

# Sage 500 ERP

## Material Requirements Planning

### Manage Material Requirement Planning (MRP) from a Single Planning Screen

It is impossible to understand material and distribution requirements across a large company without advanced planning tools. Sage 500 ERP (formerly Sage ERP MAS 500) uses historical data and advanced replenishment formulas to help you understand current and future material and distribution requirements and how they will affect your business.

Unlike legacy MRP systems, Sage 500 ERP provides single-screen planning. This feature provides up-to-date item statistics, including on-hand quantities, current purchase orders, work orders, transfer orders, and other elements that affect planning decisions. MRP calculations quickly generate suggested work orders for manufactured items, purchase orders for raw materials and subcontracted services, and transfer orders to move material between warehouse locations.

MRP also integrates with the Sage 500 ERP Project Accounting system. This integration provides a critical management system for companies with material-intensive projects. It is also a key integration point for both manufacturers that make-to-install and engineering firms that design parts that are later manufactured into prototypes and finished goods.

The planning activity provides insightful information to help you make purchasing and production scheduling decisions based on industry-standard practices and flexible, real-life circumstances. Planning personnel can maintain plans by version. This allows them the flexibility they need to manage material and distribution plans by product line, by manufacturing facility, and other user-defined criteria. In fact, the Sage 500 ERP interactive planning methodology is one of the easiest material management systems available today.

The added flexibility to override the vendor or buyer allows you to make the right procurement decisions for your company every time.

## BENEFITS

- Produce accurate material and distribution plans using advanced replenishment formulas and demand forecasting principles.
- Easily customize plans prior to MRP generation using flexible sorting and selection criteria.
- Multiple MRP versions enable management of separate MRP plans by product line, by manufacturing facility, by warehouse, or other user-defined criteria, with what-if simulation.
- Easy-to-use single planning screen creates suggested purchase orders, work orders, and transfer orders.
- Manage transfer orders from feeder warehouses to subsidiary warehouses and run Capable to Promise inquiries during Sales Order Entry.
- Integration with Project Accounting provides buyers and project managers with effective management of project materials
- Integration with Advanced Planning and Scheduling provides the capacity to synchronize manufacturing material needs to production resource availability, creating resource constrained material plans and lower material inventories.

Act	Firm	Exp	Bmp	PPL	Buyer	Vendor
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“Sage 500 ERP and MRP let us get our act together. We finally have inventory numbers we can depend on, far more on-time shipments, and better quality throughout the company.”

David Palmerston  
VP of Technology  
Helical Products Company

## Multiple MRP Versions

Maintain MRP by version for multiple warehouses and what-if simulations.

- Use MRP versions to generate specific material or distribution plans for each manufacturing warehouse or distribution center and another for centralized or global plan.
- Multiple versions provide what-if simulations of the material and distribution plan.

## MRP Sorting and Selection

Planners can easily customize their plans prior to MRP generation.

- Planners may sort material and distribution plans by item and warehouse in ascending or descending order.
- MRP may be filtered using a variety of selection criteria, including buyer codes, item IDs, item classes, item types, purchase product lines, and warehouses. Each of these selection criteria may be set for one or more classifications.
- A user-defined demand time fence can be set to freeze a period of time to prevent planned orders from interfering with current production and distribution schedules.

## Planned Inventory Transfers and Capable to Promise

Manage transfer orders from feeder warehouses to subsidiary warehouses and run CTP inquiries during Sales Order Entry.

- Manage planned and actual inventory transfers from centralized warehouses to subsidiary warehouses.
- Manage the supply chain by establishing relationships between manufacturing facilities, main warehouses, and subsidiary warehouses.
- The CTP function is available during Sales Order Entry for MRP customers. The CTP feature calculates either the quantity of times that will be available by a specific date or the date that a specified quantity of items will be available.

## MRP Calculations

Sage 500 ERP uses advanced replenishment formulas and demand forecasting principles to produce extremely accurate material and distribution plans.

- MRP determines total lead-time and production times for all finished goods, subassemblies, and raw materials.
- Demand calculations are based on demand by business day as opposed to demand by month, and handle seasonality and other industry-specific requirements.
- MRP considers safety stock, minimum/maximum quantities and transaction data from sales orders, work orders, purchase orders, projects, and inventory management.

- Demand smoothing helps you forecast projected demand over various inventory periods while using the data to drive MRP and production in a set of shop floor or production facility working periods. The six smoothing methods include Daily, Weekly, Monthly, Quarterly, Annually, and Planning.
- MRP assumes infinite production capacity (24 hours a day, seven days a week). With Advanced Planning & Scheduling installed, MRP considers actual work center schedules (not including current production load) by removing unavailable time for days off, scheduled downtime, and holidays.

## Critical Planning Information

The planning screen provides one-click access to item and period information.

- The planning screen displays summary and detailed item information, including on-hand balance, adjusted on-hand balance (including safety stock), warehouse location, and more.
- MRP exception messages may be sorted by severity and by message type.

## Single-Screen Planning

Generate actual orders and firm orders from a single point of entry.

- MRP creates suggested purchase orders, work orders, and transfer orders.
- The planner can firm planned orders or create actual orders from system-generated planned orders.
- Late orders are flagged for quick identification.
- Planned orders may be included in the production schedule.
- Purchase orders for the same vendor in the same time period and warehouse can be consolidated before converting planned orders to actual orders.
- Suggested Primary Vendors can be overridden to take advantage of one-time promotions prior to converting planned orders to actual orders.

## Multiple Access Points

Launch MRP from various points throughout the system.

- MRP may be accessed from the Work Order or Sales Order system to view material requirements specific to a selected work order or sales order.
- The Purchase Order system includes a link to MRP to view material and distribution requirements for items on the current purchase order.

## Project Materials Management

MRP integrates with Project Accounting to provide buyers and project managers with an integrated solution.

- Project managers can use manufactured items on project estimates.
- MRP picks up the material demand from the Project Accounting system so it can plan for finished goods, component items, and raw material requirements across multiple projects.
- MRP and Project Accounting help maintain adequate inventory levels so projects can be completed on time.