# Ross Enterprise

# Enterprise Resource Planning (ERP) System

The information found on the following pages is intended to highlight functional details associated with the Ross ERP System.

## Index

# Financials Module

Ross ERP is a central source of financial information that leverages data from across your enterprise and helps you manage your critical financial processes – from planning through decision-making. Incorporating proven industry practices, it provides the flexibility and functionality to manage even large, complex, or multinational enterprises in dynamic business environments. And it is tightly and seamlessly integrated with the other Ross ERP solutions to streamline and automate manual processes and deliver the information you need to make informed business decisions across your global supply chain.

## Flexible Financial Processes Match Your Business

Ross ERP provides you with the flexibility to organize your financial processes to conform to the way you do business.

> *For example, even relatively infrequent activities – such as purchasing a new production machine – follow a series of steps that are as clearly defined as the activities your business conducts hundreds of times a day. In the case of acquiring a new plant asset, Ross ERP leads your users through the complete business process. Information and activity flows follow the logical process from purchasing to receiving to payables, just as they would with any regular or manual materials transaction.*
>
> *Subsequently, plant asset transactions branch to the necessary asset management activities, such as logging the physical and organizational locations of the asset and establishing depreciation schedules. Once the machine is in place, its information remains integrated with your enterprise business processes. Maintenance activities update the asset record with information about inspections and capitalized additions. Cost management activities let you allocate the machine's depreciation to specific jobs or products. And you can calculate these allocations using statistics from production, such as machine use time or quantity produced.*

- Ross ERP delivers flexibility in key areas such as the chart of accounts, currencies, fiscal calendars, balance types, and accounting periods to facilitate local business requirements – while streamlining global consolidation and analysis capabilities.
- Rich functionality includes the ability to create vendor and customer diaries containing information to help you manage your business more efficiently. Diary entries can be set with future progression dates to remind users to follow up on various tasks.
- Ross ERP spans international markets and supports local languages, currencies, accounting and regulatory requirements. All multi-currency transactions provide you with the originating currency value, the base currency and the conversion rate, allowing you to manage multi-national transactions easily.

## Seamless Integration with Other Applications

The process of requisitioning a new part for a machine or purchasing supplies is easier when information follows a link, for example from purchasing to payables, without having to switch back and forth between applications.

Because of the tight integration among the Ross ERP solutions and applications, you can:

- Reduce or eliminate re-keying by automatically creating invoices from sales or purchase orders.
- Reduce or eliminate guesswork and re-keying by sharing data such as payment terms, bank codes, and customer and supplier information across all applications.
- Create detailed and accurate financial reports, such as profit and loss statements, that are organized by product or job/activity.
- Allocate overhead costs to a specific product based on statistics, and in the same way allocate expenses incurred in the payroll back to manufacturing.

## Competitive Advantages

Ross ERP provides numerous competitive advantages for your enterprise by allowing you to:

- Automate and streamline your accounting closing cycles.
- Lower your per-transaction-costs with more efficient operations across finance.
- Deliver key financial results to business managers electronically.
- Grow your global business operations in multiple currencies and languages.
- Improve interactions with suppliers and customers.
- Eliminate the need for spreadsheets for reporting, budgeting, and costing.
- Eliminate surprises with increased budgetary control over expenditures.
- Improve management analysis of your business operations with integrated costing capabilities.
- Gain insights and improve decision-making across your extended enterprise.

# Accounts Payable Module

Ross ERP streamlines your procure-to-pay process with seamless integration between Purchasing and Payables, while providing flexible setup, financial controls and access to information. The Accounts Payable module delivers comprehensive functionality for supplier maintenance, online inquiry, and cash management capabilities – reducing your costs, enabling your staff to concentrate on audit & control, improving your cash flow, and supplier relationships.

Ross ERP handles multi-currency invoices and payments to enable you to conduct your business anywhere in the world.

## Managing Supplier Information

Ross ERP delivers one common table for creating and maintaining suppliers for both Payables and Purchasing. Suppliers can be maintained, with appropriate security, with detailed audit trails and high-level controls for status and stop payment capabilities as needed.

Ross ERP enables you to set up unlimited buy-from and invoice-from locations for each supplier – with country-specific address formats.

- Ross ERP automatically creates a payee for each supplier. It also provides the flexibility to create many-to-one relationships as required by your business.
- A miscellaneous supplier option is available for managing one-time payments to suppliers or vendors you may use on an infrequent basis.
- For U.S. companies, Ross ERP can optionally accumulate 1099 information into a separate table and provide direct inquiry and update capabilities as needed.
- Supplier information can be set to "default" to the transaction level in order to eliminate keystrokes and guesswork. This default supplier data, which includes items such as payment terms and address information, can be overridden at the transaction level.

## Supplier Diaries and Inquiry

Ross ERP provides extensive online inquiry capabilities for quick access to all transactions with drill-down access to sales and purchase orders, payments and receipts, and any supplier or customer diary entries.

- Online inquiries are provided with a range of helpful search criteria, such as transaction number, date ranges, and wildcards for simple and easy access to information.
- Any information from Ross ERP can be quickly downloaded to Excel by clicking one button. All of the formatting information for dates, currency, decimal place, etc is maintained
- With access to multiple screens or windows across the entire system, your users can stay more productive.

## Track and Record Supplier Communications

- Diary entries are free-form notes that can be associated with any supplier (or customer) and can also be associated to any transaction in the system.
- Diary entries help you eliminate time-consuming searches and support cash management and vendor performance analysis.
- You can include a progression date and a reminder list/inquiry for each day so that you can take the appropriate action.
- You can inquire on diary entries for a specific supplier and review diary entries for a range of supplier accounts or a range of progression dates.

## Two- and Three-Way Matching

Ross ERP eliminates the manual data entry normally required in the Payables process – by creating invoices directly from the appropriate purchase order or receipt notice. Data can then be overridden within the tolerances set by your accounting and purchasing business rules.

- Vouchering directly from Purchase Order (PO) or Goods Receipt Notice (GRN) saves time and improves data accuracy by eliminating the need to re-key data.
- Transactions can be registered and set for approval processing prior to completion.
- Price and quantity tolerances can be set for both receiving and invoicing and purchase price variances can be booked automatically to the GL.
- Two-way Matching: You can optionally match invoices to purchase orders and bypass the receiving step. This is especially useful for purchasing services and related items.
- Any miscellaneous invoices for items such as rent or utilities can be entered and paid directly from Accounts Payable – without requiring a Purchase Order.

## Invoices

You can enter Invoices, Credit, and Debit Memo transactions directly - with a ledger distribution for each transaction.

- Ross ERP automatically writes a transaction record to the vendor's record and updates various supplier and period control balances when you enter a single-item transaction.
- Ross ERP produces automatic ledger postings and uses format codes to automatically distribute a balance across several ledger accounts.
- You can transfer transactions from one supplier to another, and update the relevant controls.
- For quick payment needs, you can enter an invoice that creates an immediate payment document and bypasses the normal payment selection and run process.
- Ross ERP checks for duplicate invoice numbers.

## Credit Transactions

Credit transactions are credit notes and credit adjustments. With the Accounts Payable module within Ross ERP you can:

- Offset these or allocate them against debit transactions (invoices, debit adjustments, returned checks) for the same supplier.
- Partially or fully allocate a credit transaction and repeat the allocation process as many times as necessary.
- Combine credit transactions with cash payments for the purposes of allocation.

## Recurring Charges

Recurring charges are transactions that occur with some frequency, such as regular monthly rent. The Accounts Payable module within Ross ERP handles these charges automatically so that you don't have to waste time entering the same information again and again.

- You can use them for an individual period or a range of periods throughout the financial year.
- Online inquiry provides a single listing of all recurring charges for easy maintenance and update.

## Batch Transactions

Supplier invoices (and other transactions) can entered online in batches, or accepted from external sources, with full validation rules enforced. Batches can be entered, balanced against control totals, and set for update only after review, edit, and approval by departmental supervisors.

## Payment Documents

Your payment documents (printed checks, bank drafts, or Electronic Funds Transfers) are automatically created once you select a payables transaction for payment. Ross ERP automatically updates all of the master and balance records and creates allocations records and ledger postings.

- It enables you to associate more than one payee with a single supplier. All payments are selected on the basis of a payee and are made to the payee, and the payee code may also group several suppliers together for payment.

## Automatic Payments

The Accounts Payable module in Ross ERP enables you to select transactions for automatic payment according to a number of user-defined criteria, such as payee, transaction number, date ranges, period, total payment amount or payment type.

- You can review and edit a payment run and you can choose to delete or partially pay selected items.
- You can create checks and remittances in either continuous or separate formats.
- It automatically prints checks according to your payment runs or you can opt to output to laser check format with additional setup.
- You can choose to sort checks in a different order than the order in which they were selected.
- You can print checks for each transaction or you can accumulate all payments for one payee into one check. Or when a transaction requires an immediate payment upon entry, you can produce an instant check.
- You can pay suppliers automatically using Electronic Funds Transfer (EFT) format with submissions on magnetic tape, disk or via email.

## Cash Payments

- The Accounts Payable module in Ross ERP enables you to make manual cash payments (checks that were not created and printed by Ross ERP or foreign currency drafts) and record and allocate them using manual payment options.
- It accommodates returned or canceled checks. With a returned check it creates two ledger postings that reverse the original cash payment and reinstates the original invoice. And you can manually enter (for audit purposes) any payments that you have voided.

## Drafts

If you do business in Europe, you can pay suppliers or receive payments from a customer in the same country using the draft system.

## Processing Taxes

Ross ERP provides one common tax table for sharing tax rates across Sales Orders, Receivables, Payables and Purchasing. Composite tax rates can be defined with up to six components and the system can calculate tax-on-tax as may be required by your business. Ross ERP helps you to calculate and record sales, use, and VAT taxes with complete reporting for compliance with local regulations.

# Accounts Receivable Module

Ross ERP streamlines your order-to-cash process with seamless integration between Sales Order Processing and Accounts Receivable while providing flexible setup, financial controls and access to information. The Accounts Receivable module within this application delivers comprehensive functionality to streamline routine tasks such as billing, credit management, payment application, and tax calculation – reducing costs and enabling your finance professionals to concentrate on analyzing credit risk and customer performance.

## Maintaining Customer Information

Ross ERP delivers one common table for maintaining customers for both Sales Order Processing and Receivables. Customers can be maintained, with appropriate security, with detailed audit trails and high-level controls for status and credit hold capabilities as needed. Ross ERP provides comprehensive functionality and flexibility to meet your unique business requirements.

- You can link multiple customers to a common "parent" customer and check credit, send statements, and apply payments at the summary level.
- You can group various customers together for billing frequency, pricing and discounts, and credit management purposes,
- For each customer, you can enter an unlimited number of addresses in country-specific formats.
- Maintain detailed information at the customer-address level such as language preferences, tax rates, shipment methods, and delivery instructions.

## Billing Customers

With seamless integration you can automatically check credit status during the sales order process, and generate customer invoices upon confirmation of shipment. The handling of cash receipts, and the application of these receipts to outstanding invoices is seamlessly and automatically managed.

- Your finance department can choose to review or approve invoices before they are released, as well as make any necessary adjustments.
- You can create an invoice for each shipment, or you can create a combined invoice for multiple shipments to a single customer bill-to.
- You can also enter invoices (and credit and debit memos) directly into the system and bypass the sales order and shipment process.
- You can transfer transactions from one customer to another, and update the relevant controls.

## Batch Transactions

Customer invoices (and other transactions) can be entered online in batches, or accepted from external sources, with full validation rules enforced. Batches can be entered and balanced against control totals and set for update only after review, edit, and approval by departmental supervisors.

## Credit Transactions

You can offset or allocate credit transactions (credit notes and credit adjustments) against debit transactions (invoices, debit adjustments and returned checks) for the same customer. And you can:

- Partially or fully allocate a credit transaction and repeat the allocation process as many times as necessary.
- Combine credit transactions with cash payments for the purpose of allocation.
- Apply cash based on the age of an invoice or against a specific invoice to accommodate individual customer paying habits.

## Tax Calculations

Ross ERP provides one common tax table for sharing tax rates across Sales Orders, Receivables, Payables and Purchasing. Composite tax rates can be defined with up to six components and the system can calculate tax-on-tax as may be required by your business. Ross ERP helps you to calculate and record sales, use, and VAT taxes with complete reporting for compliance with local regulations.

## Credit Management

With full integration between the Accounts Receivable and Sales Order Processing modules in Ross ERP, you have the flexibility to provide the highest level of customer service while reducing your risks. The extensive credit management functions enable you to:

- Check credit at multiple steps in the sales cycle, including at time of order entry, pick list and shipment confirmation.
- Validate customer credit levels and continuously monitor:
  - Credit usage with new orders.
  - Payment history and delinquency.
  - Nearness to credit limit.
  - Over credit limit.
- For each customer, you have the option of setting a credit-limit warning, a credit-hold warning or both. And if both are set, you are automatically warned when your customer reaches the credit limit, and again when the credit hold limit occurs.
- You can setup categories for new customers that you may want to watch closely.

## Collections

The Accounts Receivable module in Ross ERP enables you to track, monitor, and collect your receivables and reduce delinquent accounts with powerful online collection tools. You can:

- Review statements and dunning letters sent to your customers, as well as aging reports and customer performance inquiry.
- Increase the efficiency of your collectors by letting each collector focus on a specific group of customers.
- View all the day's actions with customer diary / work lists. Easily find and add customer contacts and record customer calls.
- Place a customer on "hold", keep track of customer commitments and contacts, and use the online customer diary capability to track calls and follow up actions.
- Drill down from a customer account to individual transactions.

## Online Inquiry

The Accounts Receivable module in Ross ERP provides extensive online inquiry capabilities for quick access to all transactions and drill-down access to sales and purchase orders, payments and receipts, and any customer or supplier diary entries.

- Online inquiries are provided with a range of helpful search criteria, such as transaction numbers, date ranges, and wildcards for simple and easy access to information.
- Any information from Ross ERP can be quickly downloaded to Excel by clicking one button. All of the formatting information for dates, currency, decimal place, etc is maintained
- With access to multiple screens or windows across the entire system, users stay more productive.

## Track & Record Customer Communications

You can maintain a complete history or diary of every action and /or correspondence relating to a customer account, such as telephone calls, faxes, meetings or visits, which help support your collection and service efforts.

- Diary entries can include a progression date so that you can generate daily reminder or work lists.
- You can associate a diary entry with a receivables transaction or debt letter and display your comments with inquiries on either of these transactions.

You can inquire on diary entries for a specific customer or review diary entries for a range of customers or a range of progression dates.

## Finance Charges

The Accounts Receivable module provides you with the option to apply finance charges to outstanding customer balances, as well as flexibility in calculating the applicable finance charge. It enables you to:

- Apply a periodic rate to the average daily balance of purchases.
- Add a periodic rate to all past due amounts, where your credit terms designate the past due amounts.

It automatically includes unapplied cash or credit transactions in the finance charge calculations to decrease the amount overdue. In addition you can:

- Control finance charge calculations at the customer level and prevent duplicate calculations for the same billing cycle.
- Write off finance charges for selected customers or all customers within a selected range.
- Track finance charges through Receivables and General Ledger.

## Customer Analysis

Ross ERP provides you with sophisticated customer reporting and analysis tools.

- You can group customers, even for complex customer organizations with multiple ship-to/bill-to combinations, so that you can run reports, do analysis or even send communications to them.
- You can create and maintain customer records, including details on customer alternate addresses, discount and price codes, and credit limits and terms.
- It provides you with a variety of standard reports, including aging reports and statements, audit reports, credit reports, transaction reports and control reports.

## Applying Cash Receipts

The Accounts Receivable module in Ross ERP enables you to receive and apply cash to your customer accounts and transactions – either in one single step or in multiple steps as required by your business.

- With one-step cash application, you can enter and apply receipts against customer transactions immediately.
- With a multi-step process you can enter cash receipts (or receive these electronically from your bank) and modify and approve these prior to updating customer accounts and applying to your customer transactions.
- If you use multiple currencies, you can enter cash receipts in any currency and allocate them to any transaction regardless of the original country.
- The system enables you to have partial or full allocation to single or multiple transactions. Any cash not allocated or not fully allocated is held as an outstanding credit transaction on the customer account.
- Cash receipts can be applied to customer invoices according to oldest outstanding or period balances or selected from a list of outstanding transactions.
- Cash receipts can also be applied against consolidated invoices or customer statements as required.
- You can set up an unlimited number of user-defined reason codes and write-off types and post these to separate GL accounts as needed.

## Bank Reconciliation

Ross ERP enables you to reconcile the details from a bank statement to individual cash transactions in the Accounts Payable and Accounts Receivable sub-ledgers and the appropriate cash account balance in the General Ledger.

You can enter bank statement details, such as what transactions have been processed and any bank and transaction charges, manually or automatically via an ASCII file from the bank.

# Fixed Assets Module

Ross ERP enables you to efficiently track and maintain detailed administrative data about your organization's assets, from acquisition to disposal. It allows you to distribute depreciation and expense information to the General Ledger on a monthly basis.

- The Fixed Assets module in Ross ERP enables you to build a fixed assets record by importing accounts payable or purchasing information about your capital assets – thus eliminating the need to re-key information.
- It provides you with user-defined depreciation methods to accommodate your accounting preferences.
- It utilizes these depreciation methods to develop powerful projections and build "what-if" scenarios that give you the ability to make quick decisions.
- It enables you to calculate, amend and update the depreciation of an asset or to manually override the calculated depreciation value.
- You can calculate depreciation on a monthly, quarterly, biannual or annual basis.
- You can add zero cost assets for inventory tracking purposes, as well as negative cost assets to calculate negative depreciation for contra-asset purposes.

## Tax Compliance

- The Fixed Assets module in Ross ERP supports tax compliance with the Internal Revenue Service (IRS) guidelines for federal tax depreciation, Alternative Minimum Tax (AMT), computations and Adjusted Current Earnings (ACE).
- It allows you to create an unlimited number of depreciation books to facilitate your compliance with your state and local depreciation regulations.
- It will automatically calculate all necessary ordinary and capital gains and losses.
- If you operate outside of the United States, you can calculate depreciation to meet local regulations, such as capital cost allowance (CCA) for Revenue Canada.
- It enables you to meet country-specific regulations such as investment tax credit (ITC) calculations and recapture provisions.

## Asset Tracking

- The Fixed Assets module in Ross ERP has a powerful reporting capability that provides you with the information you need to make informed decisions about purchasing, depreciation, insurance and replacement.
- It provides you with a complete audit trail for each asset throughout it's life.
- Codes associated with each asset provide you with detail regarding the physical and organizational locations of the asset, the department responsible for the asset, and the asset type, group and category.
- You can also track the dates of physical inspections.
- You can include valuation details with each asset, including original cost, disposal cost, capitalized additions, replacement cost and insurance value.
- It enables you to identify an aggregate asset with multiple sub-identification components.
- It maintains expected asset life details that are used in the calculation of depreciation in terms of years, periods and working days, and enables you to move assets and update asset information as necessary.
- Mass maintenance capabilities are provided to streamline your asset management activities and accommodate large-scale changes and reorganizations.
- It provides you with the flexibility to physically track the inventory locations of you assets and specific user responsibility.

With tight integration across Ross ERP, the Fixed Assets module automatically triggers the appropriate GL entries when an asset is transferred or moved.

# General Ledger Module

The Ross ERP General Ledger provides a central, integrated data repository for all financial and statistical transactions, with flexible configuration and feature-rich functionality to plan, manage and analyze your organization's financial performance and operating results.

## Defining a Chart of Accounts

Ross ERP provides the flexibility to define your chart of accounts the way you need to, and enables you to track profitability at any level of detail across your organization. With up to 50 characters and 15 segments you can capture and allocate your financial results by line of business, product, market, or virtually any level of detail your business requires.

- The Chart of Account maintenance is streamlined with copy and replace capabilities. Optionally you can use account templates to enforce your validation rules and automatically create new accounts as needed.
- Your Accounting responsibility can be assigned at the detail account level with account reconciliation capabilities provided.
- Analysis Codes can be used to capture and track information at the transaction level – such as employee expenses or special projects.
- User-defined Balance Types enable you to track an unlimited number of balances for each GL account – including actuals, budgets, history, statistics, and life-to-date data to support your unique financial reporting requirements.

## Ledger Codes

Ledger short codes enable you to "demystify" the chart of accounts for business users and expedite data entry.

For instance, a short code can be defined for each department in your organization. Ross ERP automatically fills in all the required fields – except for the natural account code. With online look-up tables for all fields, your financial systems can quickly become a key business system – even for non-accounting users.

- Special format codes can automatically split journals or invoice lines by pre-defined percentages across several different cost centers or business units.

## Processing Journals

Because the Ross ERP modules are seamlessly integrated, it eliminates most of the "manual" journals you may be entering online today. Additionally, the General Ledger provides comprehensive functionality to expedite closing cycles and streamline your journal entry processes.

- You can update both financial and statistical balances from a single journal entry.
- Journals can be entered directly into the ledger in real-time, either manually or with predefined journal templates that allow you to handle recurring entries. Templates can also be designed to upload data from Excel.
- Journal templates can be designed to handle complex requirements.
- All recurring journal entries, and their current status, can be viewed in a single online listing screen for managing the period-end process.
- Journals automatically update all postings when you confirm the journal details.
- Journals can be entered directly online, or accepted from external sources, with full validation rules enforced. Journals can also be set for posting in batch mode with review, edit, and approval processing by departmental supervisors.
- Any journal can be set to automatically reverse in a subsequent period. In addition you can choose any journal that may have been posted in error and reverse the journal – without losing the audit trail.

- To facilitate inter-company transactions, all inter-company and (optionally) all inter-divisional and inter-fund transactions can post automatic offsetting entries to the appropriate Due To / Due From accounts according to your business requirements.

## Flexible Processing of Period Activities

Ross ERP provides you with a great deal of flexibility related to processing period-end activities.

- It does not require you to perform a “hard” monthly close prior to reporting your financial results.
- Subsidiary modules such as Accounts Payable and Receivables can be processing transactions in the current period – while the General Ledger is still processing the previous period.
- Because all of the financial activities are linked, Ross ERP further simplifies your fiscal closing process by automatically posting to retained earnings.

## Subsidiary Updates

Once approved or confirmed, any and all business transactions from other Ross ERP modules will immediately create the appropriate journal entries for updating the General Ledger.

- These journals are available for immediate posting as often as you need to run your business – up to the minute, hour, day or week.
- Updates to the GL can be selected by module and can be controlled by your accounting staff – without needing to rely on programmers.
- Postings to the General Ledger can be summarized without losing the ability to drill-down to the supporting details held in your subsidiary modules. This allows you to keep your GL more organized and less cluttered, and provides visibility into the detail transactions behind your account balances

## Period-end Updates

Ross ERP enables you to process period-end updates at the end of an accounting period (period-end or yearend), or when all of the required reporting and balance verification is complete. It also provides online facilities to manage and verify the entire process.

- In addition to automatically accruing unvouchered receipts and similar transactions, Ross ERP goes a step further and provides detailed audit reports on any “work-in-progress” transactions that should be completed prior to close.
- Ross ERP provides an online inquiry with a complete list of all subsidiary modules, their status and current period information.
- Ross ERP allows you to make postings to prior periods and years – with appropriate security – at a time that is most appropriate for your company.
- Should auditors require changes to prior-year balances, the system enables you (with appropriate authorization and security clearance) to make those changes, and will automatically update the balances through to the current year.

## Currency Gains & Losses

If you are running in a multi-currency environment, Ross ERP will automatically compute any realized or unrealized currency gains & losses on all the transactions for selected accounts.

- Realized gains & losses, resulting from changes in currency rates between transaction and settlement, are booked automatically without requiring any intervention from the user.
- Unrealized gains & losses can also be captured and reported. Ross ERP compares any rate changes between transaction date and any selected comparison date and provides the option to post a reversing journal entry or to simply generate a reference report.
- Ross ERP provides extensive user-defined controls for separating gain / loss accounts and handling exchange rate rounding issues.

## Managing Allocations

Ross ERP enables you to easily maintain allocation rules to distribute costs to lower levels, and to manage these rules over changing business requirements. Allocations distribute costs or revenues down to lower levels in order to track profitability by product, market, activity, or virtually any level of detail.

With Ross ERP you can:

- Use statistics and variable percentages to allocate fixed costs, such as payroll expenses, to products based on labor or machine hours or square footage, etc.
- Conduct multiple iterations to step-down allocated costs from higher to lower levels in the organization.
- Review allocation results and modify these prior to posting to the General Ledger. This enables you to run a virtually unlimited number of “what-if” modeling scenarios.
- Produce detailed and accurate profit and loss statements for a specific product or job or line of business.

## Multi-currency

Ross ERP supports buying, selling, and conducting business in a multi-currency environment and enables you to separate true business results from any gains & losses resulting from changes in exchange rates. It enables you to:

- Set currency controls at multiple levels of your organization for flexible processing across different companies and divisions.
- Easily manage currency rates with one central table of exchange rates and user-defined rate types (Spot, Forward, Average, etc) and valid From/To date ranges.
- Specify “default” exchange rates, with overrides and tolerances, in order to minimize both keystrokes and guesswork.
- Track all transactions in the transaction currency, the base currency, or both.
- Enter transactions for a single customer or supplier in any currency defined in your system, including the Euro.
- Use multi-currency and have all transactions (requisitions, orders, invoices, credit notes, cash receipts, payments, etc.) hold both the originating currency value and a conversion to the base currency, with the relevant currency rate.
- Use restatement / revaluation capabilities are provided for reporting your financial results in any additional currencies as required by local regulators or parent company structures.

## Account Reconciliation

GL account reconciliation enables you to reconcile specific GL accounts to subsystems. This improves your internal levels of control by ensuring that account balances are accurate. Date and time stamps and User ID’s are provided for each transaction to provide a complete audit trail

## Commitment Accounting

Ross ERP provides commitment accounting capabilities, enabling you to monitor budgeted accounts (spanning GL, Purchasing, and Accounts Payable) and to completely prohibit processing if deemed necessary.

- You can use this budget monitoring capability to issue warnings to your staff when a specified account has reached its budgeted maximum. This allows you to monitor a project in progress and alert the user to potential shortfalls.
- You can check against the entire budget, or annual, quarterly or monthly budgets for specified projects or accounts.
- Available funds checking can take place at different levels – including detail line items or departmental summary or both.

## Online Inquiry

Ross ERP provides extensive online inquiry capabilities for quick access to information. And with access to multiple screens or windows across the entire Ross ERP solution, your users can stay more productive, and can easily switch back and forth between different windows as needed.

- Any information from Ross ERP can be quickly downloaded to Excel by clicking one button. All of the formatting information for dates, currency, decimal place, etc is maintained.
- Online inquiries are provided with a range of helpful search criteria, such as transaction numbers, date ranges, and wildcards for simple and easy access to information.

# Inventory Control Module

The Inventory Control module is the heart of Manufacturing & Distribution. Within Inventory Control, products and locations are defined, and Inventory balances maintained. All inventory related transactions from all applications are tracked including: lot details, lot traceability, and movement history. Additionally, inventory valuation and physical inventory/cycle counting are included.

Centralized Lot Record Management: Ross ERP maintains the lot record from inventory receipt, quality testing results, actual in process variables, warehousing, and final distribution.

Ross Systems understands that operational material control that meets all the quality, lot, characteristic, date control is a must have for the Life Sciences industry. These controls include:

- Quality Control enforcing GMP compliant workflow, electronic signatures, and workflow
- Inventory in multiple independent units of measure based upon fixed weight, active units, or potency.
- Bi-directional lot tracking
- Track and control attribute/characteristic variances for each lot
- Track and control material expiration, re-test, and manufacture, and ship by/sell by dates

## Enterprise and Location Product Management

Ross ERP provides you with the highest level of flexibility and control in ensuring consistency and eliminating redundancy; enabling you to manage products across multiple locations or at a specific site. With the Inventory Control module you can define unlimited Locations/Warehouses and then for each Warehouse you can define Bin Locations for inventory tracking by location.

IC is used for production materials (raw materials, intermediate products and finished goods) and non-production MRO Items. This means that you have one common inventory control application for production materials and maintenance parts.

You can maintain traceability across all locations; track production of a product in some of the locations, and the warehousing of it in others; and measure a key product characteristic easily and consistently across the enterprise.

With Ross ERP you can define and track enterprise and location specific attributes and controls. This allows you to maintain consistency across all locations in the enterprise, while allowing each location to define location specific information required for efficient operation.

## Enterprise Controls

Enterprise Controls includes things such as part numbers and descriptions, units of measure and lot controls. The location-specific controls include such features as price and cost, make or buy, min/max and reorder point values.

## Dual Inventory Units of Measure

Ross ERP provides you with state-of-the-art best practices for tracking dual inventory and unlimited packaging units of measure. This allows you to accurately track and manage your inventory without having to add separate or manual systems to meet your requirements.

## Potency Units of Measure (UOM)

Potency UOM tracking enables you to simultaneously quantify an item by two units of measure with a predefined formula. The formula can either be a simple linear conversion, or a user defined formula that has the capability to include actual lot characteristics.

Or you can quantify the strength of a chemical solution, or active bacteria in a culture. There are several different uses of potency UOM, including the following:

- Track physical and potent units of an active ingredient or potent product.
- Track both weight and volume based upon standard or actual lot specific gravity.
- Track English and Metric weight or volume based upon global conversion factors.

## Packaging Units of Measure

Unlimited packaging UOM tracking lets you manage and gain visibility of an item's inventory in total and in multiple containers and package configurations. This feature is in addition to Dual Units of Measure capability. This works with potency as well as single UOM inventory items.

## Additional Inventory Unit of Measure Controls

- You can define the length and precision of quantity fields, with support for up to 14 digits total, including up to six decimal places.
- Weight and volume conversion calculation for automatic weight and volume conversions relative to a base inventory unit of measure for purchasing and sales transactions.
- Formula-based conversions enable you to define and use units of measure based upon formulas. These formulas can include constants, database table and field references, lot characteristics and default product characteristics.
- Costing UOM enables you to cost inventory by either inventory unit of measure for items tracked on dual UOMs.
- Pricing units for both sales and purchase enable you to price materials by a unit of measure that can be different from the selling or purchasing unit of measure.
- You can quickly and easily view inventory quantities by all units of measure (dual inventory and packaging). Every Inventory Quantity display always includes both Units of Measure and Quantities when an item has been setup for Dual Inventory Units of Measure.

## Lot Characteristics

Ross ERP makes it easy for you to manage your inventory on the basis of variable attributes, or characteristics. It is common that characteristics may vary for each lot of the same item, and with Ross ERP you can accurately track and manage inventory by characteristic. Whether it's purchased raw materials, produced intermediate products or finished goods, it's likely that characteristics may vary by lot.

Not only can you track inventory by characteristic, but you can also source inventory for production or shipment to customers based on actual characteristic values. Traditional inventory systems would require the creation of a new part number for each unique set of characteristic values, resulting in an infinite number of part numbers, many of which would only be used once. Ross ERP allows you to manage your products and track the actual lot characteristics as needed to efficiently manage your business.

These product characteristics are attributes that are measurable and can vary per each lot or batch, such as pH, moisture content, potency level, or on text values like color or grade.

- For each product, you can define an unlimited number of characteristics.
- For every lot received in inventory, you can track the actual values of each characteristic.
- Record customer demand based upon customer specifications (requirements of characteristic values with predefined minimum and maximum acceptable values.)
- Predefine acceptable characteristic values by customer and automatically select and ship lots accordingly, thereby improving your level of customer service.
- Use predefined characteristics to improve control of your manufacturing processes, such as potency calculations.

## Shelf Life and Expiration Dates

Ross ERP automates the tracking of shelf life and expiration dates. It automatically assigns a lot creation date for each manufactured lot in your inventory, and calculates the expiration date based on the shelf life you defined. And in the case of a purchased receipt, you can enter the shelf life information provided by the supplier, or you can let Ross ERP calculate the expiration date for you based upon a predefined shelf life.

- Distribution Days – the minimum number of days of shelf life that must be remaining when an order is shipped. This can be customer-specific or by product.
- You are automatically notified in advance of a product approaching the end of its shelf life based upon the number of days of advance notice you specify, thereby minimizing or eliminating expired lots.
- You are automatically notified of review/retest dates. This allows you to validate that characteristics are the same and that the remaining shelf life is still accurate.

Ross ERP helps you with material planning by automatically notifying you if you have a material that will expire based on your current production plans. This includes both on-hand and on-order inventory.

## Bi-Directional Lot Traceability (Forward & Backward)

Lot traceability and genealogy documents all of the stages that a lot of product goes through during its' life cycle – from receipt of raw material through manufacturing, transfer to another location and shipment to a customer.

With Ross ERP you can trace lots forward, starting with the raw ingredient, or backward, from the customer product shipment. And, in addition to starting a lot trace from either end of your supply chain, you can initiate a lot trace from any point within your supply chain. This powerful forward and backward traceability capability enables you to start at any point in your process, and meet virtually any product genealogy requirements you have. All of this can be done on-line instantly, without having to manually check records or run reports.

- It enables you to trace in either direction, and you can trace across all locations – you can even receive in one place, manufacture in another, and package in a third location.
- It includes purchase, receiving, inspection, storage, mixing and other types of processing, testing, packaging and shipping from one warehouse to another.
- It incorporates the actual QC test results for both product and process compared to the standard.
- It captures the actual raw material usage compared to the standard for the particular batch size you are producing.

You have powerful traceability always available on-line, anytime. No additional processing or updates are required for these powerful lot trace features. This all happens automatically from recording the inventory transactions in the various manufacturing and distribution applications.

## Movement History Audit Trail

As you perform transactions, Ross ERP automatically creates a movement history record so that you can thoroughly audit every product-related transaction. This movement history, or auditability, enables you to inquire against any product transaction recorded by Ross ERP – whether it is an inventory receipt, the placing of a purchase order, the receiving of a sales order from your customer, or any other transaction regarding your product.

- Every product related transaction automatically creates a movement history audit trail including:
  - User ID
  - System date and time of the transaction
  - Program ID used
- All movement history is available through on-line inquires and reports.
- Filters for lots, transaction dates, and transaction types can be used to narrow searches to specific subsets of information.

## Inventory Balances and Basic Inventory Control

With Ross ERP you have the ability to maintain inventory control of materials and products across multiple warehouse locations, and you can view inventory balances by location or across all locations.

- You can quickly determine the quantity and location of any material or product.
- Both on-hand and available quantities are automatically maintained.
- You have the ability by location/warehouse to determine if you want to maintain inventory balances in bin locations for detail location tracking.
- You can define storage rules and restrictions on a per-product and per-location basis.
- You can define rules for the storage of materials and products (automatic or manual putaway with either fixed or random storage).

Ross ERP inventory control provides the unique ability to use three different product types, including Warehoused, Non-Warehoused and Non-Stock.

- Warehoused Products are the most commonly used, allowing you to define the enterprise and warehouse-specific controls for each item and maintain inventory balances by warehouse and bin location.
- Non-Warehoused Products is a unique option, allowing you to define enterprise controls for an item without maintaining Inventory balances. This may be useful for repetitive purchases of non-production materials that are expensed or consumed upon receipt. This allows you to set up consistent controls, costs and maintain detailed purchase history. These can also be used for sales of service and miscellaneous charges.
- Additionally, Non-Stock Items are just that. No product master has to be setup. They are one-time purchases and sales that are defined as needed on a purchase order or a sales order.

## Inventory Valuation

With Ross ERP you have the powerful ability to value inventory by various methods. You have the option to choose between standard cost, weighted average cost, actual lot cost, last in first out (LIFO) or first in first out (FIFO) cost methods. No matter what method you choose for inventory valuation, you always have the visibility of standard cost, weighted average cost, actual lot cost and last cost.

- No matter how you choose to value your inventory, you still have full visibility of your actual costs for each transaction.
- The inventory valuation is automatic with every inventory related transaction, with weighted average cost and last cost being updated automatically with every transaction.
- Inventory valuation is user selected by location/warehouse. If you have different businesses with different locations, you have the ability to have different inventory valuation methods, if

needed. Or you may want to value production materials by standard cost and maintenance parts by weighted average cost.

- Perpetual inventory quantities and General Ledger inventory assets are always synchronized because each inventory related transaction updates inventory balances and creates the appropriate journal entries for posting to the General Ledger.

## Inventory Counting

Cycle counting provides you with a highly efficient way to ensure the accuracy of your inventory. You can even minimize or eliminate the need to do a full physical inventory on a month-to-month basis and also increase your inventory accuracy; yet have the capability for full physical inventory for year-end audits.

Once you input instructions as to the number of items to count (based on product number of ABC code or bin location) and how often to count, you can choose to receive a random sampling count daily, or at any other frequency. And when you enter the count, Ross ERP compares the actual count with the maintained inventory balance, and provide you with an exceptions report. If you accept the exceptions (the actual count), the inventory count will be automatically updated.

- Ross ERP will not require you to stop all transactions to perform cycle counts. It adjusts for the ongoing transactions while the count is occurring and after you have counted but not yet input the results – you simply input when you took the cycle count and inventory is automatically adjusted retroactively.
- The inventory counting features provide the ability to perform full physical inventory, perform cycle counts and spot checks as required.
- Full physical inventory can be setup by location/warehouse with the optional ability to select by warehouse zone(s) and/or bin locations. Physical inventory includes all items and lots in the selected warehouse, zones, and bin locations.
- Cycle Counts can also be established by warehouse and optionally warehouse zone. Based upon ABC inventory classification you can specify the frequency of cycle counting. The system will automatically select all items and lots eligible for cycle counting and display the count by ABC classification. Optionally, you can reduce the quantity to cycle count by ABC classification.
- Spot checks are for a specific item with optional selection by warehouse zone and/or bin location. This is when an inventory difference has been encountered and inventory needs to reconciled, or random checks are desired.
- After inventory counts have been entered, differences are calculated by the system and management reports can be generated. When satisfied that all counts are accurate, the appropriate inventory adjustments can be made by the system.

## Centralized Quality

The quality control and quarantine function provides for a centralized control for all applications. Based upon item and transaction type, you can specify the inventory status of QOH (Quantity on Hand), QC (Quality Control) or QR (Quarantine). Every transaction that places inventory in either QC or QR status has a unique centralized quality tracking number.

- Transactions including purchase order receipts, production completions, customer returns, and miscellaneous inventory transactions changing the inventory status to QC or QR are included in the centralized quality area.
- Inquiries and reports provide the status and quantity of all lots in QC and QR status with the ability to historically view all lots that have previously been in centralized quality.

Once the physical disposition has been determined, the lot can be moved to QOH, Returned to Supplier for PO Receipt, or Disposed of by removing from Inventory. Optionally, lots in QC can be transferred to QR and lots in QR can be transferred to QC.

- Either Complete Lots or Partial Lots can be transferred to/from a QC or QR status. In addition to the system -delivered Inventory Statuses, an unlimited number of additional user defined Status Codes can be created.

## Inventory Re-Ordering

The Inventory Control application also supports the ability to perform inventory replenishment based upon the actual inventory quantity and min/max inventory values by Item by location/warehouse.

- Minimum, maximum and reorder quantity can be user defined by item by warehouse, or the system can analyze past usage history and calculate these values based upon standard EOQ (Economic Order Quantity) formulas.
- The inventory reordering calculation considers the quantity available (Quantity on Hand less any reservations, allocations, and unconfirmed picklists), outstanding purchase orders and the minimum quantity value. If quantity available plus outstanding PO quantity is less than the minimum quantity, a reorder is suggested by the system. Review and maintain the suggested reorders, and optionally convert into purchase requisitions.

## Web Services, Bar-Code Data Collection & RFID

Ross ERP is bundled with advanced web services for inventory, manufacturing and quality movements for hand held barcode data collection devices (BCDC) and RFID. Advanced features allow for device usage from Intermec, Symbol, Zebra or any vendor of your choice. RFID web services will feed any RFID Vendor of your choice as well.

Your trading partners, 3PLs, and employees can execute transactions on Pocket PC devices in the warehouse, in manufacturing, at remote or 3rd party facilities or on the road via WAN, VPN or Secure SSL connection via the internet.

All the validation routines, audit trails, user security, GMP and Part 11 controls that are embedded in the Ross ERP transactions are supported on the BCDC hand-held devices.

## BCDC Architecture

Data Collection Transactions:

- Shipment Amend
- Shipment Confirmation
- Goods Received Note Line Load
- Goods Received Note Confirm/Put away
- Multi-Line Transactions
- Stock Conversion
- Lot Maintenance
- Cycle Count Maintenance
- One Stage Bin Transfer
- Two-Stage Warehouse Transfer
- Manufacturing Direct Material Issue
- Manufacturing Material Return
- Machine Time Entry/Posting
- Labor Entry/Posting
- Manufacturing Stage Count Process
- Quality Status Transfer
- QC Test Results
- Maintenance Management Material Issue

## Maintenance Management Module

With Ross ERP you have all of the current and historical data you need to control and effectively manage this area of your business, ensure consistently high levels of equipment reliability, regulatory compliance, and cost containment, and extend the life of significant capital assets.

### Repair Work Orders

By enabling you to manage your work orders electronically, Ross ERP enables you to eliminate costly and time-consuming paper shuffling.

You can verify availability and status of required spare parts, tooling, supplies and personnel before releasing work orders. You get consistent, complete estimating, planning, approval and tracking of all forms of work orders. And up-to-the-minute status of all work orders is available online, allowing you to view progress against any work order.

### Initiating / Creating Work Orders

Choosing the right type of work order helps you define the type of maintenance to be performed and its cost, and you can select from a broad range of work order types, including:

- Corrective: provide for planning, supervisory review and approval.
- Emergency: used for immediate repair work.
- Short-form: accommodate short duration, unplanned repair work.
- Project: used for capital projects or major repair work such as overhauls, upgrades and reconfigurations, and provide the additional accounting, scheduling and coordination detail that these type of projects require.

Ross ERP provides you with instant equipment selection or account number lookup in the work order initiation process based on whatever your user happens to know about the asset.

- You can select a parts list for inclusion in any of the work order steps. And you can verify availability and status of required spare parts, tooling, and supplies before releasing work orders, and can add to or remove parts at any time before approval.

It makes it easy for you to work safely and efficiently with work orders that include:

- Safety requirements, such as permits, safety equipment and other equipment that you need to obtain before carrying out the work order.
- Work order steps that have unique safety-requirement information associated with them.
- Priority codes to establish the scheduling priority of a work order according to the urgency of the request.
- Work order notebooks, such as text files that specify information such as work instructions and required tools.

### Recording Work

You can document the activities that are done during each step of the work order. This includes completion comments, cause and effect codes, machine downtime, and the identity of the individual accomplishing the administrative completion of the work order.

- Job start activities: releasing jobs maintenance.
- Machine time activities: details of machine-related costs, if appropriate, such as date used, time started and units or time allocated, plus updated and calculated overhead allocations.
- Labor functions: direct labor cost information from time cards, including employee, work order and step, subdivided into standard time, overtime and two levels of premium time, plus user comments for each time card to supplement the work order history.
- Job inquiries: full detailed inquiries on each job that you enter.
- Material issue functions: materials from inventoried and directly purchased materials.

## Issuing and Returning Materials

Within Ross ERP, procurement functions are integrated with maintenance scheduling so you can reduce your inventory stocking levels, and the availability of accurate historical records improves your decision-making.

You can issue or purchase additional materials - even after work has begun -and these materials will appear in history as a variance, but with all the accounting and cost roll-ups still in effect.

- You can easily see if material is on hand, reserved or on order, and the status of the requisitions or purchase orders.
- You can return material from a work order step and indicate the returned quantity.

## Completing/Closing a Work Order

Completing/closing a work order is important for keeping maintenance programs on schedule. When you close a work order the data is removed from open or active status and it is automatically moved to work order history status.

- Closed work order costs can be automatically rolled up through the levels of an equipment tree so that you can establish summary points in the equipment structure, and generate real-time cost summaries at each of these points

## Equipment Records

Equipment records define any location, process or asset against which maintenance repair costs and history are accumulated. They provide vital and technical information (detailed descriptions, specifications, operating instructions and safety precautions) to those who need it, and virtually all equipment and maintenance activities within Ross ERP relate back to an equipment record.

- The equipment expense history can show repair and preventive work order costs and hours accumulated through closed work orders for the equipment, broken down according to period-, year- and life-to-date.

You can manage your maintenance functions better because it lets you identify cause or effect for equipment failure and classify work performed for later analysis.

You can review and update information quickly:

- You can view system-maintained material and labor estimates and actual costs for an entire work order or for each of the steps within the work order.
- You can access work orders that have been closed and saved in a history file.
- You can view the total maintenance history for a component or location, regardless of the number of relocations that have occurred. And you can view all closed work orders, sorted by work order number, equipment, location, equipment type, or cause and effect codes, and can reuse this information to create new work orders.
- You can view a list of inventoried catalog parts and non-stock items associated with specified equipment via a bill of material summary.
- You can view equipment expense history to see repair and preventative work order costs and hours accumulated through closed work orders for the equipment, broken down according to period-, year-, and life-to-date. This makes it easy for you to assess the costs associated with specific equipment in order to create budgets. The cost summary displays the equipment, and all of its children.

Flexible search capabilities make it easy for you to find desired equipment.

- You can browse for and sort and group equipment records by key characteristics such as equipment type and maintenance area.
- You can use drawings, which are a special form of detailed information associated with equipment summaries, to create a cross reference between equipment and drawings.

## Equipment Specifications

Equipment specifications help you address information that is unique to a specific item or type of equipment – without placing limitations on the size, number or type of data maintained.

- They consist of user-defined specification items and equipment, or type-specific values. Typical specification items can include horsepower, phase, coupling type, seal material, or any other equipment detail.
- A group of related specifications and associated values can be assigned to one or more equipment records sharing common design features, enabling you to view and work with all specifications defined for your factory.

## Component / Location Tracking

Utilizing a component and location tracking capability, you can view a list of all of the components ever assigned to a specific location or all the locations where a specified component has been assigned.

- You can track the spares under three simultaneous schemes:
    1. As a functional description in the enterprise, i.e. #1 HVAC compressor motor.
    2. As a serialized component (Motor #123) that may currently be fulfilling a function in spare parts inventory or in repair.
    3. As a spare part number under which all like components are inventoried.
- This information is stored in history for each work order so that you can retrieve the total maintenance history for a component or location, regardless of the number of relocations that have occurred. And when you relocate the component, you can identify the new component with the new location, and at the same time you can record the disposition of the removed component.

## Preventive and Predictive Maintenance (PM)

PM tasks can be defined for any work that is performed on a repeated basis and requires recorded history, such as defining the trade, crew, shift and labor requirements for each planned work order function.

Ross ERP automatically creates repetitive maintenance work orders on the first occurrence of a trigger: on a calendar interval (elapsed period of time such as weekly, quarterly or yearly), or when a monitored operational parameter (miles, hours, pressure, temperature) exceeds a predefined threshold, or on a manual override.

## Meter Readings

A meter record tracks the equipment conditions that can trigger a PM task.

- You can define a meter for any quantifiable parameter, regardless of the source of data.
- You can change an existing meter record’s description, location, maximum value or unit of measure.
- You can view current and previous readings and dates.
- It automatically evaluates all tasks associated with the meter and assigns the current day as the date for any task whose meter trigger point is exceeded.

## Bill of Materials (BOM)

A BOM is a list of part numbers, both stock and non-stock, that have some form of common usage – typically to describe the parts list for one or more equipment records that use the same parts. They may also be used to define repair “kits” for specific repairs or the define the list of parts required for a preventive maintenance task, in which case the parts on the PM BOM are automatically reserved at the time of PM scheduling. The primary benefit of the BOM is to help your maintenance planners quickly determine necessary spare parts and assist in the planning of repetitive tasks and work orders.

With Ross ERP, you can:

- Create a new BOM identifier, description, and associated part list or change an existing BOM and its associated part list.
- Review and update lists of cataloged, warehoused parts and non-warehoused items associated with a specific BOM, equipment associated with a specific BOM, all BOMs that contain a specific part or all BOMs and their descriptions.

## Accounting Information

Ross ERP enables you to define all accounting detail for a specific type of work that will be charged to a general ledger account code and control the normal accounting of maintenance activities related to that equipment.

- You can let authorized users override any default.
- You can assign specific work orders or work order steps to different charge accounts and thereby direct related costs to different points in the GL.

## Charge Accounts

Charge accounts provide you with the ability to forecast/budget labor and material costs for all maintenance activities related to the equipment tracked and compare forecasts to accumulated actual labor and actual material costs.

- You can post actual costs to the GL during the processing of time cards, inventory issues and returns, additional work order costs, and purchase order receipts, invoices and credit memos.
- You can view and track actual cost-to-date against the estimated cost of any work order, and quickly determine if a cost overrun is likely.
- You can setup charge accounts that are useful in the management of capital projects. And you can use multiple charge accounts to define the GL structure for various phases of the project with related work orders referencing the appropriate charge account to provide automatic posting to the proper GL account.
- When used in conjunction with Ross ERP Business Analytics, you gain additional analysis dimensioning capabilities.

# Manufacturing Module

In Ross ERP, the Manufacturing module defines the production process, calculates and tracks product and job cost, and records all of the activities necessary to manufacture products. Stages of the manufacturing are consolidated into a process specification. Actual cost rollups with in the process specification are compared to standard job cost for each lot or batch produced. All manufacturing-related activities (including issue of materials which automatically decreases inventory balances, recording of production outputs which increase inventory balances) are tracked and charged to a Job, thereby determining actual job cost and variances. General Ledger journal entries automatically created for all transactions. And the lot trace information is recorded from the manufacturing activities.

## Manufacturing Specifications

With Ross ERP you can manage all of the resources required to produce a product - in every stage of your manufacturing process – with unlimited inputs and outputs.

The Ross ERP process specification has been designed to meet the most unique and complex manufacturing requirements. Stages in the manufacturing process can be combined to minimize WIP and not force a return to inventory of component stages. Or very detailed separate stages can be created to feed an electronic batch record entirely with in Ross ERP.

A recipe or stage is the basic building block of defining the manufacturing process. It defines all of the process steps and resources required to produce a product, including raw materials, intermediate products, resource and labor requirements and any miscellaneous requirements. Multiple outputs can be defined including primary products, co-products and by-products. The Recipe can include the following:

- Materials, labor, equipment and miscellaneous items such as utilities and water.
- Waste streams can be defined as an output for accurate costing and disposal
- Specify the quality requirements for the process or product.
- Include all of the outputs, such as the final product, co-products, and by-products.

The process specification then links one or more recipes or formulas with stages to define the complete manufacturing process for producing a finished good or intermediate product. A process specification can be a complex 50-stage process or a simple 3-step process:

By setting up the process specification into individual stages you are able to summarize costs and activities by stage, as well as view all of the details of every activity by stage. It also simplifies the maintenance of recipes when a common recipe is linked to multiple process specifications.

- Each stage can have unlimited inputs and outputs, and can include instructions that define the activities of the stage.
- Define an unlimited number of stages (group of activities that occur together and can be summarized together) that can be in series or in parallel.
- The stages are linked together, with the output of one stage becoming the input for the next stage.
- Move product from one process step to another – without having to perform an intermediate inventory transaction to reflect the movement of product from one process stage to another, or define unnecessary intermediate products. Optionally, you can require counts at specified stages.

## Quality Control Tests

With Ross ERP, you can define QC requirements for each stage or activity, for both product and process.

- QC Tests can be setup with a target value and high and low limits.
- Multiple QC Tests can be grouped together for recording results and reporting purposes.
- In manufacturing, any time you have an actual test result that is outside of your test limits, the batch is automatically flagged for QC hold.
- QC results, along with high/low limits, are included with the lot traceability inquiries.

## Rate-Based or Fixed-Time Production

You have the flexibility to define equipment and labor rates on either a production or a fixed time basis. Rate-based is variable based upon the number of units of production such as X units per hour, whereas Fixed-based is constant up to the maximum batch size such as Y hours per batch.

## Flexible Units of Measure (UOMs)

Ross ERP provides you with tremendous flexibility in utilizing units of measure within a process specification.

Your process specification can record all resources, including inputs and outputs, in different units of measure for a given production stage – you do not need to use a common UOM throughout a process specification.

## Input- or Output-Based Process Specifications

Ross ERP provides you with the flexibility to define and use both input-driven and out-put driven processing.  Traditional methods are output driven, and that determine input material requirements based upon finished product requirements.

You may have a process that is based upon the input of a specific product, with either one or multiple outputs.  Input driven processes are based upon the quantity and characteristics of the primary input product. Based upon this, the expected output(s) can be determined. Your process may also include the separation of an input material into its various elements. And you can easily use the input driven process to define this.

## Dynamic Potency and Dependency Calculations

Ross ERP performs potency calculations automatically, and enables you to specify the minimum and maximum characteristic value of an input material that is allowed for use in a particular process specification. It also calculates multiple dependencies based upon user defined dependency formulas which can consider actual lot characteristics.

You can specify a unique potency calculation based upon the characteristic values of actual lots in inventory, and Ross ERP will dynamically calculate the physical quantity required.

## Batch Scaling

Ross ERP allows you to define batch sizes in either quantity (i.e. 1,000 Kg) or time (i.e. one hour or a shift).  You can set the minimum and maximum allowable batch size and the possible increments within the range. Based upon demand quantities, Ross ERP automatically determines the number of batches along with the size of each batch.

## Version Control and Authorization Safeguards

Version control and authorizations are integrated with the application security which provides you with auditability and traceability of Stages and Process Specifications.

Version control capability enables you to limit changes to an existing recipe, and preserves the full auditability, traceability and version control history of your process specification. It can be either automatic or manual.

Each version contains effectivity dates that specify the time periods during which a process specification is valid.  You may have overlapping effectivity dates (with the latest authorized version within the effectivity date automatically selected for use). However you can select to use an earlier version, as long as it remains activated and is within the effectivity dates.

You can set up authorization control as a requirement to ensure that no one can use a new or changed recipe without the required approvals, which are established via a pre-defined routing by department and employee for authorization. This provides you with an audit trail of those approving or rejecting, along with dates and comments.

## Location-Specific Specifications

You may produce the same product in multiple factories, and you may use the same or different ingredients based upon geographic availability, your processes may be different due to different equipment, batch size restrictions may be different due to vessel capacity, and as a result your costs may be different by Factory. With Location/Factory specific Process Specifications you can define the factory specific requirements.

- Your process specification can be location-specific even if you produce the same product at many locations.  Each location can have the same or different ingredients, along with location-specific equipment, labor classes, quality requirements and processing times.
- You can compare costs from location to location, compare actual to estimated costs, and calculate a direct cost and an overhead cost for each activity.
- You can use multiple or alternative process specifications to create the same product.
- You can have multiple process specifications per location.

## Product Costing

After you have created the recipes and process specification, you can determine the estimated or standard cost based upon cost rollups.

- A cost rollup can be performed for either a specific product or process specification, for groups of products or process specification, or for all process specifications for a factory or all factories.
- If the product or process specification that is being rolled-up includes an intermediate product(s) the cost rollup will also perform the cost rollups of the intermediate products, through multiple levels.

Part of the process specification setup is to determine the cost categories that you want to use to in calculating product cost. You can use the traditional material, labor, overhead and miscellaneous cost categories, or you can setup additional costs. You may want to separate material costs into primary ingredients, miscellaneous ingredients and packaging supplies. And you may want to separate value added costs by department or operation type. There is no limit to the number of cost categories that you can setup to manage product costs.

For each activity (material input, machine requirement, labor requirement, and miscellaneous input) that you have included on the process specification, you have the ability to define a direct cost category and an overhead cost category.

- The results of the cost rollup can be viewed in a summary mode for one product or process specification or all items included in the cost rollup. The summary compares the current rollup results to the existing standard cost for each item.
- Detailed cost rollup inquiry provides various views and formats of the cost rollup, including the ability to view cost by product, by stage, by cost category and by stage and cost category. If you have questions about how the cost rollup was calculated, you can drill down to each activity line on the process specification and view the associated cost.
- If you have co-products or by-products in your process specification, the cost rollup handles these appropriately. You can allocate the costs across multiple co-products and you can receive credit for the value of any by-products.
- Once you have reviewed the cost rollup results, made any necessary adjustments, you can then easily transfer the cost to be your new standard cost.
- All production jobs track and compare the actual cost to the cost rollup and calculates and reports differences. If you are using standard costing for inventory valuation, then all of the variance postings are also determined.

## Production

**Jobs** Ross ERP uses Jobs to setup and record all manufacturing activities. A Job is the authorization and instruction to produce a specified amount of a product(s), using a specific process specification. Required dates can either be a due date and time, or start date and time, or both. Based upon the job quantity, the inputs are determined for output driven process specifications. For input driven process specifications, all of the other inputs and expected outputs are determined based upon the primary input quantity.

Jobs can be automatically created from planning jobs or created individually by a designated planner at any time.

- If the process specification has by-products or co-products, the job created will produce these multiple products.

When creating a job, you can:

- Select from alternative recipes.
- Optionally, make one-time modifications or one-time deviations for the specific job, if allowed based upon user -defined controls.

When a planner creates a job, the job type can either be inventory or customer.

- For inventory type jobs, the planner enters the process specification, quantity and start or due date.
- For customer type jobs, the planner selects the sales order line that the job is for, and then the system determines the process specification, quantity and due date from the sales order, with optional overrides by the planner.
- Any customer specifications on the sales order are automatically transferred to the job QC test limits, if QC tests have been previously established on the process specification for the specification characteristics. Also, any comments on the sales order are automatically transferred to the job for customer type jobs.
- For customer type jobs, a sales order to job link is automatically created. This allows customer service to inquire on job status during sales order inquiry, and it also allows planning and manufacturing to view sales order requirements from the job status.

After a job has been created, it can be finite scheduled and released to manufacturing.

**Material Inputs** Ross ERP helps you ensure that the materials you need for a key customer or a critical job are not used for another purpose, and are there when you need them.

- You can perform a trial kit (see whether the required materials are on hand, and if any shortages exist, where they are) for a job or group of jobs before releasing the job to production. Any shortages are noted as exceptions and this can then be used as an expedite list.

You can have Ross ERP allocate materials (reserves specific lot numbers and quantities) for a specific job. If you are using potency and dependency formulas, the allocation process determines the amount of each ingredient and lot to use based upon lot characteristics.

- You can also generate a pick list (the list of all the materials needed for the job, the selected lot, and the location of each one) – even if you have not previously allocated material.
- The allocation and/or pick-list processes reduce the quantity available of each input required for the job, but the Quantity on Hand is not reduced until the actual material issue is made by confirming the pick-list.
- When confirming the pick-list, the quantity or lot number can be entered to record any differences in the pick-list and what was actually used.
- You can also use a direct issue to issue material without a pick-list. With the direct issue, you can issue additional materials or substitute materials, with appropriate audit trails created.
- A material return feature provides the ability to return any unused or left over materials back to inventory, optionally going through a QC or Quarantine process to validate materials returned.
- For non-lot controlled items, such as packaging supplies, etc. you can elect to have the system back-flush these materials for you. Back-flushing is the automatic issue of necessary materials based upon the actual quantity of output product recorded.
- All material issues automatically create the lot trace details and make the necessary journal entries for posting to the General Ledger.

**Recording Machine and Labor Time** If you want to record actual machine and labor time used in production for costing and efficiency calculations, you can record this information for each machine and labor activity on a Job. However you can also elect to have the system Backflush machine and/or labor time for you, based upon the quantity of production recorded.

- When recording machine time you can record the actual machine used and either the actual start and stop time or just the elapsed time.
- When recording labor time, you can record either the labor class or the actual employee. Also, you can record the actual start and stop time or just the elapsed time.
- You can elect to record actual time for specific activities and backflush other activities.
- When you record the actual time, this is used in determining actual job cost, calculating efficiency of the operation and job and used in calculating variances if you are using standard costs.

**Recording Process Variables – Lot/Batch Record** Ross ERP can record process variables extracting real time, or historical data from the process control system, maintaining the lot/batch record in a central data repository. User defined tables can be created to store exception reports, high/low levels, moving averages, or any other process control tags made available from your process control system. Ross ERP is capable of communicating to all of the process control systems in the market using common industry standard communication protocols.

**Record QC Test Results** With Ross ERP you can record and monitor the results of QC testing for both product-related tests and process-related tests. Optionally the test results on the final product then automatically become the characteristic values for the product in inventory.

- You can record virtually an unlimited number of readings for each test and Ross ERP automatically maintains the highest reading, the lowest reading, and the average for each test.
- Ross ERP compares actual results to the minimum and maximum allowed for the test.
- Out of range test results are automatically flagged for QC hold, allowing you to continue to record all production related activities. This then goes into the centralized quality area for tracking and disposition.
- You have the ability to record production outputs into a QC or Quarantine status and then report QC Test results afterwards. After test results have been entered, the output lot can be transferred from QC or Quarantine into Quantity on Hand status.

**Recording Production Outputs** Production outputs can be recorded for output products going into inventory as well as the quantity produced (Stage Count) at any stage. They can be subdivided into counts, count approvals and inventory put-away. Based upon your processes and procedures, you determine if you want to setup the recording of outputs into consolidated, separate, or individual steps.

- Inputs set up for back-flushing are automatically charged to the job.
- Inventory put-away automatically updates inventory balances, creates all lot trace records and creates journal entries for General Ledger postings.
- You have the ability to record multiple output transactions (counts) for the same job with each subsequent count defaulting to the same output lot number.
- If the output product has shelf life restrictions, all of the lot dates are automatically calculated and recorded for the output lot.
- If you have co-products and by-products you can record the count of all outputs either at one time or individually.
- Inventory put-away is based upon the pre-established put-away controls for the output product and warehouse. Or if you chose, the operator may be allowed to control the put away location.

**Job Status and Performance Reporting** From the time that a Job is created until after is has been completed and closed, Job Status and Performance Reporting is available on-line.

- The status function determines and reports if the job is early, on-time, behind schedule or late based upon the job schedule and current status. The status function also reports where the job is located in the process and if it is waiting or running, all based upon inputs of machine and labor activity.
- Performance reporting compares actual inputs and usage to the standard amount required for the job. For material Inputs, the actual quantity is compared to the standard quantity with quantity and percentage variances calculated. For labor and machine inputs, the actual time is compared to the standard time with variances also calculated as well as efficiency reported for each machine and labor requirement and total for the job. Actual output quantities for each stage count and production outputs are tracked and compared to planned outputs.

**Yield Reporting** For each process specification, the user can setup one or multiple yield measurements based upon the recipe material inputs and production outputs.

Yields are easily established – first you specify the Unit of Measure to use for inputs and outputs, and then indicate the inputs and outputs to include in the yield measurement calculation. From this, standard yields are automatically calculated by the system.

From entering the material inputs and recording the material outputs Ross ERP can then determine the actual yield(s) of each job.

- The actual yield of each yield measurement is automatically calculated and compared to the standard yield, with the ability to see the details of both the standard and actual yield calculations.
- Yield measurement and tracking can be a very effective performance measurement tool for operations and management to measure material usage and variances.

**Job Costing** Ross ERP automatically calculates an estimated or standard cost for each job based upon the process specification and quantity to be produced. Any planned one-time modifications or deviations to the job are also included in the estimated job cost.

The reporting of actual job cost is very similar to that of product costing with various formats available to view total cost, unit cost, cost by stage, total cost by cost category and detail activity, and unit cost by cost category.

- Unlimited cost categories are used for tracking and reporting actual job cost, based upon the cost categories defined in the process specification.
- For every job the actual cost is recorded and calculated based upon all of the actual inputs with the ability to compare to standard cost, either in total or unit cost, by cost category, by stage, by stage and cost category.
- Direct and an overhead costs are automatically calculated for each activity.
- Information is summarized by stage and by category, and for each activity the amount used as well as the actual cost is tracked, and this is compared to the standard or estimated cost and usage. In the case of labor, for example, it will record employee hours in addition to labor costs.

# Purchasing Module

In Ross ERP the Purchase module handles all of the Purchase Requisitions, Purchase Orders, Receiving and Vouchering of Invoices for raw materials, MRP purchases, Maintenance and other MRO purchases and one-time purchases. It can support the purchasing requirements of both multi-site, multi-national corporations and single site domestic operations in either a centralized or decentralized mode. And because it is integrated with the Financials application of Ross ERP, you gain the benefit of effective management throughout your enterprise.

## Supplier Master

With Ross ERP there is one common supplier file for accounting and purchasing. The Supplier Master includes information such as payment terms, purchasing information, addresses and tolerance for receiving and invoicing.

Ross ERP enables you to setup unlimited buy-from and invoice-from locations for each supplier.

- You can set the payee as either the supplier or another payee.
- You can link a supplier to multiple payees and select the appropriate payee during invoice vouchering.
- If you receive non-purchase order invoices, for expenses like utilities, you only have to setup a payee for invoice processing and cash disbursement. A supplier does not have to be setup if purchase orders are not placed.
- It keeps all purchase history at the buy-from level so that you benefit from having all payee and location information, plus the ability to group multiple payees – such as subsidiaries – under one main supplier.

## Purchase Requisitions

Ross ERP enables you to create purchase requisitions in a variety of ways – providing you with efficiency and time savings:

- Automatically from MRP for suggested raw material purchases.
  - Directly from a maintenance requirement.
  - Directly for Reorder Point Suggestions in Inventory Control.
  - Easily by copying an existing requisition, using the same as/except capability.
  - Enter multiple items or lines on a single requisition.
  - Different types of items on the same requisition, including warehoused items for which you maintain inventory balances, non-warehoused items for which you do not maintain inventory balances but have repeat purchases, and non-stock items that are one-time purchases.

## Purchase Requisition Approval

After you have created the Purchase Requisition it is submitted for approval, with approval limits by amount.  Your Approver can either approve and forward to Purchasing, or reject and return to the requestor.

During the approval process, the status of the purchase requisition is tracked, along with a complete audit trail of approval or rejection.

## Bid Tracking

Ross ERP lets you choose whether or not you want to use bids, and what the minimum requisition amount is that qualifies as a bid.

- If you want to use bids, it automatically routes approved requisitions into the bid process that includes releasing the bid, receiving bid responses, generating a bid report, and awarding the bid.
- You can easily cancel a bid or create an addendum to it.
- The awarding of bids automatically generates purchase orders.

## Purchase Orders

Ross ERP provides you with multiple ways to initiate a purchase order. You can:

- Convert an approved purchase requisition to a purchase order, with the ability to split the requisition to multiple suppliers or combine multiple requisitions into one purchase order for the same supplier.
- Make a release against a blanket purchase order.
- Enter the necessary information to create a new purchase order from a manual requisition.
- Copy a prior purchase order and change it as needed.
- Award a bid to a supplier.

You can enter multiple items on one purchase order and each item can have multiple deliveries in which you specify the quantity for each delivery.

And it provides you with a full audit trail. Even when you convert a requisition to a purchase order, you retain both documents, so you can make inquiries based upon requisition number or purchase order number. And if you create a purchase order form a blanket purchase order, you can still view the blanket order and all of the releases generated from it.

## Purchase Order Pricing and Discounting

Ross ERP automatically manages pricing and discounting for you. For orders, it will automatically use the established price of an item if there is a contract with a supplier for the item.

- If the item has been through the bid process, it will automatically use the bid amount.
- If there is no supplier contract, then it will automatically check to see if there is a standard purchase price for that item.
- You always have the flexibility to override any price, with an audit trail maintained.
- It automatically calculates sales tax and provides you with the option to pay or accrue it.
- It automatically uses the supplier’s currency, but you have the flexibility to override this and use any currency. If you use a currency other than your base currency, it will maintain both the purchase-order currency (and its amount) and the base currency (and its amount) at the same time, and make postings to the General Ledger in both currencies.

## Receiving

Ross ERP lets you combine the functions of recording the receipt of material, and then verifying quantity with inventory put-away) into one transaction, or splitting them into multiple steps if they are performed by different users or at a different time.

- For a multi-line purchase order, you have the option to receive all outstanding lines, or selected lines.
- When you receive an order you can enter the quantities actually received by pulling up the purchase order with outstanding quantities, using the inspection requirement that is appropriate for that receipt – receive into inventory, or into inspection.
- Ross ERP automatically updates purchase requisitions and purchase orders with the status of received items. If you are the requestor or buyer, you can easily find out whether an item has come in, when it was received, and where it is. And if you are the receiving department, you can inquire on the receipt and get all of the requisition and purchase order information.
- You can specify receiving tolerances by supplier or by supplier and product, and you can specify the tolerance as a quantity or a percent.
- Journal entries for inventory asset or expense, and liabilities for un-vouchered receipts, and purchase price variance if using Standard Cost are automatically created.

## Receiving Inspection

Ross ERP includes a Receiving Inspection function for Purchase Order Receipts that is part of the Inventory Control Centralized Quality. It enables you to maintain an audit trail of the status of a product through the inspection process and its' disposition. Inspections can verify and record the actual value of lot characteristics of items that you purchase.

- You can designate items that require inspection, or you can do random inspection on any item at the time of receipt.
- You can update an item or material status by accepting it into Quantity on Hand Inventory, rejecting it, or returning it to the supplier.
- At the time of receipt you can include supplier inspection reports for characteristic values, and then have your inspection process validate whether the supplier results are correct.
- As soon as a receipt is entered, Ross ERP keeps an audit trail that maintains the quantity, the status (whether it is quantity on hand, inspection or quarantine), the location, the supplier's lot number, your lot number, and any characteristic values, and automatically begins tracing, inventory control and other functions.

## Supplier Returns

A receipt can be returned to the Supplier either during the receiving process or after the receipt has been made.

- During the receiving process, the quantity received can be confirmed and then if there are any returns to be made at this time, the quantity can be indicated, along with the quantity either transferred to inspection or put-a-way in inventory. By doing this, there is a record on the Purchase Order that the Supplier shipped you the total quantity, but you rejected and returned part or all at the time of receipt.
- If after the Receipt has been made, a supplier return is required, it can be entered as a separate return transaction. The return can be entered by either the Receipt number (with lookup by Purchase Order number) or by product number. If the Receipt number is entered, you can select the product and line to return. If entered by Product number, all receipts of this product are shown, and you select the corresponding receipt.
- In addition to reducing inventory quantity for the return, the Purchase Order is also updated with the quantity of the Supplier return.
- The Supplier return can only be done prior to vouchering of the invoice for the related purchase order or receipt.

## Vouchering Invoices

Ross ERP provides you with online vouchering and 3-way matching of invoices:

- A three-way match between the purchase order with the price, receipt quantity and invoice (with price and quantity) from the supplier.
  - The 3-way match can be based upon the PO or Receipt number.
  - If done by PO Number, the total quantity received on multiple receipts can be vouchered on one invoice.
  - If done by Receipt number, only the items and quantity received on that receipt could be vouchered on the invoice.
  - The supplier Invoice number is automatically checked for duplicity.
- For non-warehoused items (with no receiving report required), Ross ERP performs a two-way match of purchase order and invoice.
- For invoices with no purchase order or receipt, as in the case of a utility bill, you can enter the information with the appropriate accounting distributions.
- You can use invoice price tolerances, similar to receiving tolerances.
- Because the Ross ERP application is integrated with the Ross ERP Financial applications, once the vouchering process has been completed and verified, the invoice is available for cash disbursement.

# Planning Module

The Planning module within Ross ERP provides you with the capability to develop Production Plans based upon Demand (Sales Orders and/or Sales Forecasts) and current Inventory levels and existing Replenishments. Capacity requirements of resources can be checked. Based upon capacity constraints, the Master Schedule can be adjusted to result in a work-able production plan. Then Material Planning can determine the quantity and required date of ingredients and packaging supplies. Planning Jobs can also be created and firmed, for later transfer to manufacturing Jobs.

It also provides you with the ability to effectively manage your resources to meet sales demands. It enables you to:

- Manage your capacity with comparison to demand, and arrive at a viable production plan that is within your constraints. With this production plan, Ross ERP calculates the materials you need and creates manufacturing jobs for production.
- Review and make adjustments or identify alternatives in production planning.
- Specify both the planning horizon for the planning process. You can perform strategic long-term planning objectives, such as projected sales for the next five years on an annual basis or an annual operating plan for budgeting. And you can do tactical planning based upon actual orders and inventory levels including an intermediate forecast.

## Production Planning – Master Scheduling

With Ross ERP you develop a production plan that shows you the products you need to produce and time period in which to produce them in order to meet demand.

## Master Scheduling

- You can use actual sales demand, forecast demand or a combination of both to develop your plan. If you use both Sales and Forecasts you can specify a demand fence that lets you consider only sales orders inside the fence, and outside of the fence considers whichever is larger (sales or forecast).
- You have the option to include or exclude current inventory balances and planned replenishments.
- You can do master scheduling for products with dependent demand that are not actually sold (you might have one or more intermediate products that are part of your process).
- The master scheduling function warns you of any expected expiration of both intermediate products and finished goods.
- Dynamic inventory policies can be specified for each product being planned by defining target inventory levels in terms of day of inventory. As demand increases, planned inventory levels increase and as demand decreases, planned inventory levels decrease.

*You can use the master schedule to plan based upon future demand and an inventory policy expressed in days of cover stock. If you want four days of cover stock, Ross ERP determines how much you need to produce not only to meet demand but also to maintain the four days of inventory. And if your demand increases, it will automatically calculate how much more inventory you need to stock to maintain the four-day safety margin and how much more you need to produce to meet the new demand.*

- The Master Schedule can consider and include items that are typically Make-to-Stock and items that are typically Make-t-Order.
- Exception Reports are available to report any Product Shortages for Sales Demand, so that any potential out of stock situations are known in advance and proactive measures can be taken.
- You can generate multiple master schedule iterations and assign a unique Retrieval Code to each one for viewing later. You can the select the Master Schedule that is best for you and use it for Material Planning and creating Planning Jobs.

## Rough Cut Capacity Planning

For Rough Cut Capacity Planning (RCCP), Ross ERP translates the master production schedule into resource capacity requirements, and then looks at your current resource allotment to see how much capacity is available and identifies both over-capacity and under-capacity situations.

RCCP considers all of your resources (i.e. labor, equipment, miscellaneous, materials, utilities) and compares them to demand requirements in order to provide you with the most reliable and efficient capacity analysis.

*For example, instead of looking at just labor and equipment, it will identify for you situations where water or power or some other raw material might be a constraint in your production planning.*

- You define resource capacity in the units of your choice.
- In the case of equipment or labor, you can use time as a common denominator, and the planned quantity will automatically be translated into time requirement based upon the process specification. For materials or miscellaneous resources, you can specify Kgs or liters or any other unit of measure.
- You can evaluate multiple resources as possible constraints.

*For each resource you can identify the daily capacity by date range to account for resources that may vary. Using effectivity dates you can then factor the purchase of a new piece of equipment into your planning to show the increased capacity after a certain date.*

- You can see exactly where shortages exist if you are over capacity, and if you are under capacity you can see the amount of unused capacity so that you can increase your production utilization. For both over- and under-capacity you will see this information in both production hours and production quantity.

*For example, if you are 15 production line hours short of full capacity, you will also see the number of units of product that could be produced in this time period.*

- Ross ERP can smooth your production plan by moving the production to match the capacity of the problem resource.
- Your planner can also make manual adjustments to the Production Plan and immediately see the capacity effect of the adjustment.

*You can move production from one time period to another, or if you have alternative methods of production you can select an alternative process specification in the same factory or a different factory.*

## Material Requirements Planning (MRP)

Ross ERP determines the purchases that are required to support your production plan –the materials, the quantities and the required dates– on an item specific basis for each location. After reviewing the purchase recommendation, you can automatically create purchase requisitions for individual or all recommendations.

- MRP considers your current inventory of raw materials and outstanding purchases.
- MRP recommends the materials and the quantities to be purchased with the required dates. It considers lead-time to tell you when the purchase needs to be placed and the receipt date required to support the production plan.
- If there are outstanding purchases that need dates changed, recommended reschedules to existing purchase orders are made.
- It considers the minimum and maximum inventory levels you have established and your replenishment rules (such as the lot size for reorder and the minimum reorder quantity), as well as any order consolidation policies you might have, to recommend order quantities.
- The Order Interval Days is also considered in consolidating requirements over a number of days into 1 purchase recommendation. For example, you may only want to order a product every 2 weeks, by using order interval days the system will consolidate the requirements into 1 purchase recommendation.

- If there is insufficient lead-time to purchase materials to support the production plan, this is noted as a Sales Shortage, and can be used to expedite materials.
- Shelf Life is also considered. It identifies materials that will expire based on actual shelf life, and notifies you if you have any inventory on hand that will expire before the scheduled production date. And it will notify you if your planned or open purchase order amount exceeds what your requirement is during the material's shelf life.

Various Inquires and Reports are included with MRP. Both Summary and Detail Inquires with pegging to the demand is available. MRP Reports for all Recommendations and by type of Recommendation are included.

Your Material Planner can review the MRP Suggestions and Firm any or all suggestions. In firming suggestions, the Planner can adjust the quantity or required date of any purchase, as needed. Either when firming suggestions or later, the suggestions can be converted into Purchase Requisitions and processed as Purchase Orders in the Purchase Order Processing application.

## Planning Jobs

Your planner can convert the Master Schedule suggestions into Planning Jobs for a specific time period, with specific product(s) or all planning suggestions. After creating Planning Jobs, your Planner can review and Firm them as desired. By firming Planning Jobs, subsequent planning processes can consider them as planned replenishments and not re-plan or re-suggest the same production.

Planning Jobs, either Firmed or not Firmed can be converted into Manufacturing Jobs and Released to authorize and record production.

# Sales & Order Processing Module

The Ross ERP Sales Order Processing module includes the functions for Order Entry, Shipping, Invoicing, Credit Memos and Sales Analysis. To support these functions, creation and maintenance of the Customer Master, along with Price and Discount functions are also included. Included with Order Entry and Shipping are on-line Credit Checking and Inventory Availability including Available to Promise and Reservations.

## Customer Master

There is a common Customer Master in Ross ERP that is shared between Sales Order Processing and Accounts Receivable. The Customer can have unlimited addresses for Shipping and Invoicing purposes, with a default/primary Ship-To and Bill-To address used for Order Entry, that can be over-ridden.

- If the Customer is owned by a parent company, that relationship can also be established with the Statement Account feature. The Statement Account can link one or many Customers to a parent Customer.
- The Customer Master also includes Sales and Shipping Information, Credit Limits, Payment Terms and other miscellaneous information. Customer information is automatically retrieved by the system based upon Ship-To address during Sales Order Entry. The Customer Information can be verified and changed if needed on an individual Sales Order.

## Sales Order Entry

The Order Entry process is simple, fast and sophisticated supporting sales and customer requirements. In addition to the traditional Order Entry methods, sales orders can be entered by copying previous orders with same as/except capabilities, created from user defined templates, or brought in from EDI transactions.  Additionally, customers can place sales orders through an eCommerce Internet-based Shopping Cart order entry process in the Customer Portal application. No matter what the source, all create open Sales Orders.  Additionally, Sales Orders can be changed, with certain limitations, anytime after order entry.

To enter a sales order, all that is required is the Customer Number and optionally, the Customer purchase order number. Then, Ross ERP automatically supplies key customer information, such as sales representative, territory and price classification, but you have the option to add, over-ride or make changes to orders.

Once the customer and ship-to are entered manually or using the on-line look up function, only the products being sold and the quantity of each are required.

- Full multi-currency capability is supported in Sales Order Entry and Invoicing. During Order Entry, the customers default currency is automatically used, with optional override capability to a different currency for the transaction. With multi-currency, any sales orders entered that are in a different currency, than your base currency, have the capability to show both transaction currency and base currency.
- Sales tax is automatically calculated based on the ship-to location.
- General Ledger postings are made automatically, and in both currencies.

## Electronic Data Interchange (EDI)

This section lists the possible transactions that our customers may typically implement. However any EDI transaction may be mapped with in the Ross ERP EDI engine.

- Inbound Sales Orders (850/875)
- Outbound Sales Invoice (810/880)
- Contract Pricing and Chargebacks (844)
- Outbound Sales Purchase Order Acknowledgment (855)
- Outbound Advanced Shipment Notice (856)
- Inbound Customer Order Change (860)
- Inbound Remittance Advice (820)
- Outbound Sales Order Status (870)
- Inbound Sales Order Shipment Receiving Advice (861)
- Outbound Stock Transfer to Warehouse (943)
- Inbound Stock Transfer Receipt (944)
- Outbound Shipment Request (940)
- Inbound Shipment Confirmation (945)

Value Added Networks (VAN) and EDI Translator
The majority of EDI is transferred between Electronic Mailboxes provided by a service. This service is termed a VAN. In order for the data to be interpreted into application meaningful data, a Translator is required. The translators have the capability to produce the data into flat-files or XML data. There are two avenues for the translator solution: in-house (e.g. Sterling, Global Exchange Services), and outsourced (e.g. B2B Gateway).

The EDI Engine Manages:

- Trading partner maintenance
- Flat-File Mapping via tables
- Application File Mapping via tables
- Validation and Cross-Reference Maintenance via tables and small portions of Gembase Code
- Flat-File Only
- Transactions

## Checking Credit

With Ross ERP, you have the flexibility to provide the highest level of customer service while reducing your risks. Within this function you can:

- Check credit at time of order entry and creation of shipping documents.
- Credit checking can be against both credit limits and overdue debits.
- You can predetermine the action to be taken when a customer exceeds credit limit, by customer. The Order can be taken and placed on Credit Hold for review and release, the Order can be taken without going on Credit Hold with just a warning, or you can reject the order.
- Validate customer credit levels and continuously monitor available credit with each new order.
- For each customer, you have the option of setting both a credit-warning amount and a credit-hold amount. You are automatically warned when your customer reaches the credit warning amount, and again when the credit hold limit occurs.
- You can setup categories for new customers that you may want to watch closely.

## Flexible Units of Measure

In addition to the Dual Inventory Units of Measure, you can setup unlimited Units of Measure for Order Entry, as well as predefine by customer, or unit of measure by item.

- Based upon the Unit of Measure conversion, Ross ERP will automatically convert the Sales Order UOM to the Inventory Unit of Measure for checking Inventory availability and for creating Pick-lists for Shipping. Internal documents for picking and shipping will be in your inventory units of measure, whereas Sales Order Acknowledgements and Invoices will be in the Customers Unit of Measure used on the Sales Order.
- If you have Packaged Items, you have the ability to enter both the Sales Unit of Measure and the Package Unit of Measure on the Sales Order.
- You also have the capability to override both the Sales and Pricing Units of Measure on an individual Sales Order.

## Customer Specifications

For items that have lot characteristics defined, you have the ability to setup and use Customer Specifications during Order Entry.

- Customer Specifications are predefined limits (minimum and maximum value) for characteristics.
- If you are using Available to Promise during Order Entry, it will automatically compare the actual characteristics of each lot to the customer specification and show you which lots match the customer's specification.
- When creating pick-lists, the system automatically selects the lot that matches the customer's specification. This allows you to provide superior customer service and ensure that you only ship products that meet your customer's specification.
- A Customer Specification can include multiple characteristics.
- If a customer does have a customer specification predefined before order entry, a pre-existing specification can be assigned during the order or the limits individually entered for each characteristic.
- If a customer has a predefined customer specification, you can also allow or prohibit any overrides to the limits on individual orders during order entry.

## Inventory and Available to Promise

Ross ERP provides you with all of the information you need to make the best business decision about reserving product for customers. And during order entry, current inventory quantity on hand, quantity available and outstanding order quantities are always displayed.

You can elect to either Reserve Inventory based upon current Quantity on Hand or use Available to Promise to do time-phased inventory reservations. Inventory Reservations considers what is currently available in inventory, and allows you to reserve inventory during order entry. With this you can reserve inventory for customers with certainty of having it available to ship. You can predefine by customer if Reservations are automatic, prompted for confirmation during order entry, or not available.

Available to Promise considers current inventory availability and planned inventory receipts by date. Released Jobs, Planned Jobs, Suggested Production and Outstanding Purchases are included as available to promise sources. Your customer's required date is matched to the closest available source and promises made against the source. This allows you to maximize inventory levels by not tying up or holding current inventory for future customer requirements when there is a planned receipt prior to the ship date to the customer. And if you are using Customer Specifications, Available to Promise automatically compares the customer limits to the actual characteristics of lots and notifies you of the lots matching the customer specification.

## Discounts, Rebates and Bill-backs

You have the option of Customer specific price by item, Customer contracts, multiple price lists with each customer or ship-to being associated with a price list, and list price by item.

During Order Entry, the sales price is automatically determined based upon the price method previously setup by customer and product. If no price has been established, it defaults to the list price. Prices can be overridden or entered manually, if allowed. All price overrides and manual entries are automatically tracked with a price audit and reason.

- Pricing can be tiered based upon either order quantity or amount.
- Contracts for customer and product include effectivity dates.
- Multiple customers can be grouped together under a price list.
- Future Price Increases can be entered for contracts and price lists in advance with effective date of price increase. Mass price changes can be performed by percentage increase or decrease.
- Promotions can be setup for special pricing of a product for a specific period of time.

Discounting can be setup at both the line level and the order total level, and can be based on quantity or amount. Discounting can be based upon customer or customer group and product or product group.

- Discounts are calculated and displayed on each sales order line during order entry. Both the discount amount and discount percentage are displayed. Any discount overrides, if allowed, are also tracked with a discount audit and reason.
- Total Order Discounts are displayed in both percentage and amount at the sales order summary, based upon customer discount group.

You can setup Freight Pricing as part of the product pricing and included in the product price as a delivered price, or can be calculated and added to the product price when freight is prepaid and added to the order. Additionally, freight allowances for customer pickup can also be calculated based upon freight terms. Or freight can be added manually during the Order Summary.

## Shipping

The Shipping Function includes the selection of inventory by lot to ship to the customer, the creation of picking and shipping documents, and the confirmation of shipment and inventory updates.

You can generate shipments by either Shipping Horizon Date or user defined Shipping Selection Criteria.

- If you are using the Shipping Horizon Date method, all outstanding sales orders due for shipment on or before the horizon date are displayed; and the display can be filtered by Customer, Sales Order, Customer Purchase Order or Item. The user can select what orders to ship or deselect what orders not to ship with the ability to override the outstanding order quantity for shipment.
- If you are using Selection Criteria options include Customer Number range, Sales Order number date, Shipping Date range and Item range. The Selection Criteria can include multiple options. After entering the Selection Method, the user is prompted for the values to be included for selection. The system then selects the outstanding sales orders that match and creates the pick-lists.
- Ross ERP can automatically select only the lots with lot characteristics that match your customer's required specifications for the order, with the final selection of lots based upon the picking rules set for the particular warehouse.
- If your products have shelf life with expiration date controls on each lot, then customer distribution dates are considered in selecting lots for shipment to customers. The distribution day defines the minimum number of days of shelf life remaining upon customer shipment; and can be defined by customer and/or by product.
- It will automatically generate the shipping documents based upon the pick list information.

## Customer Invoices

With Ross ERP you can automatically generate invoices upon confirmation of the actual quantity shipped, using the quantity confirmed at the time of shipment and either the price at the time of sales order entry or the price at the time of shipment.

- For Potency or Active Unit items, the actual weight or quantity shipped can be used for invoicing.
- Accounting can choose to review or approve invoices before they are released, and make adjustments.
- Create an invoice for each shipment, combine invoices for multiple shipments to a customer bill-to.

The handling of cash receipts and allocation of cash to outstanding invoices, as well as the updating of accounts receivable with current outstanding balances is seamlessly and automatically managed.

## Direct Invoices

Direct Invoices provide you with the ability to enter the Sales Order, select lots and reduce inventory and create Invoices all in one transaction. This can be useful for sale of product from public warehouses or product on consignment in customer locations, where there is no actual shipping process. This is also useful in creating Customer Debits in which an inventory update occurs.

## Transfer Orders

If you have multiple locations/warehouses and ship products from one warehouse to another warehouse you can use Transfer Orders for this.

- When entering a Transfer Order, you specify both the source and destination warehouse. Just like a Sales Order, you can promise inventory to a Transfer Order. The shipping process of a Transfer Order is identical to that of a Sales Order, in selecting inventory and confirming shipment. This results in only one procedure in your shipping department for both customer orders and transfer orders.
- Upon receipt of the Transfer Order shipment at the destination warehouse, a Receiving Confirmation and Inventory Put away process occurs, very similar to that of a Purchase Order receipt. Again this simplifies the Receiving process with Transfer Orders and Purchase Orders being similar.

## Credit Memos

The Credit Memo process is very similar to that of Sales Order entry in which a Customer is specified along with an item and quantity.

- The originating Invoice and Line number can be entered on the Credit. This automatically enters the product and actual selling price into the Credit Memo. It also validates that a prior credit has not been given for the same invoice and ensures that a credit is not given for a greater quantity than was shipped. Inventory can be updated through a return from a customer credit memo.

## Sales Inquiries and Analysis

Ross ERP provides you with comprehensive sales information from current, open and shipped orders.

- You can inquire on open or completed orders in multiple ways – by customer, by product, by customer purchase order number, by sales order number and by date range.
- You can perform inquiries and generate reports for even more detailed analysis because full details of all shipment and invoice transactions are maintained.
- Unlimited Sales History is maintained for multiple year sales analysis and reporting.
- Online Sales Analysis is available with information on quantity, price and cost. Detail Inquires with multiple selection filters by customer, date range, product group, product, sales rep, etc is available, as well as Summary and Detailed Reports.
- You have full comparison reporting, with the ability to compare current sales to sales of previous periods and previous years, and you can compare actual sales to sales budgets.

## Customer Portal

Enterprises are recognizing that it makes good business sense to allow customers and partners to access information and obtain self-help via the Internet– it lowers the cost of support while raising customer satisfaction.

Today companies are integrating their Web site's buying and selling processes into the company's Supply Chain and CRM solutions, and linking back office, customer and marketing processes. Ross ERP Customer Portal enables you to extend classical CRM to include all Web-based interactions with your customers and partners – providing consistency and synchronization with all other interaction channels. With it you can offer customers and prospects value before, during and after the sale, and take full advantage of cross-selling opportunities. Additionally, you can leverage your existing Ross ERP applications to:

**Product Catalogs:** Using the dynamic nature of the Internet, changes in product availability, pricing and attributes can me made available, instantly, to all of your customers and prospects. You can also filter information to ensure that customers with unique terms only see the pricing and products that are relevant to them. And, at a very low cost, you can run targeted sales promotions, to sell excess inventory for instance, using the Internet.

**Self-Service Inquiry:** You can provide your customers with easy, immediate answers to order status, shipping status and availability questions. You can even provide order history look-up allowing customers to search for, and repeat orders based on past activity. As an added benefit, your CSR's have more time to address complex and sensitive customer issues.

**Self-Service On-Line Orders:** You can let your customers place orders on-line. And because it is linked directly with your other Ross ERP solutions, order processing is streamlined and all opportunities for human-error removed.

**User Management:** Utilizing a secure login to provide controlled access to your other Renaissance solutions for on-line, real-time inquiries and transactions. The User Manager provides a registration page for new users and profile management to maintain existing user account profiles. It utilizes user roles to further control and personalize access to your system.

According to industry analysts, 25 - 40% of the cost of implementing customer commerce / self-service portals can be attributed to integration with your back-office systems. Because this is completely integrated with the other Ross ERP solutions, you virtually eliminate that cost and effort - your customer portal plans can be implemented quickly and affordably. Moreover, it enables your users to interact with your customers in the way you customers prefer. And it is completely safe and secure. You have complete control over the information published to the Internet with role-based administration and security.