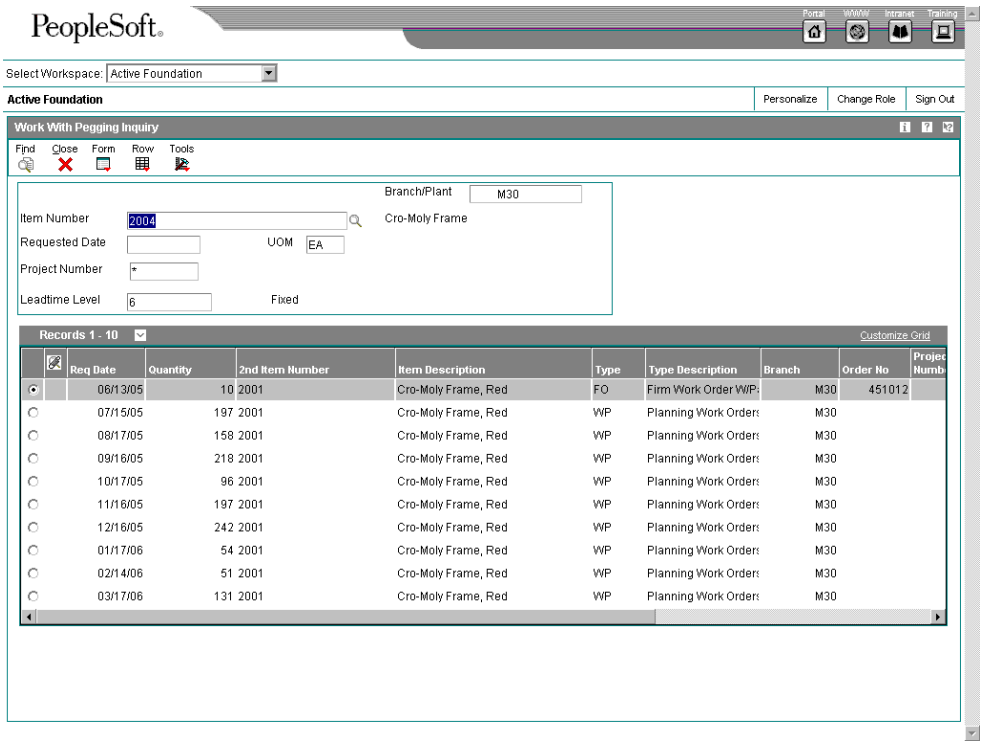
- Display the parent work orders requiring a particular item.
- Trace the source of demand for each item.
- Display the different levels in a bill of material so that you can peg demand from the beginning level through the parent item.

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

Reviewing MRP Supply and Demand

Use Supply and Demand Inquiry (P4021) 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.

Planning Fence Rule Impact to Supply and Demand Inquiry

The supply and demand inquiry view of the Supply and Demand Inquiry program (P4021) uses the identified planning fence rule for an item when calculating real-time net requirement values. The supply and demand inquiry view respects the designated planning fence rule when identifying which demand elements are considered during real-time netting calculations for an item.

Note

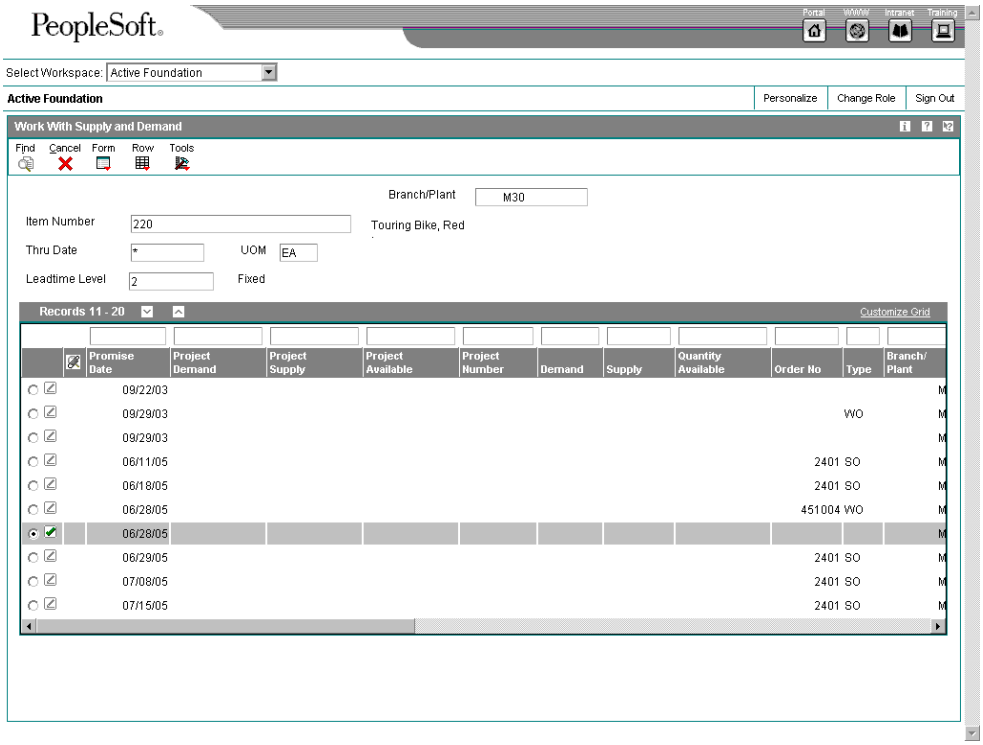
Supply and demand inquiry reflects all of the planning fence rules with the exception of the Forecast Consumption rule (rule H). Forecast Consumption logic is displayed via the time series view only.

Available-To-Promise calculations can be displayed on the demand inquiry view by setting the appropriate processing option for the Supply and Demand Inquiry program.

► 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 and Demand Inquiry (P4021)

Process Tab

Use these processing options to specify whether the system displays the following values in the Supply and Demand Inquiry program (P4021):

- Availability without safety stock
- Routing instruction quantities

Use these processing options to specify whether the system displays the following:

- Planned orders
- Bulk stocking type records

Use these processing options to specify how the system processes the following quantities:

- Work order quantity
- Available quantity

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.

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.

1. Deduct Safety Stock From Available Quantity

Blank = Do Not Deduct

1 = Deduct Safety Stock

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 Considered As On Hand

Blank = Do Not Consider

1 = Consider As On Hand

Quantity In Transit

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

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

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

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. Supply/Demand Inclusion Rules

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.

4. Subtract Expired Lot Quantities

Blank = Do Not Subtract

1 = Subtract Expired Lots

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.

5. Enable Engineering Project Management (EPM)

Blank = Do Not Enable EPM

1 = Enable EPM Functionality

Use this processing option to specify whether the system enables Engineering Project Management (EPM) functionality. Valid values are:

Blank

Do not enable EPM functionality.

1

Enable EPM functionality.

6. Include Past Due Supply In Quantity Available

Blank = Do Not Include

1 = Include Past Due Supply

Use this processing option to specify if past due quantities are considered while calculating available quantity. Valid values are:

Blank

Do not include past due quantities.

1

Include past due quantities.

7. Rate Based Schedule Type

Blank = Do Not Include Rate Based Items

Use this processing option to specify the rate-based schedule type for the 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.

8. Include MPS/MRP/DRP Planned Orders

Blank = Do Not Include

1 = Include Planned Orders

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.

9. Forecast Types (5 Types Maximum)

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.

10. Days From Today To Include Forecast

Blank = Include From Today

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.

11. Exclude Bulk Items

Blank = Do Not Exclude

1 = Exclude Bulk Items

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.

12. Include Past Due Rates as a supply

Blank = do not include

1 = include

Use this processing option to specify whether the system considers open quantity from past due rate orders as supply.

Note: When you enter 1, the system includes past due orders in the rate schedule unadjusted (+RSU) and the rate schedule adjusted (+RS) line of the Master Planning Schedule - Multiple Plant program (R3483). Valid values are:

Blank

Do not use open quantity from past due rate orders as supply.

1

Use open quantity from past due rate orders as a supply.

13. Forecast Start Date

Blank = System Date

1 = Start Date Of Current Forecast Period

Use this processing option to determine the Start Date. Valid values are:

Blank

Use the System Date.

1

Use the Start Date of the current forecast period.

Note: If you enter a 1, the Enable Manufacturing Project Management processing option must be blank.

14. 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

Display Tab

Use these processing options to specify whether the system displays the following values in the Supply and Demand Inquiry program (P4021):

- Routing instruction step quantities summarized

Use these processing options to specify whether the system displays the following:

- Supply/Demand Inquiry program (P4021) in the window format
- Planned orders

Use these processing options to specify how the system processes the following quantities:

- Work order quantity
- Available quantity

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.

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.

1. Convert Quantities To Standard Potency

Blank = Do Not Convert

1 = Convert To Standard Potency

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.

2. Display ATP Line

Blank = Do Not Display

1 = Display ATP Line

2 = Display CATP 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).

3. Summarize All In 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.

4. Summarize Item Balance Quantity Records

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 In Window Mode

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.

Versions Tab

Use these processing options to specify the versions of the following programs that the system uses with the Supply and 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)
- 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.

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.

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 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 (MRP) schedule valid.

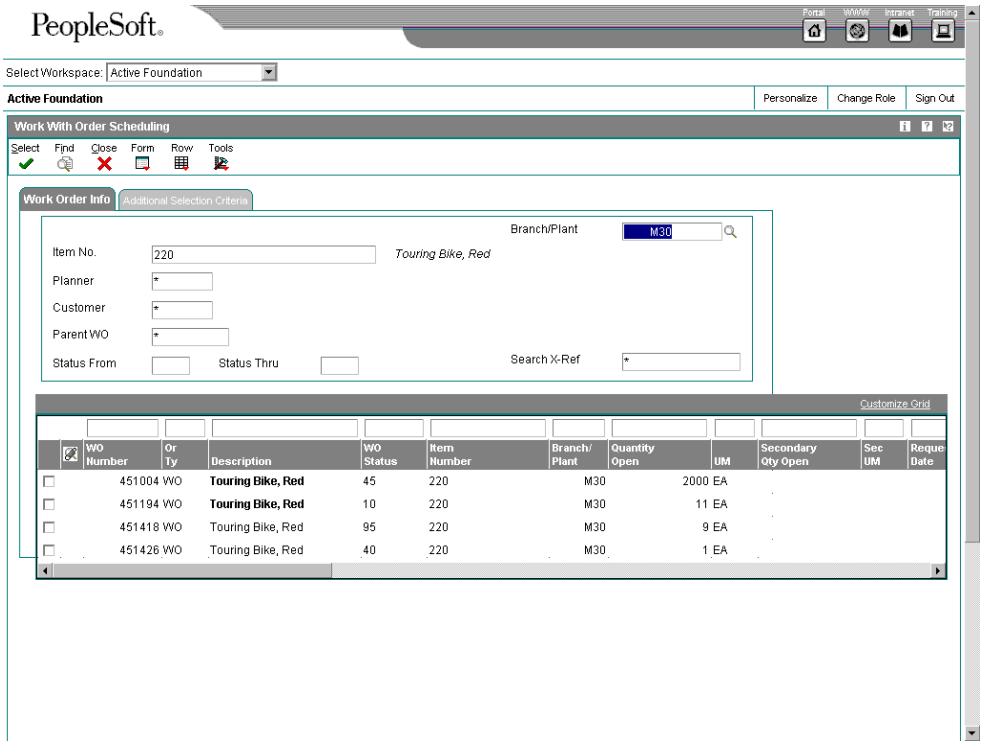
See Also

- *Revising Work Order Status Information* in the *Shop Floor Management Guide*

► 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
   - Status From
   - Search X-Ref



3. Review the following field:
    - Quantity Open

Processing Work Orders

From the Daily Order Preparation - Discrete menu (G3111), choose Order Processing.

After you run either the MRP – Gross Regeneration or MRP - Net Change versions of MRP/MPS Requirements Planning (R3482) , use the Order Processing batch program (R31410) to process multiple work orders. The system:

- Attaches the parts list
- Attaches the routing instructions
- Sets an initial order status
- Generates outside operations purchase orders
- Generates the shop packet, including:
    - Parts list
    - Routing instructions
    - Shop packet summary
    - Component shortages

The program that you use to process orders for Material Requirements Planning (MRP) is the same program that you use to process orders for Distribution Requirements Planning (DRP), Master Production Schedule (MPS), and Rough Cut Capacity Planning (RCCP).

See Also

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

Validating Requirements Plans

After you generate your requirements plan, either a master schedule or material requirements plan, you can validate it to ensure that you have sufficient work center capacity. Use the CRP/RCCP Regeneration program (R3382) to generate capacity planning information.

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

The primary differences between CRP and RCCP are:

- RCCP is generally run for end items on the Maser Production Schedule (MPS) and only considers critical work centers.
- CRP is generally run for all manufactured items and considers all work centers.

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 CRP/RCCP Regeneration program generates the following:

- 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 field on the Work Center Master Revisions form 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 work day 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 work day 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 Work Center Resource Units (P3007) program.

Work center hours Use the Work Center Resource Units Generation program (R3007G) 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.

Before You Begin

- ❑ Capacity Requirements Planning (CRP) follows the same level of operational planning as Material Requirements Planning (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

Generating Capacity Plans

Use the CRP/RCCP Regeneration program (R3382) to compare prospective resource requirements to the capacity that is available in critical work centers. The capacity plan indicates whether you should revise the schedule to create feasible workloads or improve the use of limited resources.

When you run the CRP/RCCP Regeneration program, 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 ten hours to complete a job that has standard hours established at eight 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 as compared to standard. One hundred 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 File 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 *Hours and Quantities* in the *Shop Floor Management Guide.*
- Verify that resource units exist for all of the critical work centers in your generation. See *Setting Up Work Centers* in the *Shop Floor Management Guide.*
- Set up supply and demand inclusion rules for Rough Cut Capacity Planning (RCCP).
- Run the Master Production Schedule (MPS) program.

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.

8. Closed Routing Operation Status

Enter the status for closed routing operation. CRP will not calculate loads for operations whose status(OPST) is greater than or equal to this value. If left blank, loads will be calculated for all routing operation steps.

Reviewing Work Center Load

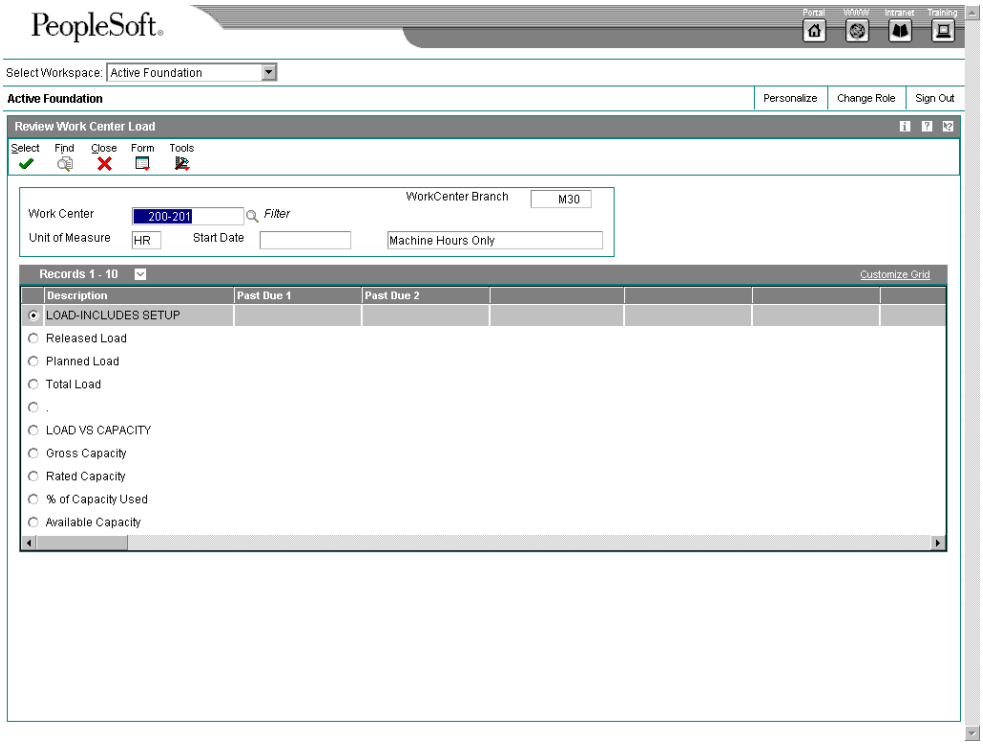
Use the Rough Cut Capacity Load version of the Capacity Load program (P3313) to review the load and capacity information for the work center that you select. The load and capacity information depends on the Prime Load code that you entered for the work center on the Work Center Master Revisions form.

► To review work center load

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

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

1. On Review Work Center Load, complete the following field and click Find:
   - WorkCenter Branch
   - Work Center



2. Review the following fields:
   - Unit of Measure
   - Start Date
   - Description

Reviewing Period Summaries

Use the Period Summary program (P3312) 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 that is planned for that period for an item on an order.

► To review period summaries

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

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

1. On Work With Period Summary Review, complete the following fields and click Find:
   - Workcenter Branch
   - 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 the Operation Dispatch Inquiry program (P31220) 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:

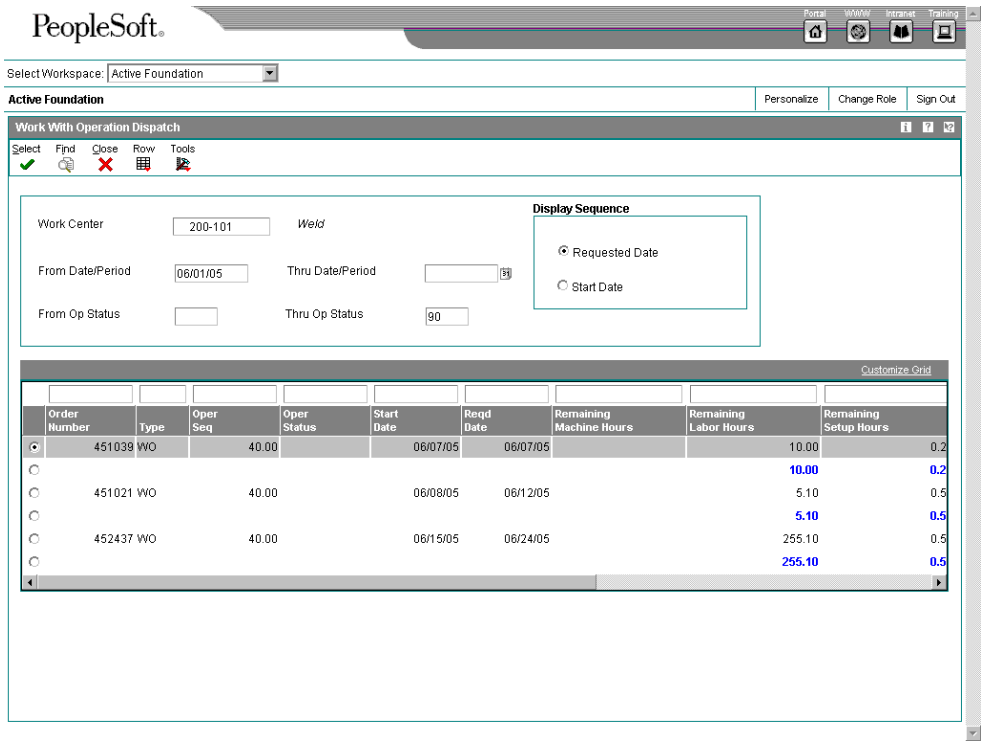
- Access work order information, including the header, the parts list, and the routing instructions.
- Review work order information, such as work center, remaining labor, and machine and setup hours.
- Sort work orders by start date, requested date, or operation status codes.
- Change the work order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

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

1. On Work With Operation Dispatch, complete the following fields and click Find:
   - Work Center
   - From Date/Period
   - Thru Date/Period
   - Thru Op Status



2. Review the production information.

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 to be used for each program.

1. Work Order Processing (P48013)

Blank = ZJDE0001

2. Work Order Routing (P3112)

Blank = ZJDE0001

3. Work Order Parts List (P3111)

Blank = ZJDE0001

4. Work Order Parts Inquiry (P3121)

Blank = ZJDE0001

5. Operation Dispatch Inquiry (P31220)

Blank = ZJDE0001

6. Work Order Quantity (P31121)

Blank = ZJDE0001

7. Work Order Hours (P31122)

Blank = ZJDE0001

Process

1. Quantity Calculation

Blank = Remaining Quantity includes quantity scrapped/cancelled

1= Remaining Quantity does not include quantity scrapped/cancelled

Reviewing Rate Schedule and Work Center Loads

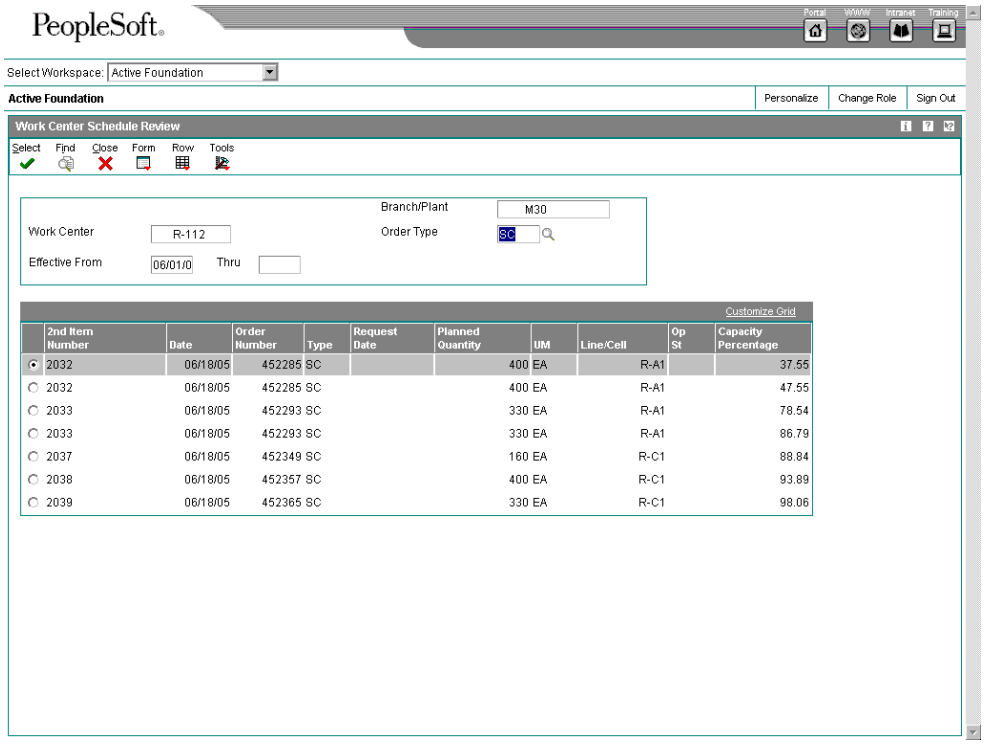
Use the Work Center Schedule Review program (P31224) to review the rate schedule load and the work order load for a work center. You can review a day, week, or month of the rate schedule load and the work order load. You can also select a specific date range for which to view the load for the work center. If you need to adjust the scheduled load at the work center, you can access several different forms on which to make adjustments.

Work Center 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 Order Preparation - Discrete menu (G3111), 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 Tab

1. Document Type

A specific document type

Blank = No default

Use this processing option to specify the default document type associated with the work order or rate schedule. Document type is a user defined code (00\DT) that identifies the origin and purpose of the document. Enter the document type to use as a default value or choose it from the Select User Define Code form.

Disp Options Tab

1. Subfile Dates

1 = Monthly

2 = Weekly

3 = Daily

Use this processing option to specify how the system calculates and displays the loads. Valid values are:

1 The system calculates and displays monthly loads.

2 The system calculates and displays weekly loads.

3 The system calculates and displays daily loads.

Blank The system calculates and displays daily loads.

1. Include Work Order Generated Loads

1 = Before Rate loads

2 = After Rate loads

Blank = No Work Order loads

Use this processing option to specify whether the system includes work order loads before rate schedules, after rate schedules, or not at all. Valid values are:

1 The system generates work order loads before rate schedules.

2 The system generates work order loads after rate schedules.

Blank The system does not recognize work order loads.

2. From Operation Status

Include as an active operation

Blank = No specific status to include

Use this processing option to specify the status the system uses for the work orders or rate schedules as the routing steps are completed. Operation status is a user defined code (31/OS) that describes the status of a work order or rate schedule. Enter the operation status to use as the default value or choose it from the Select User Define Code form.

3. To Operation Status

Include as an active operation

Blank = No specific status to include

Use this processing option to specify the operation status the system uses for the work orders or rate schedules as the routing steps are completed. Operation status is a user

defined code (31/OS) that describes the status of a work order or rate schedule. Enter the operation status to use as the default value or choose it from the Select User Define Code form.

Versions Tab

1. Rate Revisions (P3109)

Use this processing option to specify the version the system uses when you choose the row exit to the Enter/Change Rate Schedule program (P3109) from the Work Center Schedule Review program (P31224). 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.

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 gross forecast. Actual orders are placed that consume the forecast. Forecast consumption compares and uses the greater of forecast or sales orders in the calculation that consume the gross forecast and creates a net forecast.

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 gross (unadjusted) 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.

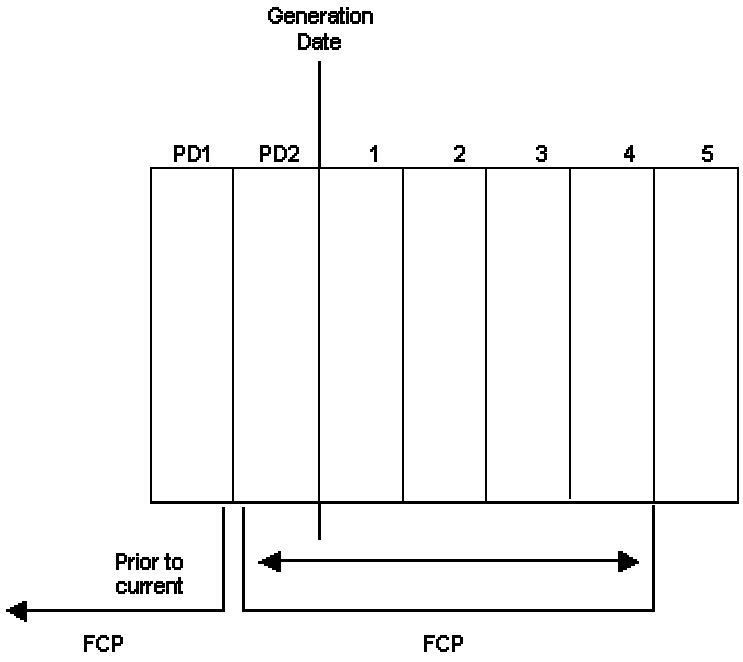
The additional forecast consumption time periods are incremental to the number of time periods that are identified in the MRP/MPS Requirements Planning program (R3482). The total for all time periods cannot exceed 52.

The system only applies the forecast consumption calculations if you set the appropriate processing option. 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 Additional System Information form.

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**
	6-30-05	**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				

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 Revisions 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 MRP/MPS Requirements Planning program (R3482). The total for all time periods cannot exceed 52.

Note

You are not confined to entering forecast in the same period patterns as the consumption periods. For example, you can have weekly forecast to smooth your demand while having a monthly consumption period.

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 Additional System Information form, Plant Manufacturing tab, with a value of H
  - The Planning Fence field on the Additional System Information form, Plant Manufacturing tab, with a value beyond the end of the planning horizon
  - The appropriate processing options in the MRP/MPS Requirements Planning program (R3482)

Note

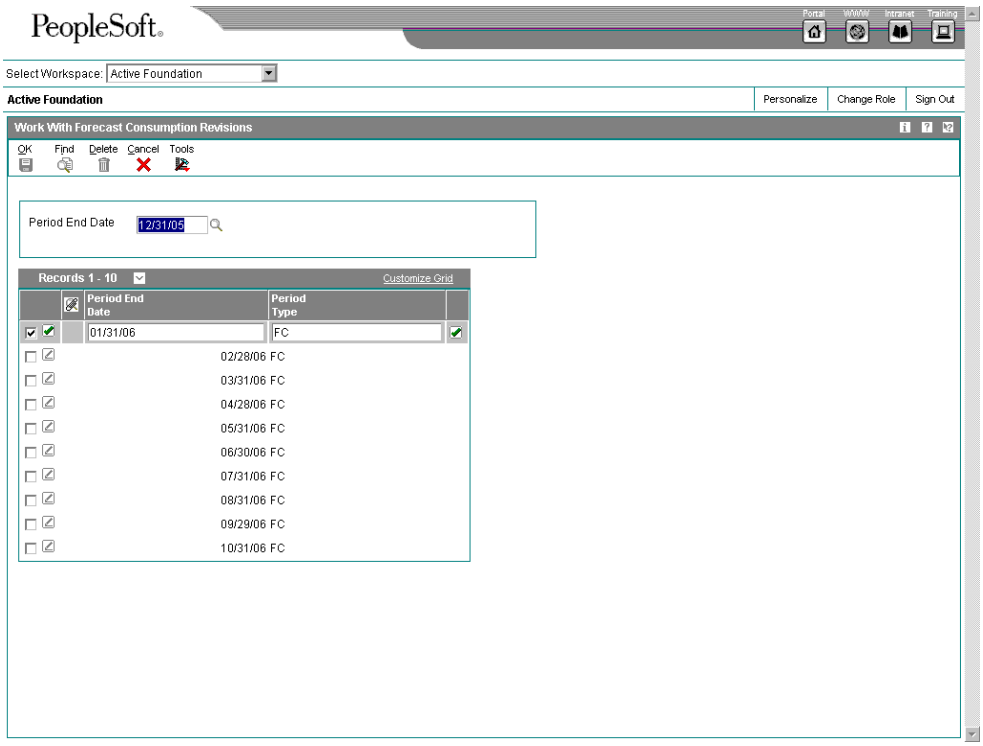
You must set up the planning fence field on the Additional System Information form, Plant Manufacturing tab with a value beyond the end of the planning horizon. (J.D. Edwards recommends a planning fence of 999). If you do not set the planning fence beyond the planning horizon, the batch planning programs (DRP/MPS/MRP Regeneration and Net Change) do not work properly.

► To set up forecast consumption periods

From the Material Planning Setup menu (G3442), choose Forecast Consumption Periods.

1. On Work With Forecast Consumption Revisions, complete the following fields and click OK:

   - Period End Date
   - Period Type



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.

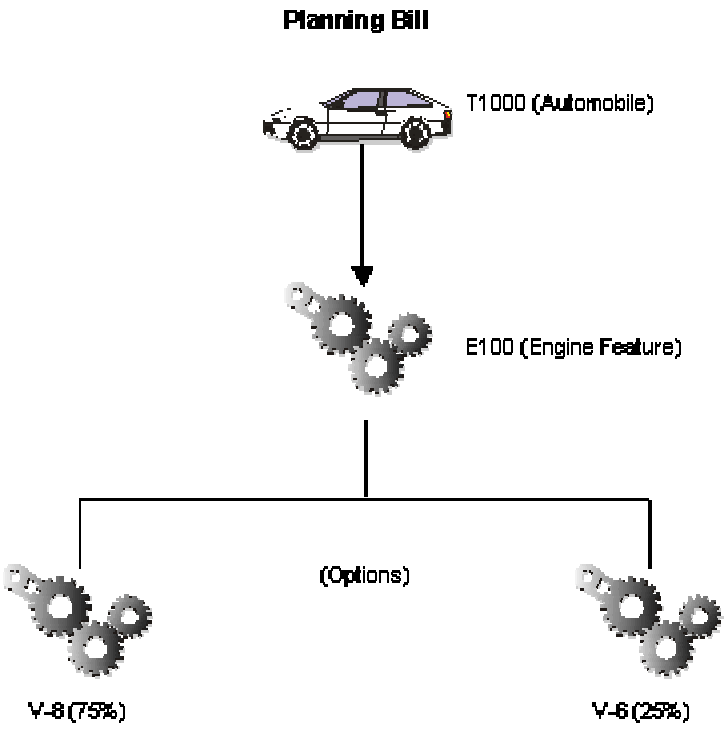
What Are Planning Bills?

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.

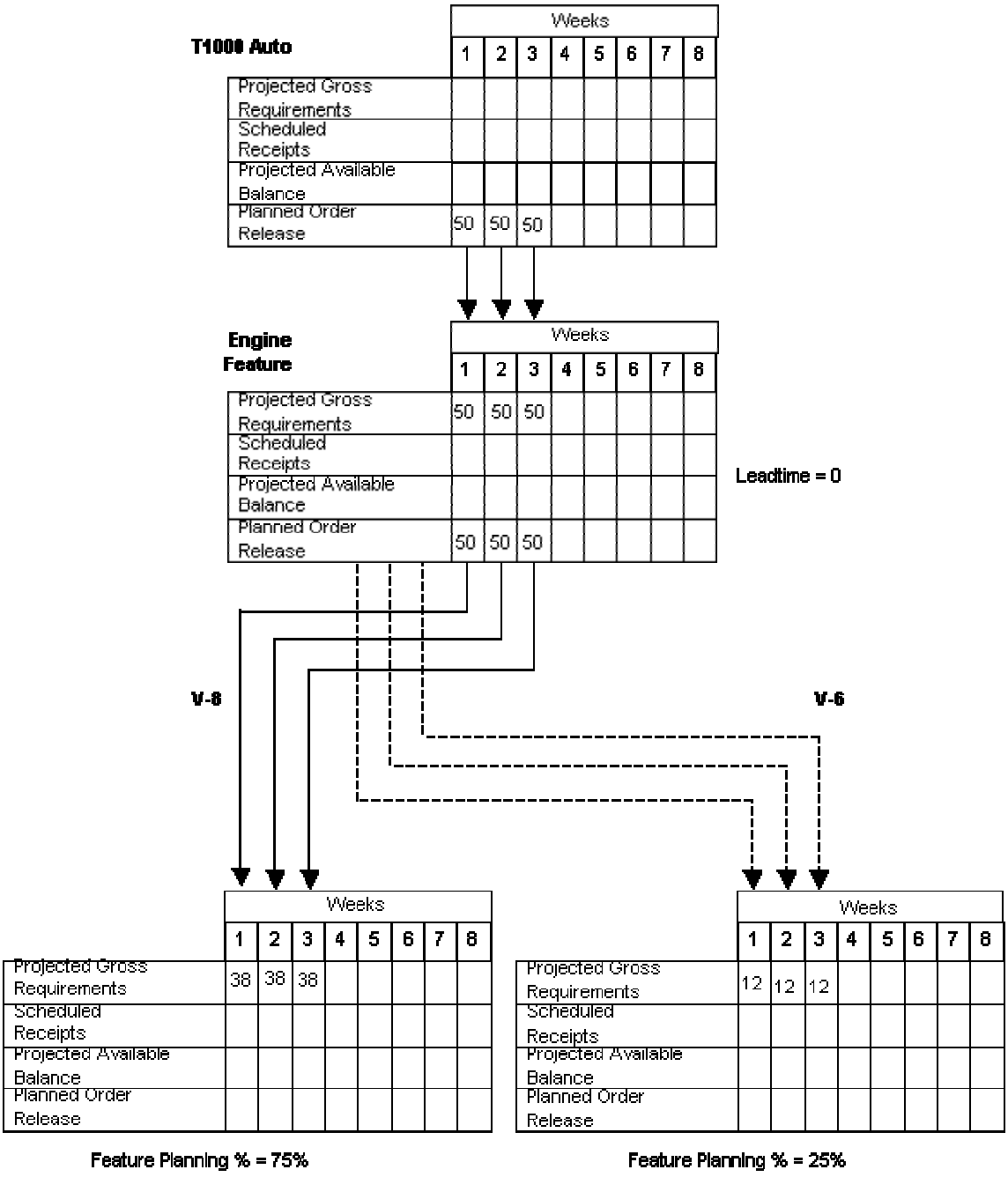
A stocking type of K identifies that the parent (automobile) is planned for in the same way as a kit. The feature item (engine) has a stocking type of 0 (phantom). Phantoms call for a special type of processing for which the leadtime is zero and the order policy is lot-for-lot.

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.

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.

Before You Begin

- ❑ Set up multilevel master scheduling.

Batch Planning

With batch manufacturing, a product is made from a bill of material in a standard run. The run 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 Material Requirements Planning (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.

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.

See Also

- *Bills of Material* in the *Product Data Management Guide* for more information about batch bills of material

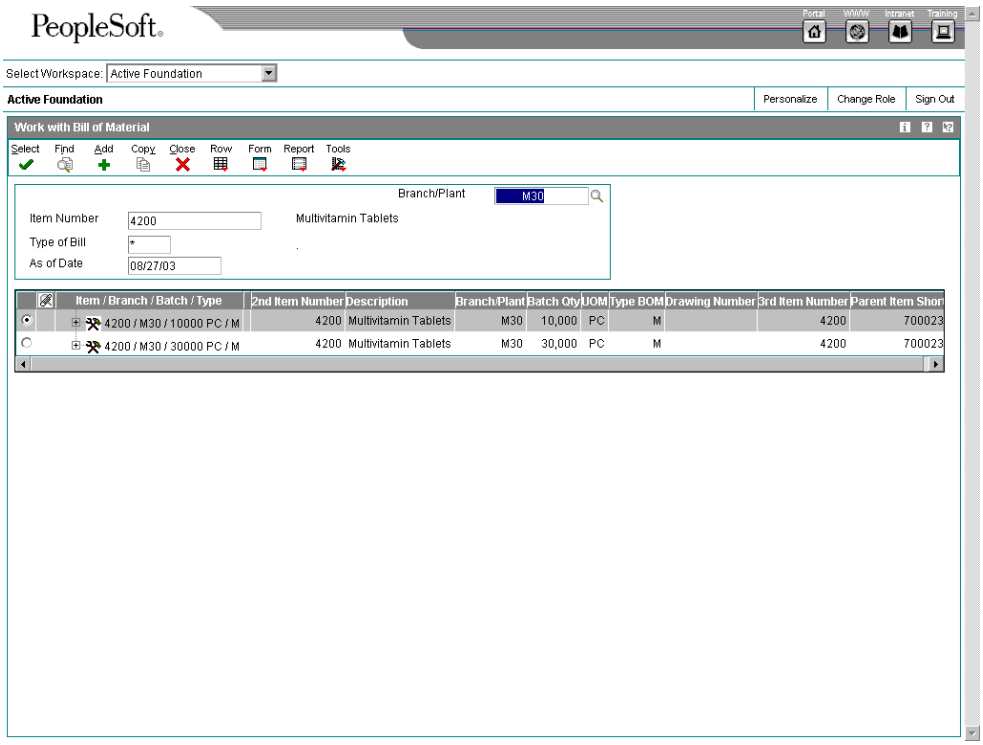
Before You Begin

- ❑ Set the appropriate processing option to display the Batch Quantity field.

► To review 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
   - Type of Bill
   - Branch/Plant



2. Review the following fields:
   - Batch Qty
   - UOM
   - Type of Bill

Examples: Generating MPS for Batch Bills

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

Use the MPS – Gross Regeneration version of the MRP/MPS Requirements Planning program (R3482) 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, Master Production Scheduling (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.

Reviewing Batch Output from MPS

After you generate a master schedule, use MPS Time Series (P3413) and MRP/MPS Detail Message Revisions (P3411) 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.

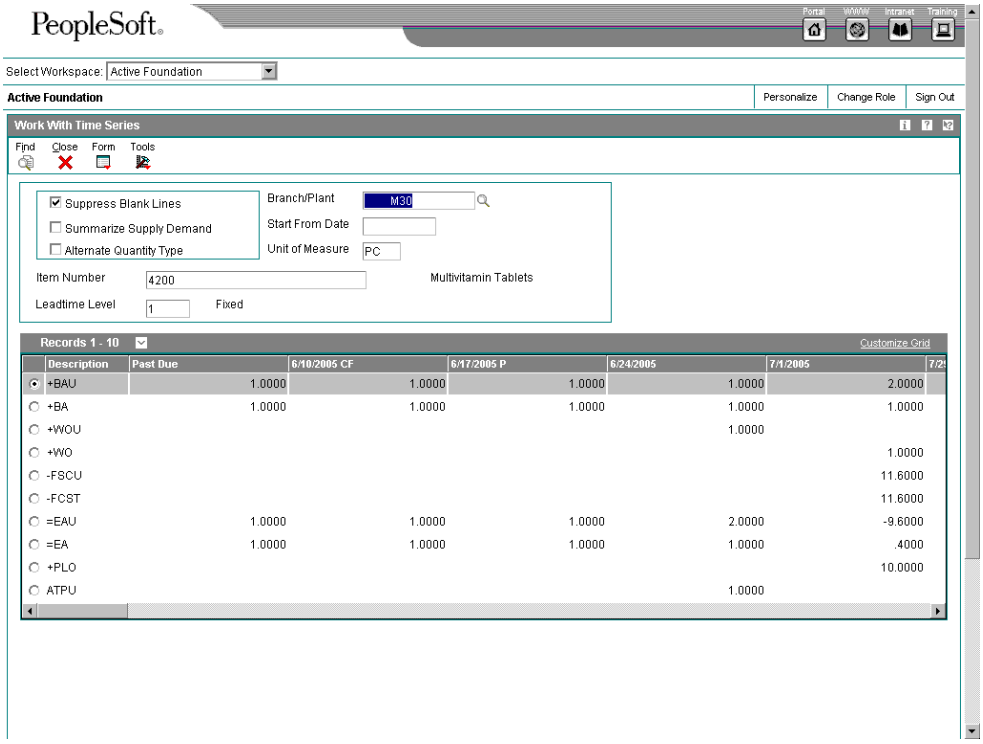
► To review the time series for batch output

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:
   - Item Number
   - Branch/Plant

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

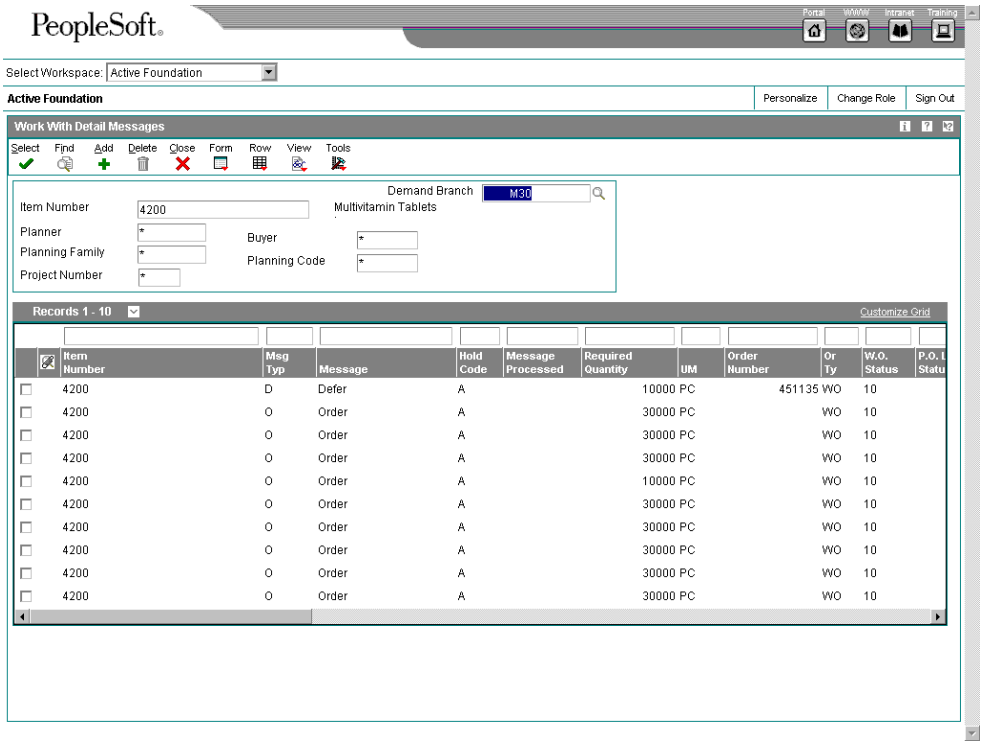


► To review action messages for batch output

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:

- Item Number
- Demand Branch


PeopleSoft
Portal
WWW
Intranet
Training
Select Workspace: Active Foundation
Active Foundation
Personalize
Change Role
Sign Out
Work With Detail Messages
Select
Find
Add
Delete
Close
Form
Row
View
Tools
Demand Branch M30
Item Number 4200
Multivitamin Tablets
Planner *
Buyer *
Planning Family *
Planning Code *
Project Number *
Records 1 - 10
Customize Grid
Item Number
Msg Typ
Message
Hold Code
Message Processed
Required Quantity
UM
Order Number
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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.

Setting Up Process Planning

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.

Defining the Stocking Types for the Process

You define the stocking type of a process to distinguish the processed item from its co-products or discrete items. The stocking type for a process is user defined code R in UDC table 41/I.

Defining Co-Products and By-Products

Use the Co-Product Planning/Costing Table program (P3404) to set up co-product and by-product processes for Master Production Scheduling (MPS) and Material Requirements Planning (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.

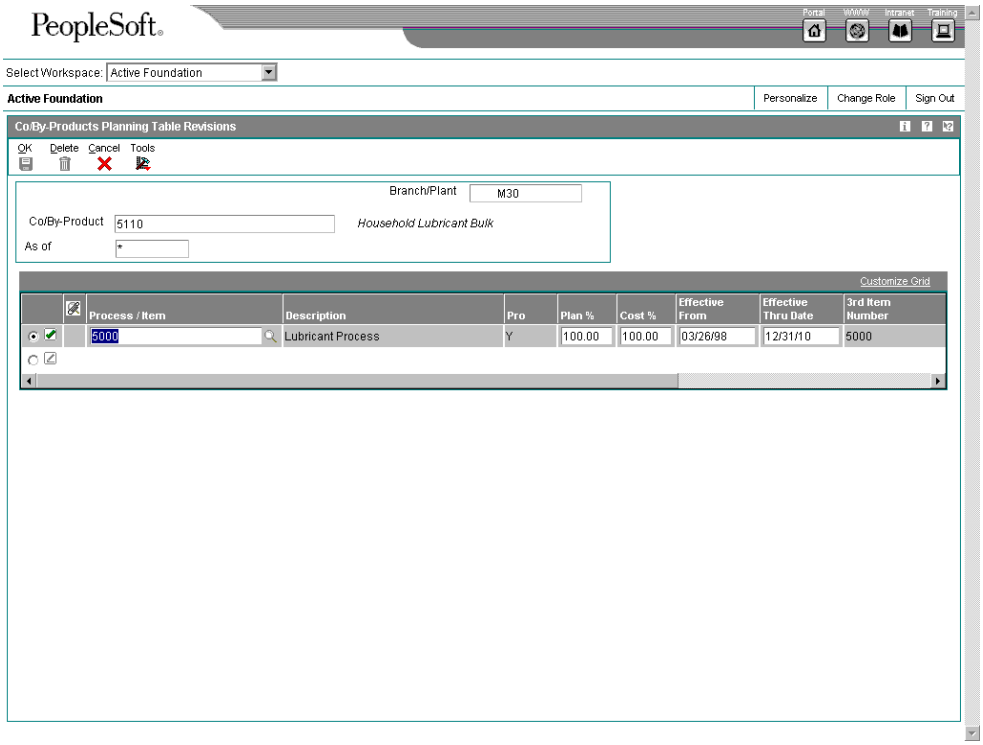
You can also specify special circumstances. For example, by entering 75 percent in the table, you specify that 75 percent of demand is satisfied from process work orders and the balance from other sources. The system automatically satisfies the balance, for example, by planning co-product work orders 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:
   - Co/By-Product
   - Branch/Plant
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

Working with Process Planning

Once you have defined the stocking types, and co- and by-products for your process, 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.

Generating MPS for the Process Industry

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

When you choose the MPS – Gross Regeneration version of the MRP/MPS Requirements Planning program (R3482), the system:

- Evaluates selected information

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

Reviewing Process Output from MPS Generation

After you generate a master schedule, use the Time Series – MPS version of MPS Time Series (P3413) and the Message Detail – MPS version of MRP/MPS Detail Message Revisions (P3411) 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 greater demand for plastic in a time period exists, 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.

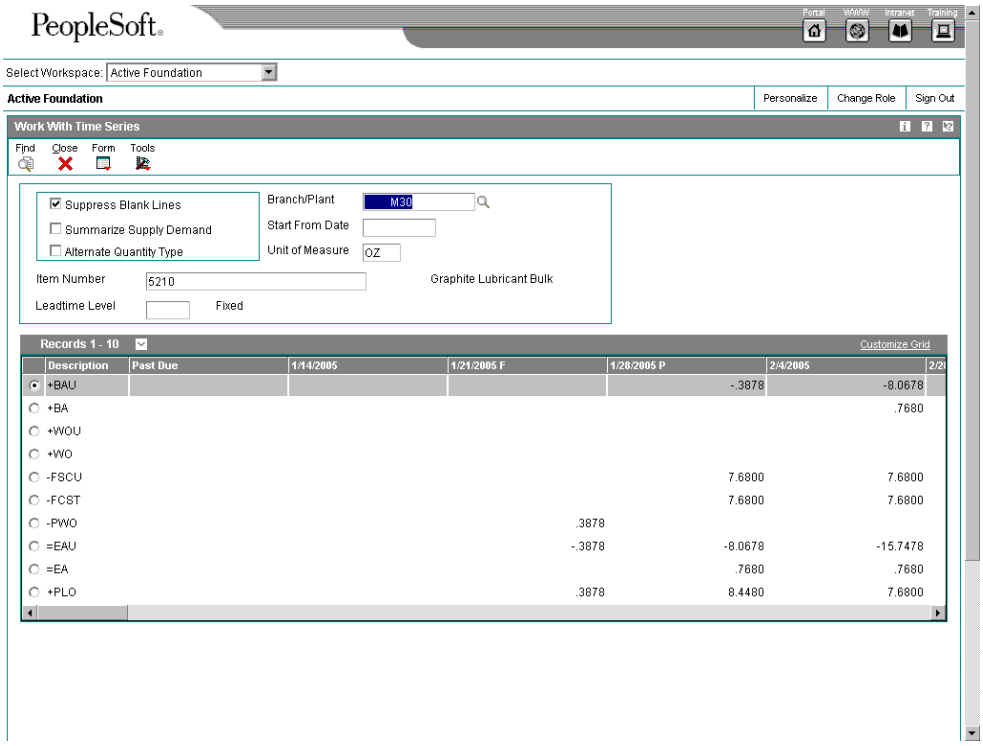
Note

Process item numbers do not have a time series.

► To review time series for co-products and by-products

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

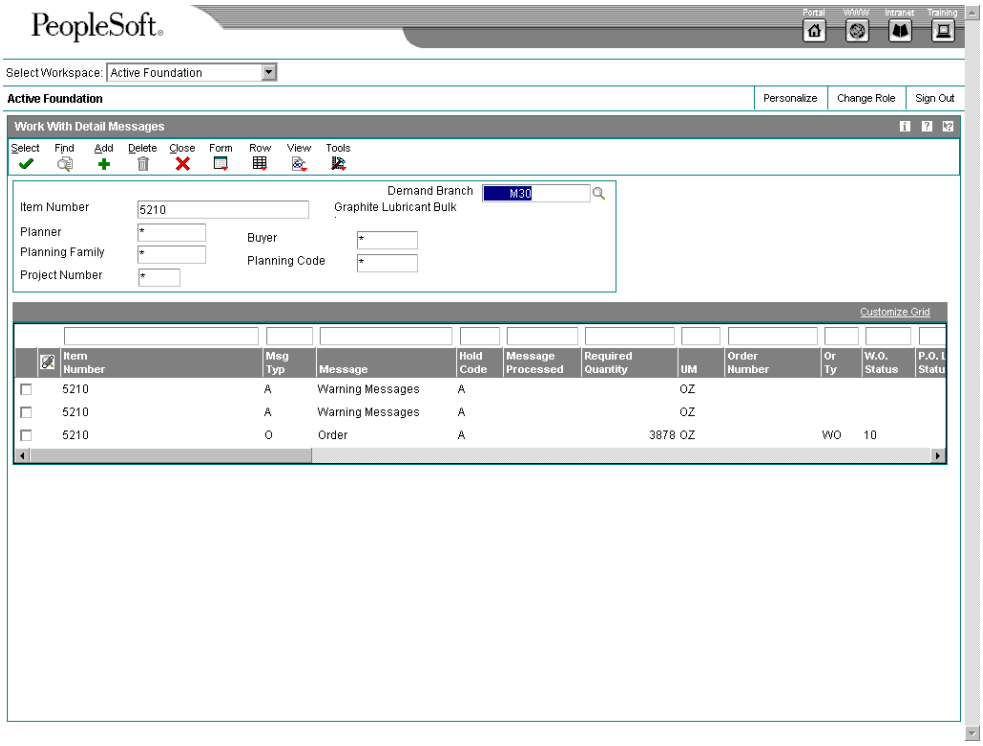
1. On Work With Time Series, complete the following fields to locate the time series for a co-product or by-product:
   - Item Number
   - Branch/Plant
2. To suppress the quantity types that have no data in the time series, click the following option and then click Find:
   - Suppress Blank Lines



► To review messages for processes

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

1. On Work With Detail Messages, complete the following fields and click Find to locate the messages for a process item:
   - Item Number
   - Demand Branch



Note

Co-products that are fully satisfied by the process do not receive order messages.

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)

Setting Up Repetitive Planning

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.

Defining Item Information for Rate Scheduled Items

Planning in a repetitive environment requires that the following item master or item branch/plant information be set up:

- Stocking Type should be set to M for manufactured item.
- Order Policy Code should be set to 5 (Rate Scheduled Item).
- Order Policy Value should be set to define the length of the rate schedule.

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.

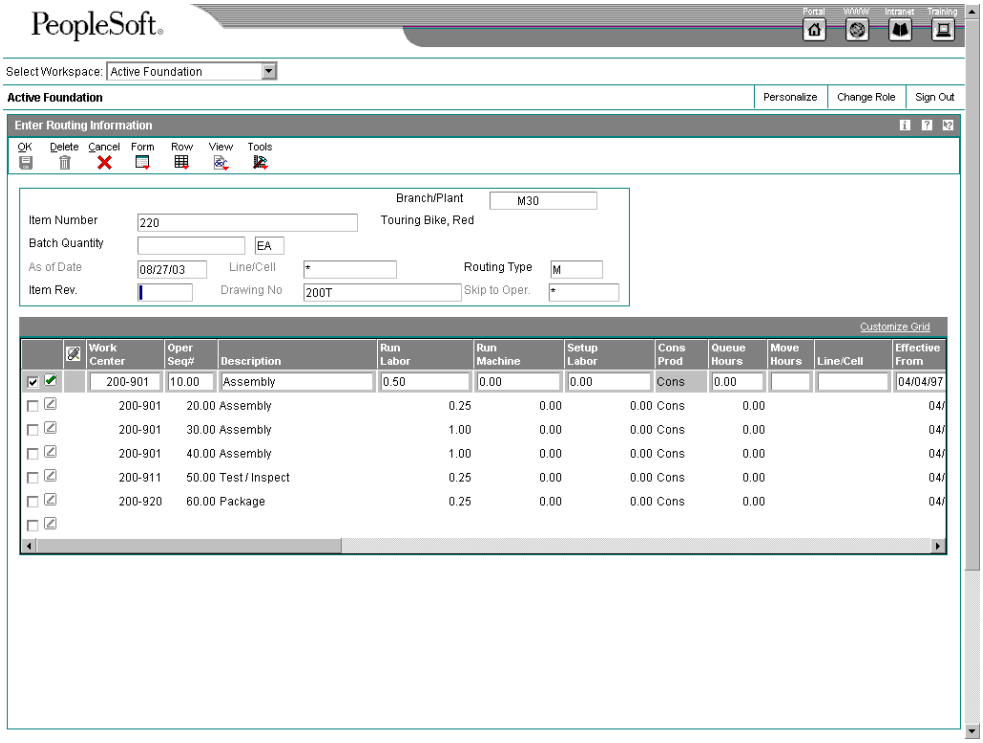
See Also

- *Working with Routing Instructions* in the *Product Data Management Guide* to add, change, or delete routings

► 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. To change any operation, choose that row and click Select.



3. On Enter Routing Information, review the following fields for each operation sequence:

- Line/Cell
- Consuming Location
- Resource Units

4. If you make changes to any operation, click OK.

Creating Line and Item Relationships

The Line/Item Relationships program (P31093) identifies on which production line a product is assembled. Line/Item Relationships also defines shift and period information for that line.

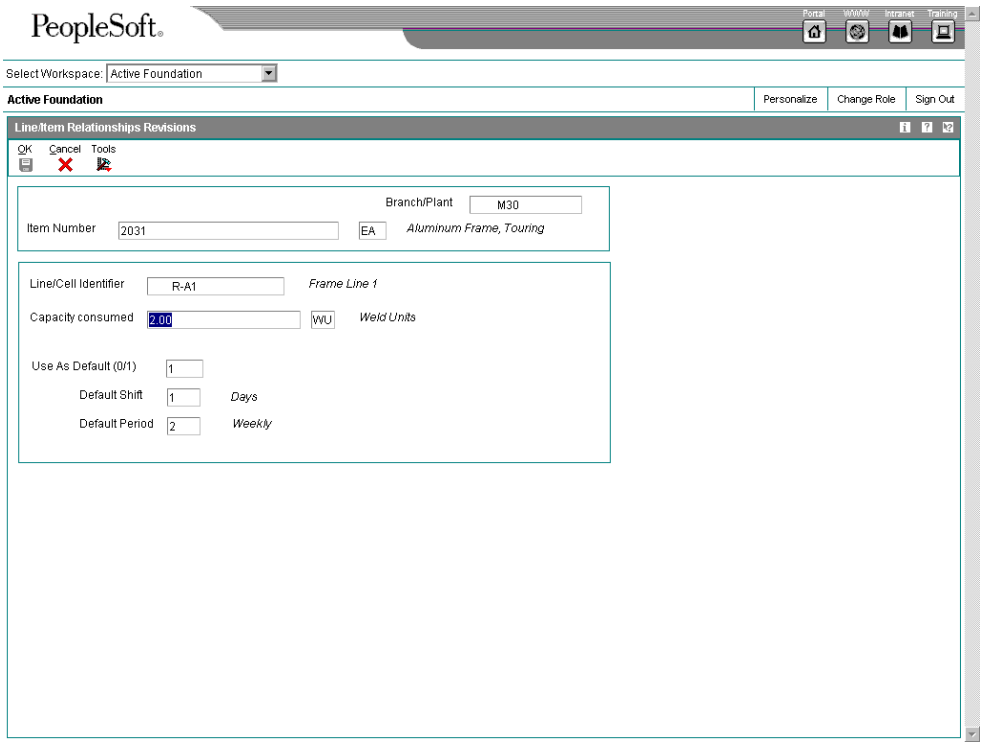
See Also

- *Setting Up Item-to-Line Relationships* in the *Shop Floor Management Guide*

▶ 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:
   - Item Number
   - Branch Plant
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

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.

See Also

See the following topics in the *Shop Floor Management Guide*:

- *Entering Rate Schedules*

- *Completing Rate Schedules*

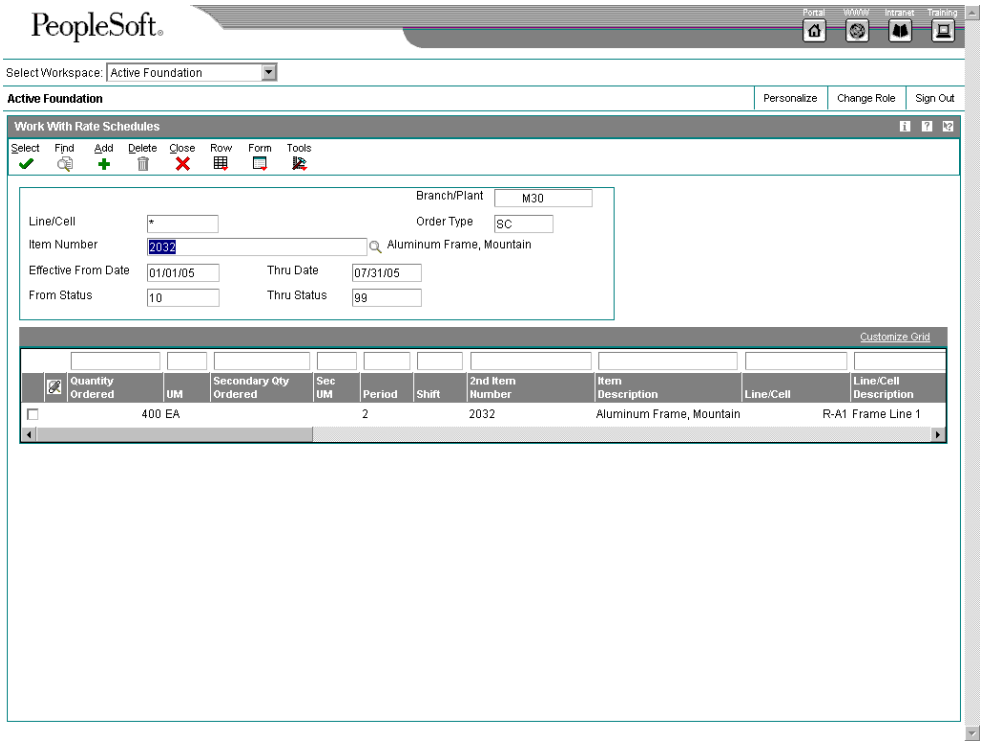
Before You Begin

- 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 and item relationships. See *Creating Line and Item Relationships* in the *Requirements Planning Guide*.

► 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:
   - Line/Cell
   - Item Number
   - Effective From Date
   - Thru Date
   - From Status
   - Thru Status
   - Branch/Plant
   - Order Type



2. Review the following default information:
   - Period
   - Shift
   - Category 1
   - Category 2
   - Category 3
   - Qty Completed
   - Qty Scrapped

Working with Repetitive Planning

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.

Before You Begin

- ❑ Identify the order policy code for repetitive items.
- ❑ Ensure that all routings are set up.

- ❑ Ensure that all production lines are identified.
- ❑ Ensure that all rate schedules are set up.

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 MPS – Gross Regeneration versions of the MRP/MPS Requirements Planning program (R3482), the system:

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

To generate the Master Production Schedule (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.

Reviewing Repetitive Output from MPS

After you generate a master production schedule, use MPS Time Series (P3413) and MRP/MPS Detail Message Revisions (P3411) 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 that are 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.

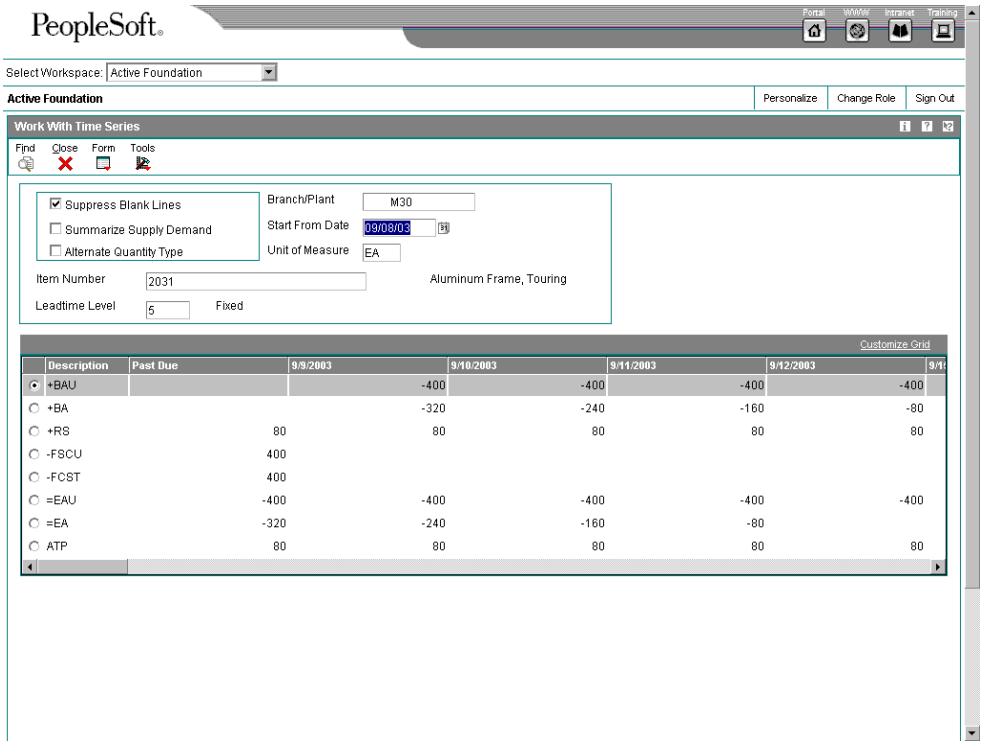
Note

Non-repetitive items use leadtime to backschedule the start date of an order. A repetitive item does not use this logic. Repetitive items use the Rates Effective From and Thru Dates for backsheduling.

► To review the time series for rate-scheduled output

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

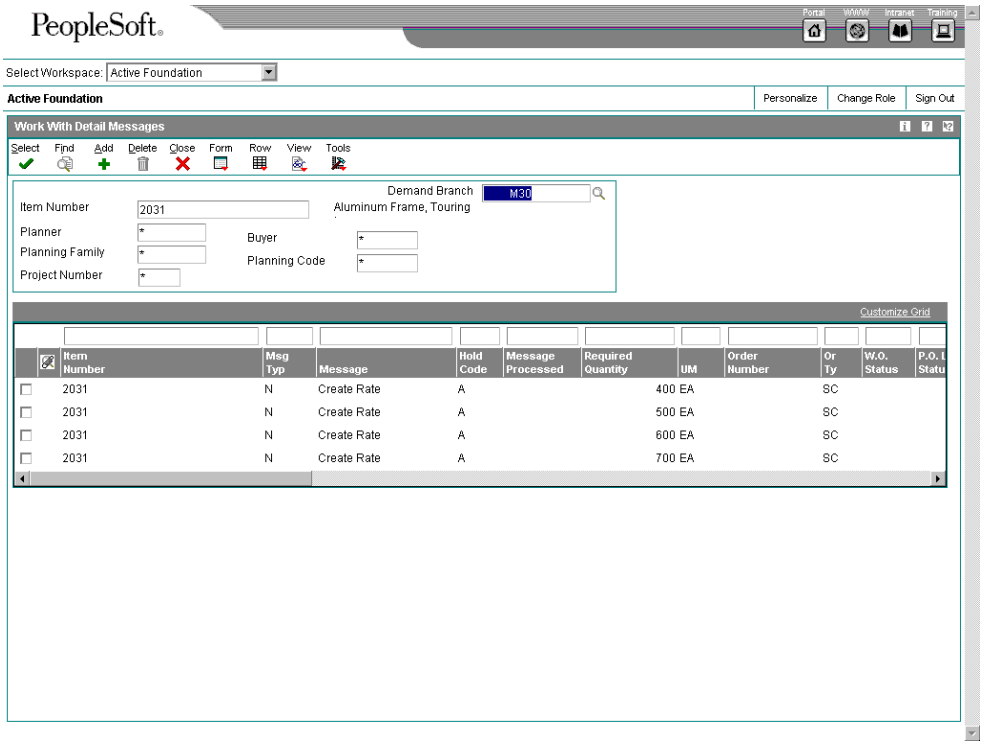
1. On Work With Time Series, complete the following fields and click Find to locate the time series for your item:
   - Item Number
   - Branch/Plant



► To review action messages for rate-scheduled output

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

1. On Work With Detail Messages, complete the following fields and click Find to locate the messages for your item:
   - Item Number
   - Demand Branch



Reviewing Rate Schedule Loads

Use Line Schedule Review (P3152) to review rate schedule load on a given production line. You can select a specific date range for which to view the load for the repetitive line. If you need to adjust the scheduled load on the line, you can access the Enter/Change Rate Schedule program (P3109) to make adjustments. For example, immediate changes to ongoing build forecasts or last-minute bulk orders might require you to increase or decrease a rate schedule quantity that has begun production.

Line Schedule Review is used only for rate-based items. Any line or cell identifier that you enter in the form header is validated against the Work Center Type value in the Work Center Master File table (F30006). When non-repetitive line identifiers are entered, a hard error is generated.

See Also

- *Reviewing Rate Schedule and Work Center Loads* in the *Requirements Planning 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:

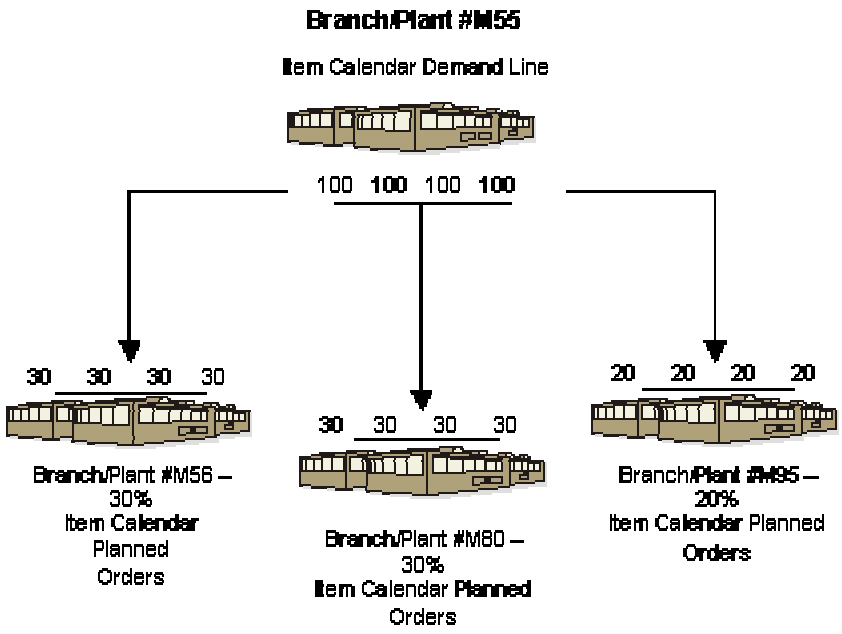
- Manage the movement of material through distribution networks and multiple production facilities.
- Formalize the process of transferring items among your facilities.
- Create internal transfer orders to help ensure traceability of materials and their costs between facilities.
- Ensure that the facility 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 Material Requirements Planning (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.

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.

Before You Begin

- ❑ Understand the concepts and terms described in *Requirements Planning Concepts* in the *Requirements Planning Guide*.

Setting Up Supply and Demand Relationships

Use Branch Relationships Revisions (P3403T) 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 Material Requirements Planning (MRP), Distribution Requirements Planning (DRP), and Master Production Scheduling (MPS) versions of the Branch Relationships 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

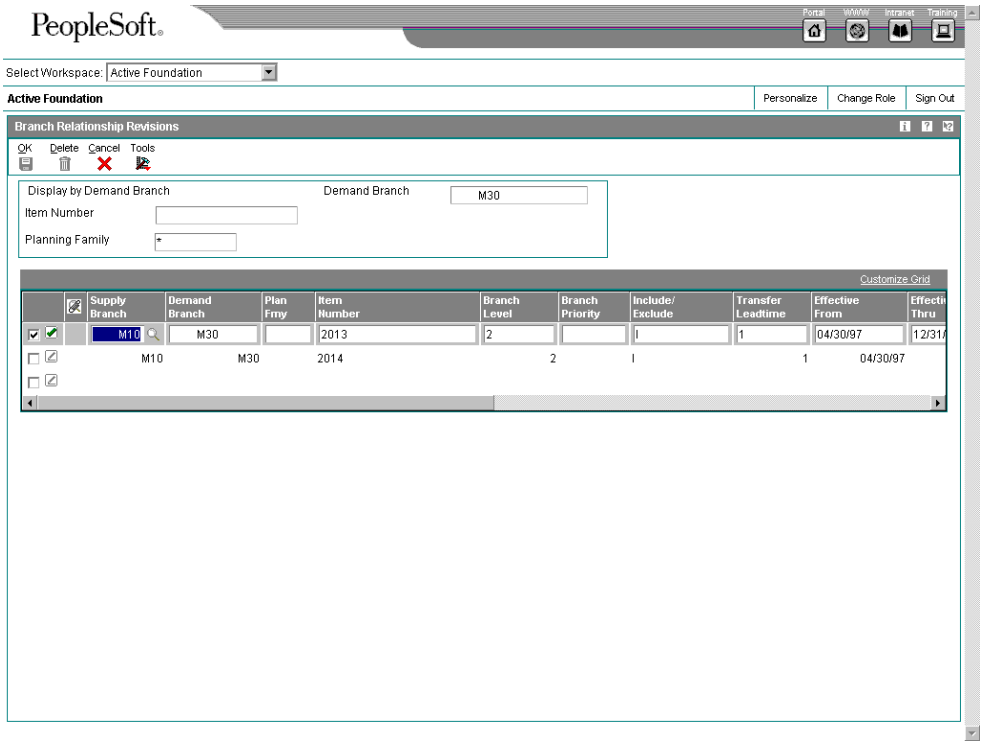
When you delete a supply and demand relationship, the system deletes the entire record.

► To set up supply and demand relationships

From the Multi-Facility 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.
   - Planning Family
   - Item Number
3. Choose the record and click Select.



4. On Branch Relationship Revisions, complete the following fields:

   - Include/ Exclude

     Some parts might come from certain branch/plants. In multifacility planning, if *Exclude* is selected, then the item is supplied by the demand branch only.

   - Effective From

     This date defaults in from the bill of material.

   - Source Percent

     The percent of demand to be supplied by the *source* branch/plant.

   - Percent To Fill

     This amount of the source percent must be available to be filled by this branch/plant. The percent of demand should be filled to place a transfer order message. A transfer order is generated if Availability Check is on.

5. Complete the following optional fields, then click OK:

   - Branch Level

     The branch that will go first, second, and so on. The lowest level is processed first (the highest numerical value). Ensure all demand is generated before supply is allocated.

   - Branch Priority

     This field shows the sequence within a level branch/plant where requirements are processed.

- Transfer Leadtime

  This field shows the time to ship the item from the supply to the demand branch plant in days.

- Availability Check

  If availability check is on, the system checks the availability of the supply branch inventory only. The available balance is committed until a zero inventory balance, and then moves to another supply branch or creates an order in the demand branch.

  If availability check is off, then the inventory balance can go negative.

Processing Options for Branch Relationships 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 (P34031) 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 Material Requirements Planning (MRP), Distribution Requirements Planning (DRP), and Master Production Scheduling (MPS) versions of the 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-Facility 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:

   - Supply 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
3. On Work With Branch Relationships Hierarchy, choose a row and click Select to review the branch relationships.

Transfer Orders and Multifacility Planning

Transfer orders are used by the Multifacility Planning system to transfer inventory between branch/plants within your company. The transfer of inventory is done by generating a purchase order at the demand plant and a sales order at the supply plant.

Instead of manually entering the transfer orders, you run Master Planning Schedule – Multiple Plant (R3483), which generates the plan and respective planning messages. You then process the messages.

When the system creates a transfer order from a planning message, the system does the following:

- Creates a purchase order for the supply branch/plant that ships the items
- Creates a sales order for the demand branch/plant that receives the items
- Processes the inventory amounts on the transfer order as a formal purchase and sale of goods
- Creates documents -- such as orders, pick slips and invoices -- that are necessary to complete the transfer

When the sales order is generated, the system uses the Customer Master for certain defaults and validation. The system might check the following settings:

- availability checking
- partial shipments allowed
- default carrier
- order holds
- freight charges

Markups can also be applied by setting up the Branch Relationships Master File table (F3403).

When the purchase order is generated, the system uses the supplier master to get defaults and validation. The system might check the following settings:

- order holds
- print messages
- landed costs

J.D. Edwards software has standard document types set up for transfer orders. Sales orders use document type ST and purchase orders use OT. These document types are defined in user defined code (UDC) table 00/DT. Thus, you can create your own document types. For example, transfers that are generated by planning might use the ST/OT document types

while orders generated manually use alternate document types. Along with the visible difference in document type, the use of different document types allows for differences in accounting, approvals, and order activity rules.

Customer and Supplier Masters and Multifacility Planning

To create transfer orders in the Multifacility Planning system, you are required to set up default customer and supplier masters for the branch/plants that are used.

Note

Transfer orders use the customer and supplier masters in unique ways during order generation.

A customer master is required for the demand plant, and a supplier master is required for the supply plant.

A standard sales order uses the customer address book number for the billing instructions. The sales order that is created for a transfer order uses the address number of the branch from which you are shipping.

A standard purchase order uses the supplier's address book number. The purchase order that is created for a transfer order uses the address book number of the branch that is receiving the product.

See Also

- *Setting Up Customer Billing Instructions* in the *Sales Order Management Guide*
- *Entering Supplier Master Records* in the *Accounts Payable Guide*

Generating Multifacility Plans

Use one of the following navigations:

From the Multi-Facility Planning menu (G3423), choose MPS Regeneration.

From the Multi-Facility Planning menu (G3423), choose MRP Regeneration.

After you have set up the supply and demand relationships among your branch/plants, you can use the Distribution Requirements Planning (DRP), Master Production Scheduling (MPS), and Material Requirements Planning (MRP) gross regeneration versions of Master Planning Schedule – Multiple Plant (R3483) to generate a multifacility plan. Alternatively, you can use the DRP, MPS, and MRP net change versions of Master Planning Schedule – Multiple Plant 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.

Before You Begin

- Set up DRP/MPS multifacility planning.

Processing Options for Master Planning Schedule – Multiple Plant (R3483)

Horizon Tab

These processing options specify dates and time periods that 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. The following information concerns 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 that is 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 indicates 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 = multilevel 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 that you specify in the data selection down to the components. You must specify all of the 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 action 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, 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. No -PWO demand from parent items exists -- 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 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

Use this processing option to specify whether to include quantities in inspection when the system calculates the Beginning Available amount. Otherwise, the system includes these quantities in the In Receipt (+IR) line of the time series. The system still considers the quantities available. 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

5. Include Past Due Rates as a supply

blank = do not include

1 = include

Use this processing option to specify whether the system considers open quantity from past due rate orders as supply. If you enter 1, open quantities from past due rate orders are included in the rate schedule unadjusted (+RSU) line as well as the rate schedule adjusted (+RS) line of the Master Planning Schedule - Multiple Plant program (R3483). Valid values are:

Blank

Do not consider past due orders as supply.

1

Consider past due orders as supply.

Forecasting Tab

These processing options serve two purposes:

- Determines what forecast types the program reads as demand
- Initiates 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 forecast consumption

1 = use forecast consumption

2 = use forecast consumption by customer

Use this processing option to specify whether the system uses 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. The sales order is not considered an additional source of demand. For forecast consumption to be used, the planning fence rule for the item must be H and the planning fence must be 999. You enter these values on the Plant Manufacturing Data form.

Note: When you use forecast consumption, the system applies forecast consumption logic to the aggregate sales order and forecast quantities.

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.

4. Forecast type for forecast consumption by customer

When Forecast Consumption Logic is set to 2 (Forecast Consumption by Customer) use this processing option to specify the forecast type (34/DF) that the system uses to create a forecast for the actual daily demand by customer. This value cannot equal that of the Forecast Types Used processing option.

5. Default Customer Address Relationship for Forecast Consumption by Customer

1 = Ship to (default)

2 = Sold to

When Forecast Consumption Logic is set to 2, Forecast Consumption by Customer, then this processing option specifies the customer address relationship i.e. the address book number (ship to or sold to) used for calculation purposes.

Valid values are:

1 - Use ship to address book number

2 - Use sold to address book number

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. Input the Branch/Plant Where Planning Tables Will Be Cleared

blank = all planning tables will be cleared

Use this processing option to specify which Branch/Plant records in the MPS/MRP/DRP Message File table, MPS/MRP/DRP Lower Level Requirements File table, and the MPS/MRP/DRP Summary (Time Series) table (F3411, F3412 and, F3413, respectively), are purged.

Note: This option is only valid when Clear F3411/F3412/F3413 Tables processing option on the Performance tab is set to 1 and the Delete Branch/Plant processing option contains a valid branch/plant. This processing option enables a preprocess purge of these tables. If this processing option is not enabled or is set to blank, the system purges records for a given branch/plant and item as you plan the item. Depending on processing option combinations, the following scenarios can occur.

Example 1:

Clear F3411/F3412/F3413 Tables is set to '1.'

(a) Delete Branch/Plant is set to blank.

All records from the three tables will be prepurged.

(b) Delete Branch/Plant contains a valid branch/plant.

Records for all the items that belong to the valid branch/plant will be prepurged from the three tables.

(c) Delete Branch/Plant contains an invalid branch/plant.

No records will be prepurged from the three tables.

Example 2:

Clear F3411/F3412/F3413 Tables set to Blank

Delete Branch/Plant is not active.

No records from the three tables will be prepurged.

3. 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:

- o 1 if messages were not created
- o 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.

4. 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

5. Ending Firm 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.

6. 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

7. 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.

8. Set Key Definition For Table F3411

Use this processing option to support concurrent MRP/MPS runs. The value that you enter determines the range for the number of records in the F3411/F3412 tables for a given run. The number must be large enough to include the number of records that will be generated for the table. For example, if you enter a value of 8 for the first run and 10 for the second run, the range of records that the system reserves for two simultaneous MRP/MPS runs will include:

First run:

The system reserves records in the range of 1 to [1*10^8], or 1 through 1,000,000,000.

Second run:

The system reserves records in the range of [1*10^8 + 1] to [2*10^10], or 100,000,001 through 20,000,000,000.

Notice that the values that you enter serve as the exponent in the equations above. Valid values are:

Default value: 10

Minimum value: 7

Maximum value: 14

Note: This process runs only when a subsequent MRP/MPS job is submitted while an existing job is currently running. The MRP/MPS Requirements Planning program (R3482) and Master Planning Schedule - Multiple Plant program (R3483) enforce these values. You determine the optimal value for the key definition. All values for this table should be the same for all versions. If version settings are not the same, the results are unpredictable.

9. Set Key Definition For Table F3412

Use this processing option to support concurrent MRP/MPS runs. The value that you enter determines the range for the number of records in the F3411/F3412 tables for a given run. The number must be large enough to include the number of records that will be generated for the table. For example, if you enter a value of 8 for the first run and 10 for the second run, the range of records that the system reserves for two simultaneous MRP/MPS runs will include:

First run:

The system reserves records in the range of 1 to [1*10^8], or 1 through 1,000,000,000.

Second run:

The system reserves records in the range of [1*10^8 + 1] to [2*10^10], or 100,000,001 through 20,000,000,000.

Notice that the values that you enter serve as the exponent in the equations above. Valid

values are:

Default value: 10

Minimum value: 7

Maximum value: 14

Note: This process runs only when a subsequent MRP/MPS job is submitted while an existing job is currently running. The MRP/MPS Requirements Planning program (R3482) and Master Planning Schedule - Multiple Plant program (R3483) enforce these values. You determine the optimal value for the key definition. All values for this table should be the same for all versions. If version settings are not the same, the results are unpredictable.

10. Set Maximum Number Of Branches

Use this processing option to specify the maximum number of branches that the system processes when you run the Master Planning Schedule - Multiple Plant program (R3483). Since this processing option controls the allocation of memory for arrays, you should use the minimum number of branches necessary.

Caution: J.D. Edwards supports up to ninety-nine locations. If you specify more locations that ninety-nine, the program might generate unpredictable results. J.D. Edwards strongly recommends that you make incremental adjustments to this value.

11. Suppress Time Series

blank = generate time series

1 = do not generate time series

Use this processing option to specify whether the system generates the time series. Valid values are:

Blank

Generate the time series.

1

Do not generate the time series.

Note: Performance improves when the time series is not generated.

Mfg Mode Tab

These processing options define integration with other systems.

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

2. Configurator Functionality

blank = do not include configured components

1 = include configured components

Use this processing option to specify whether the system processes configurator components from the Configurator Component Table (F3215) and adds them to the Sales Order Detail File table (F4211) and the Work Order Parts List table (F3111). If you enter a 1 in this processing option, the system processes the items on the Configurator Components table as demand items.

Blank

Do not process items from the Configurator Component Table.

1

Process items from the Configurator Components table.

Multi-Facility Tab

These processing options define criteria in a multifacility environment.

1. 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.

2. 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)

3. 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.

4. 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

5. 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

6. 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 Planning Output

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.

Reviewing the Time Series for the Multifacility Schedule

Use MPS Time Series (P3413) 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 Master Planning Schedule – Multiple Plant program (R3483) 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.

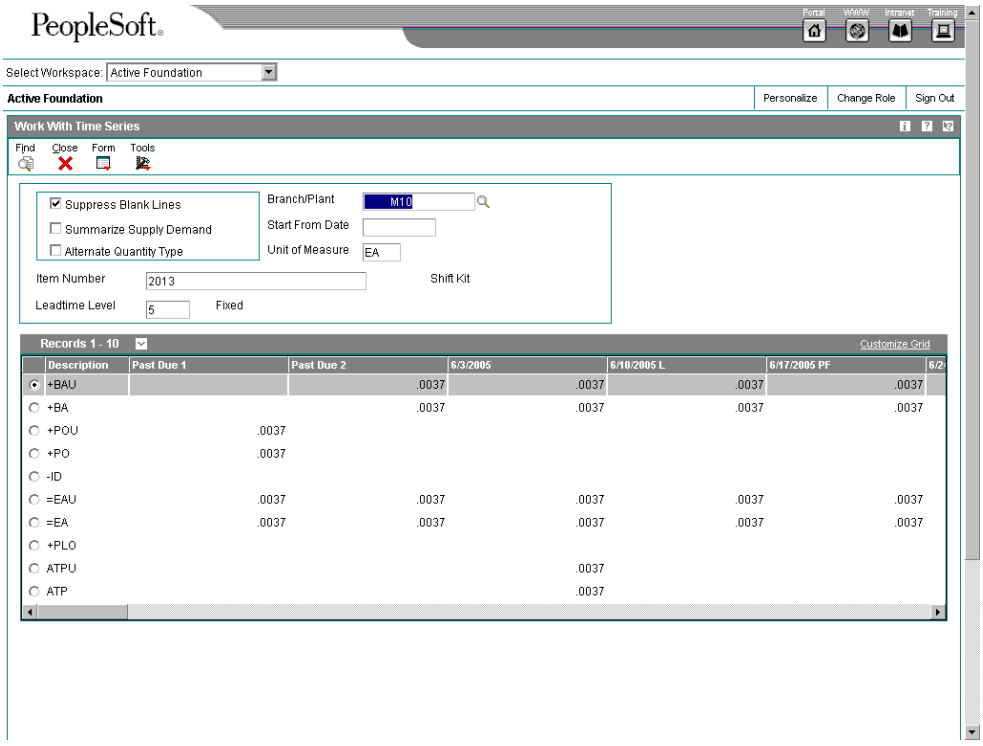
See Also

- *Reviewing the Time Series* in the *Requirements Planning Guide*

▶ To review the multifacility time series

From the Multi-Facility Planning Daily Operations menu (G3414), choose Time Series/ATP Inquiry.

1. On Work With Time Series, complete the following fields and click Find to locate the time series for an item:
   - Item Number
   - Branch/Plant



Processing Transfer Order Messages for the Multifacility Schedule

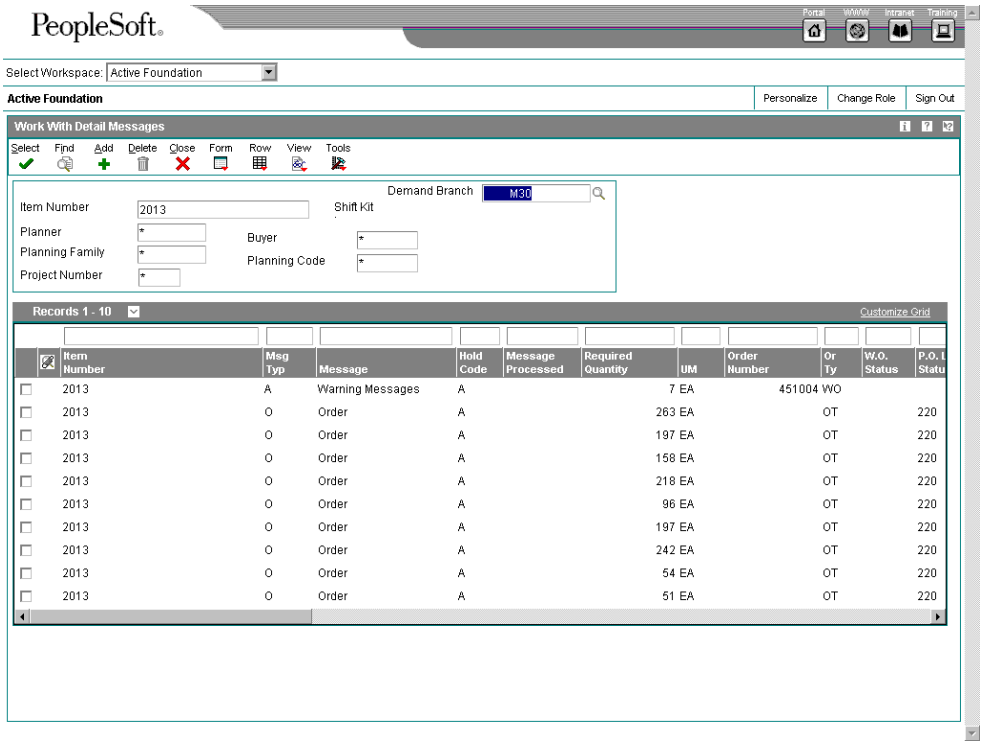
Use MRP/MPS Detail Message Revisions (P3411) to review the transfer order messages for the multifacility schedule. Multifacility scheduling creates messages that are appropriate to the demand and supply facilities. If you process the messages, the system automatically

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:
   - Item Number
   - Demand Branch
2. Choose the transfer order messages that you want to process.
3. From the Row menu, choose Process Message(s) to create the following:
   - Transfer order for the item
   - Purchase order number for the demand plant
   - Sales order number for the supply plant
4. On Work With Detail Messages, review the information for the new orders in the following fields:
   - Order Number
   - Start Date
   - Request Date
   - Recmd'd Start Date
   - Recmd'd Complete
   - 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. The option that you choose is dependent on your need to forecast interplant demand.

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 – Multiple Plant 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 user defined code (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 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 writes 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.

Project Requirements Planning (PRP)

Project Requirements Planning (PRP) is an option within the MRP/MPS Requirements Planning program (R3482) that you use to generate replenishment schedules for production orders and components for an end item that are used in a project.

PRP recognizes the shippable items from the project as the supply of the end item and uses this supply to drive the demand for its components. Thus, the project supplies its own demand.

The dependent demand is generated by the bill of material (BOM) structure or by the work order parts list that is associated with the end items. Inventory that is acquired either by purchase order receipts or work order completions for these project-specific items should be used only for meeting the project's demand.

Project demand and supply is regarded as *standalone* or *independent* so that any additional demand or supply from forecasts, sales orders, work orders, or purchase orders on that end item does not interfere with the requirement from the project.

Setup Considerations for Project Requirements Planning (PRP)

To successfully plan a project by running the Project Requirements Planning (PRP) option of the MRP/MPS Requirements Planning program (R3482), you must verify certain system setup information.

In the Item Master program (P4101), the stocking type for project-specific items is defined with a special handling code of P for project. PRP uses the stocking type to denote that the item is specific to a project.

Caution

An item cannot be identified as both a project-specific and a standard item within the same branch/plant.

For multilevel bills of material, when an item is identified as a project-specific item, all parent items in the hierarchy, including the end item, should also be project-specific items. Otherwise, the originating order requirements (pegging records) cannot be linked.

PRP uses the low-level code to identify the lowest level at which an item resides in a bill of material structure. The low-level code is assigned to an item when it is added to a manufacturing bill of material (BOM). An item can reside on a manufacturing BOM, the project work breakdown structure, or both. Because the work breakdown structure is similar to a BOM structure but is not a BOM, the system requires a way to assign an item's low-level code when you use it on a given project. To assign correct low-level codes, run the Bill of Material Structure Analysis program (R30601) with the processing option set to consider items in projects.

PRP identifies the supply for project-specific end items on the work breakdown structure when the Shipment field contains the value 1.

Note

Initially, when you add an end item to the work breakdown structure, do not add any subassembly items to the work breakdown structure. PRP uses the parent end item's supply work order to explode demand to the subassembly and component items. After processing a work order message, the system updates project-specific subassembly items on the work breakdown structure.

You can also set up supply and demand inclusion rules for PRP. Consider the statuses of the manufacturing work orders on the work breakdown structure when you use supply and demand inclusion rules for PRP.

Project Requirements Planning Generation

When you run the Project Requirements Planning (PRP) option of MRP/MPS Requirements Planning (R3482), the system generates a replenishment schedule for a project.

Demands for projects are given preference when the system distributes on-hand inventory. The Project Commitment Detail Table (F410211) stores the detail records for project specific inventory items. PRP uses this table to determine what project specific inventory to allocate to a given project.

The project supply or availability for an end item is stored in the Work Order Master Tag File table (F4801T) like a typical work order, but with the project number populated.

Project Requirements Planning Output

Once the Project Requirements Planning (PRP) option of MRP/MPS Requirements Planning (R3482) runs successfully, you can review output information in the system.

The user defined code (UDC) 34/QT contains the following quantity types that are specific to project supply and demand:

Quantity Type	Description	Unadjusted/Adjusted
+BAPU	Project Beginning Balance Unadjusted	Unadjusted
+POPU	Project Purchase Orders	Unadjusted
+WOPU	Project Work Order	Unadjusted
-FWOPU	Project Firm Work Order	Unadjusted
+BAP	Project Beginning Balance	Adjusted
+IRP	Project Receipt Routing	Adjusted
+POP	Project Purchase Orders	Adjusted
+WOP	Project Work Order	Adjusted

-PWD	Project Work Order Demand	Adjusted
-FWOP	Project Firm Work Order	Adjusted
-PWOP	Project Plan Work Order	Adjusted
-SOP	Project Sales Order	Adjusted

Planning messages for project specific subassemblies and components include the project number and parent work order information. The project number can be used to filter on project specific planning messages in Message Summary (P3401) and MRP/MPS Detail Message Revisions (P3411). Work orders and purchase orders that are created from planning messages contain the project number.

When creating pegging records, PRP stores the project number in the MPS/MRP/DRP Lower Level Requirements File table (F3412) table to indicate the origination of the requirements resulting from the project. Orders that are pegged to the project are only used for the given project.

The MPS/MRP/DRP Summary File table (F3413) does not contain the project number, but project specific quantity types are used by PRP to calculate and display project specific quantities.

Supply and Demand Inquiry (P4021) has additional grid columns to display the project demand and supply. You must set the processing option to enable PRP display.

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 Distribution Requirements Planning (DRP), Master Production Scheduling (MPS), and Material Requirements Planning (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 the Order Entry - Blanket version of Purchase Orders (P4310) 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

6. **Define Supplier Contract**

   Define the details of your contract with the supplier on the Enter/Change Supplier Information form.

7. **Define Shipment Patterns**

   Define which days are valid to receive a shipment.

8. **Run DRP/MPS/MRP**

   Run DRP/MPS/MRP to plan order quantities in terms of time and quantity.

9. **Review Messages from MRP**

   Review, expedite, defer, or cancel any of the MRP messages. Do not process message type O order messages here.

10. **Supplier Split Percentage (Optional)**

    Define necessary split percentages between suppliers by item.

11. **Generate Supplier Schedule**

Generate a draft of your supplier schedule prior to committing to a final schedule.

12. **Review and Revise Supplier Schedule**

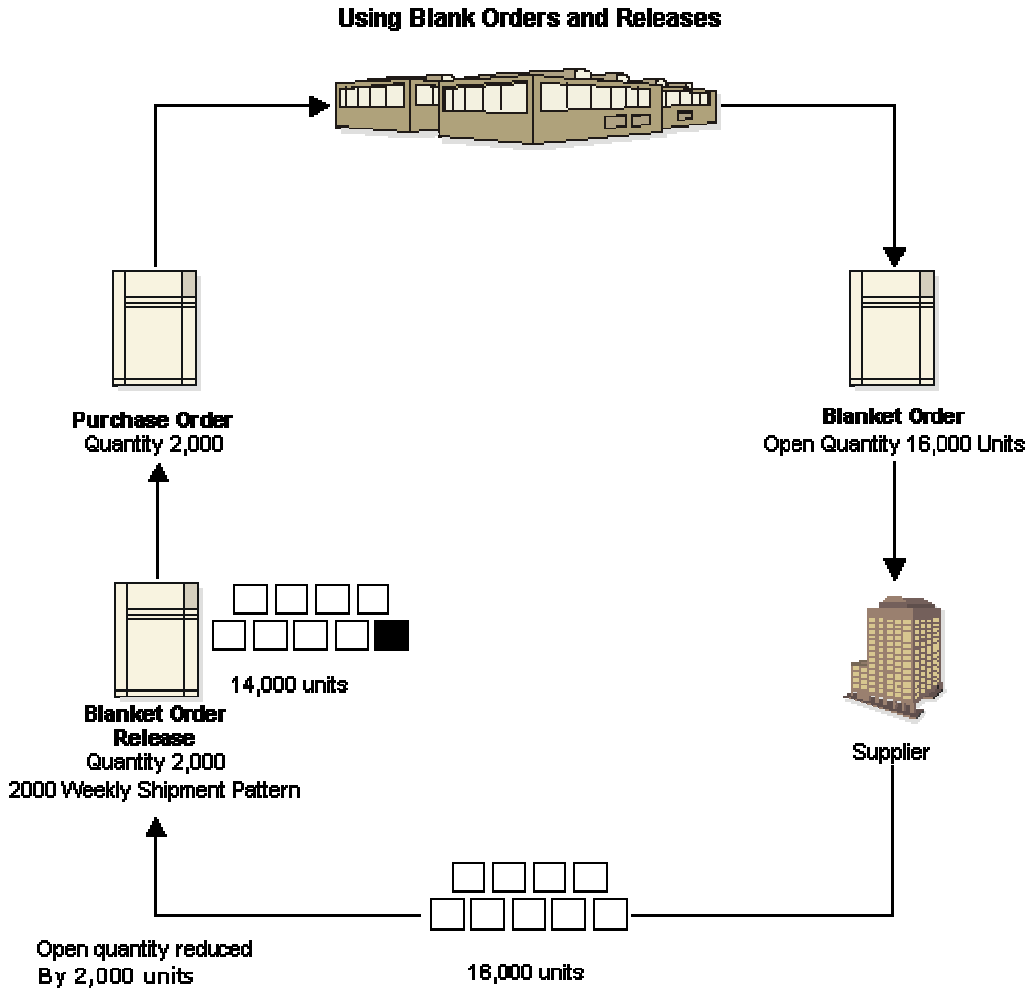
    Update system-scheduled quantities to compensate for last-minute changes to the schedule.

13. **Approve and Release Supplier Schedule**

    Release quantities from the blanket order and create purchase orders for all quantities within the releasable time fence.

14. **Print Supplier Schedule (Optional)**

    Print a report showing the shipment schedule and the releasable quantities.



See Also

- *Entering Blanket Orders* in the *Procurement Guide*
- *Generating Material Requirements Plans* in the *Requirements Planning Guide*

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.

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 the Vendor Schedule Master Revisions form. When you delete supplier information, the system deletes the entire record, including the history.

Before You Begin

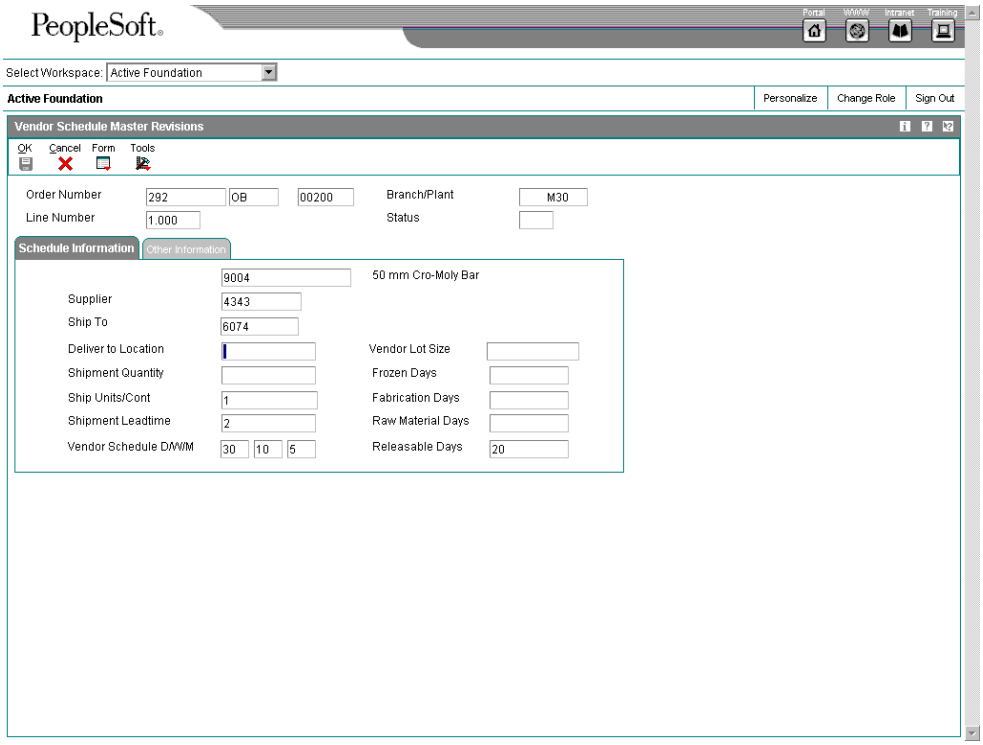
- ❑ Create a blanket order for every item that you want to schedule through supplier scheduling.

► To define supplier contract information

From the DRP Daily Operations menu (G3411), choose Enter/Change Supplier Info.

From the MRP Daily Operations menu (G3413), choose Enter/Change Supplier Info.

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 Type
   - Order Company
2. Click Select.



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
   - Shipment Leadtime
   - Vendor Lot Size
   - 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 he or she 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.

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.
2. Work Day Calendar Type
3. Work Day Calendar Key

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 work days
- Every Monday
- Monday through Friday of the first and third weeks of the month

The shipment pattern is based on the shop floor calendar, either the numerical or named calendar.

► To create shipment patterns

Use one of the following navigations:

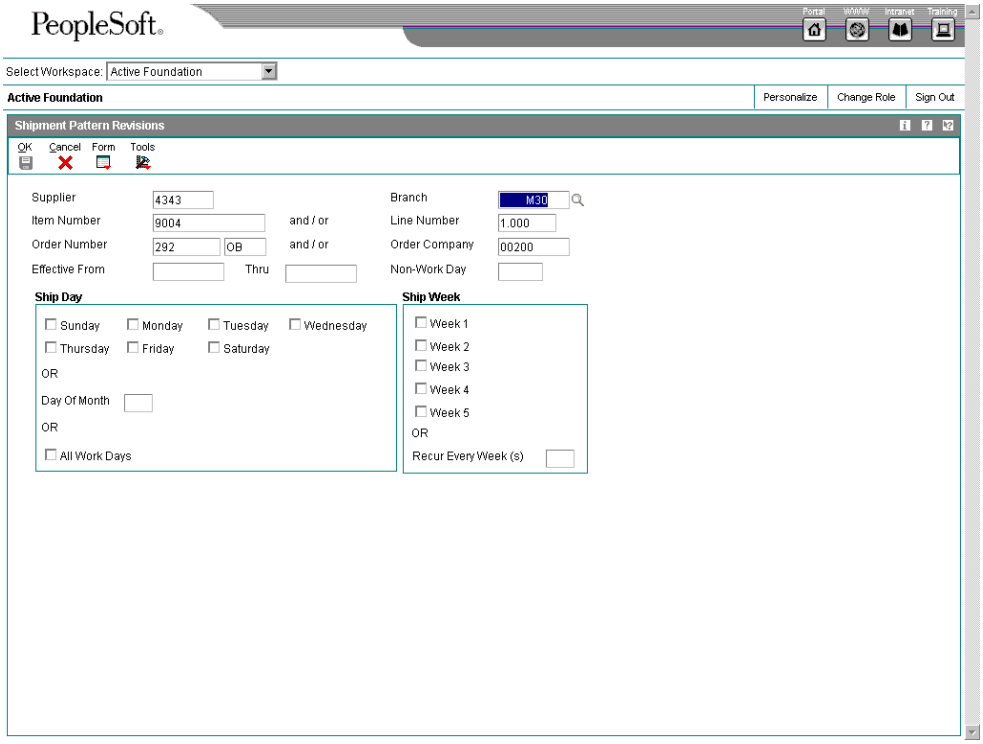
From the DRP Daily Operations menu (G3411), choose Enter/Change Supplier Info.

From the MRP Daily Operations menu (G3413), choose Enter/Change Supplier Info.

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
- Order Type

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 the Ship Day heading:
   - Sunday
   - Monday
   - Tuesday
   - Wednesday
   - Thursday
   - Friday
   - Saturday
6. Alternatively, choose one of the following options under the Ship Day heading:

- Day Of Month
- All Work Days

7. Choose one or more of the following optional fields under the Ship Week heading:
   - 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:
   - 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

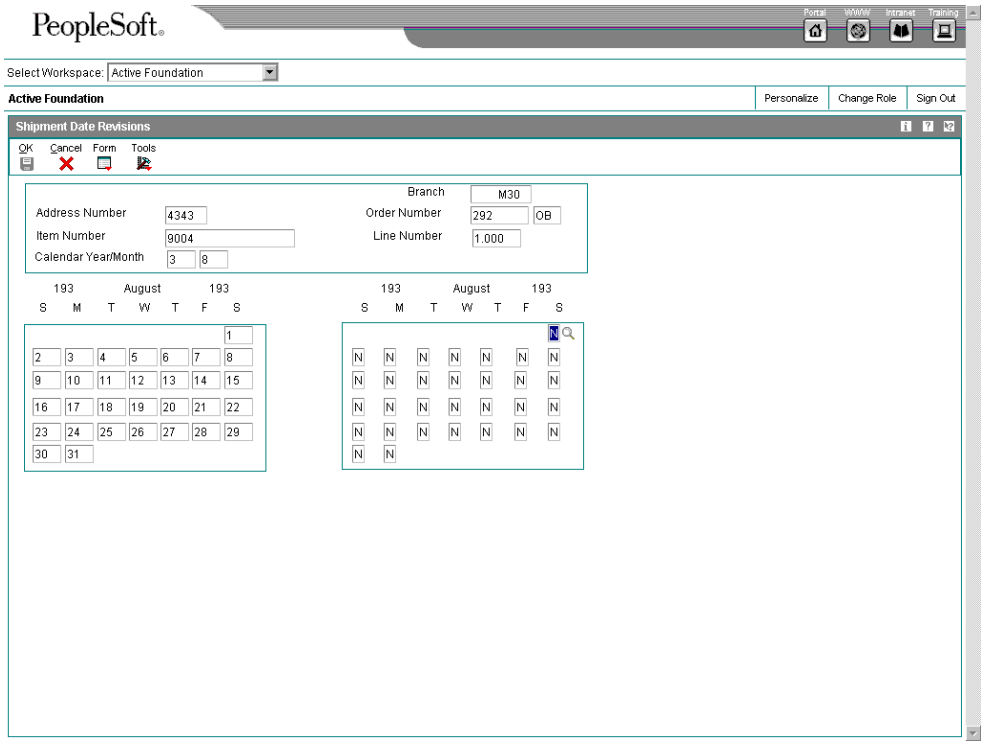
Use one of the following navigations:

From the DRP Daily Operations menu (G3411), choose Enter/Change Supplier Info.

From the MRP Daily Operations menu (G3413), choose Enter/Change Supplier Info.

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
   - Order Type

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.
6. Revise the pattern if necessary.

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 Revisions (P43211) to define the split percentages among the suppliers.

► To define supplier split percentages

Use one of the following navigations:

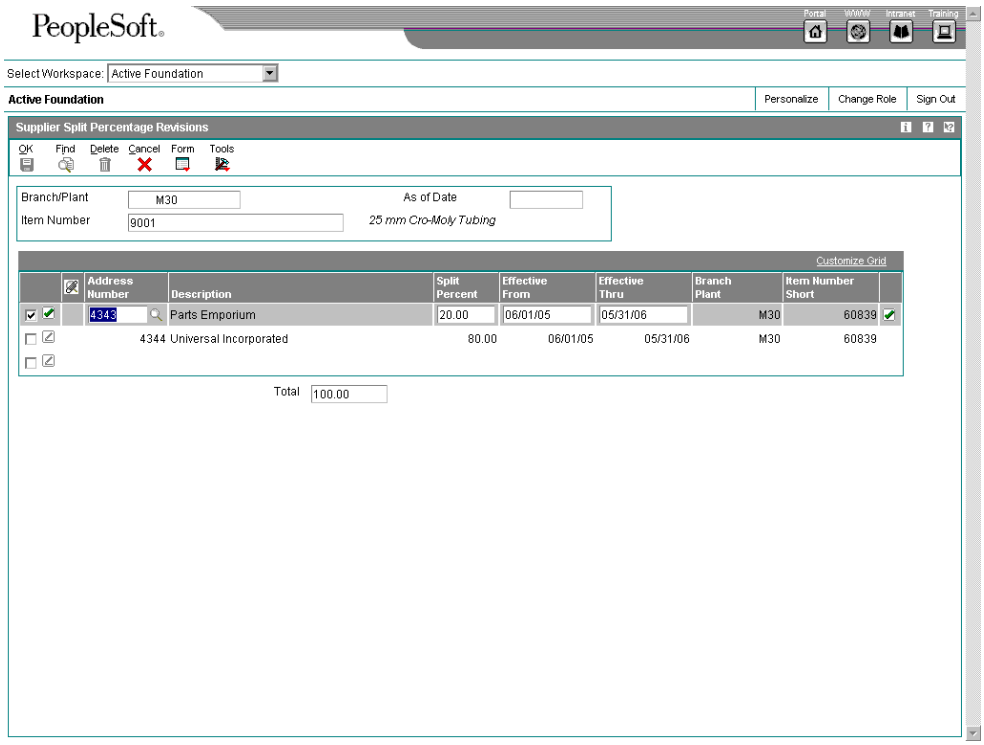
From the DRP Daily Operations menu (G3411), choose Supplier Split Percentages.

From the MRP Daily Operations menu (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:
   - Branch Plant
   - As of Date

Generating Supplier Schedules

From the Single Site Periodic Planning Operations menu (G3422), choose Generate Supplier Schedule.

Use the Supplier Schedule Generation program (R34400) to process O (order) type messages on the Material Requirements Plan (MRP). If you do not use the Supplier Schedule Generation program, you can process purchase orders manually. The system does not display the orders that 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 that is defined in the Supplier Schedule Master File table (F4321) 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 Supplier Schedule Revisions (P34301) 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 Schedule Master File table (F43211).

Before You Begin

- Verify that the following information has been set up:
  - The DRP or MPS system
  - An active blanket order for the item
  - Associated supplier information for the order
  - The blanket order, order type, line type, and status in the version of supply/demand inclusion rules that are used during supplier schedule generation
- Run the MPS/MRP/DRP generation so that the system can:
  - Create order messages for supplier scheduled items.
  - Produce a time-series material plan so you can analyze the impact of choosing to accept or reject planning suggestions.

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

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 (UDC 00/DT) that the system uses to locate an item blanket order when you run the Supplier Schedule Generation program (R34400). If you leave this processing option blank, the system uses document type 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 Supplier Schedule Revisions (P34301) to commit to a final schedule.

Supplier Schedule Revisions 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 do not affect the most recent Master Production Scheduling (MPS), Material Requirements Planning (MRP), or Distribution Requirements Planning (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
   - As of Date
   - Branch/Plant
2. Choose a record and click Select.
3. On Vendor Schedule Revisions, click the Order Info tab and complete the following field:
   - Status
4. Click the Receipt Info tab and complete the following fields:
   - Carrier Number
   - Deliver to
   - Supplier
   - Cum Receipt
   - Cum Fabricate
   - F.O.B.
   - Last Rls P.O.
   - Last Receipt
   - Receipt Qty
   - Cum Frozen
   - Cum Raw Mat.

5. Accept the record by clicking OK, or complete the following field to update planned quantities in the schedule and then click OK:

   - Planned QTY

     You can update the quantities in any of the quantity fields on the Planned row.

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 chnages 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 Supplier Schedule Revisions (P34301), you can release the current supplier schedule. After the schedule is processed, the system updates the planned quantities inside the time fence.

The Release Supplier Schedule program (R34410) 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

Before You Begin

- ❑ Generate a current supplier schedule.

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 that 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 Supplier Schedule Print (R34450) 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 Blanket Order Release (P43060).

Before You Begin

- Run the Supplier Schedule Release Generation (R34410) batch process.

Processing Options for Supplier Schedule Print (R34450)

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