Sage ERP X3

Process Manufacturing

Designed to support the dynamics of process manufacturing, Sage ERP X3 Process enables manufacturers to achieve greater product and process consistency, while improving the ability to satisfy increasing customer demand.

In particular, the advanced planning and control capabilities of Sage ERP X3 Process use real time and historical information to help manage inventory levels and costs, optimize product mix, reduce waste, and shorten product development cycles. Its industry focus and modular design promote faster implementation of key process and business functions to provide a rapid return on investment.

Formula Management

Formula management is the basic building block of the Sage ERP X3 Process Suite. Unlike its bill of material equivalent in the discrete world, formulas specify the ingredients required to make an end item. And, because ingredients can be expressed in different proportions (such as gallons, liters, pounds), Sage ERP X3 Process provides a powerful unit of measure conversion engine that accounts for this inherent variability and integrates it with the production process. This natural integration is important because it allows ingredients to be added at different times during the manufacturing process. And it permits specified routing steps to be run simultaneously, such as when a batch must simmer at the same time another operation commences.

Formula Management takes the complexities out of dealing with specific gravity calculations, calculations for theoretical vs. actual yields, multiple formulas for the same product, and decimalpoint precision for managing unit quantities.

Sage ERP X3 Process supports multiple packaging variations per product by permitting individual items to be tracked and processed in different package or container units than those in which they can be produced or sold. This feature allows users to view inventory availability and to process transactions for products according to their unique packaging unit. It not only minimizes the number of product numbers that need to be maintained, but it allows products to be priced and sold in ways that satisfy specific customer requirements.

Measurement of the production process, as well as sound pricing strategy, is based on valid cost information. Using traditional legacy software, process manufacturers have long had difficulty setting up and maintaining such vital information. With Sage ERP X3 Process, cost data is integral to defining and producing product. Once formulas are created, costs for intermediate and finished goods are automatically calculated based on user-specified methods, overhead, and batch cost factors. Both standard production reporting and purchasing functions automatically update actual costs, ensuring timely updates and accurate cost calculations. Armed with timely decision-making tools such as variance reports, margin analyses, and work-in-process reports, managers can make more informed decisions.

Sage ERP X3 Process also accounts for by-products of the production process, as well as maintaining raw material potency and other key product attributes.

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Lot Control and Tracking

Either by government regulation or to satisfy company requirements for quality assurance and warranties, many process manufacturers have a critical need to maintain lot-related information and trace its use. Sage ERP X3 Process provides such tracking and control to the extent that any product or ingredient defined as lot-controlled will have its identity recorded on any material transaction. It is also possible to allocate inventory immediately from a specific lot on demand to meet any specific customer requirements prior to an order being placed. In addition, the system provides complete expiration date management, affording users the opportunity to pull material from lots prior to their expiration date, resulting in reduced waste and lower inventory costs.

Quality Management

A key success factor for many process manufacturers is knowing the quality characteristics of finished goods at various stages in their life cycle. Sage ERP X3 Process is designed to track and maintain quality specifications and test results for raw materials, intermediates, and finished goods. It tracks material quality from procurement and production—all the way to the customer. As batch production runs of finished goods are completed, test results are recorded and maintained together with production history.

Regulatory Compliance

Dealing in a simple and accurate way with the complex procedures demanded by government hazardous material reporting and labeling is a major concern for process manufacturers. Sage ERP X3 Process provides users with alternatives—as attachments linked to the products or through full-featured, integrated third-party solutions—for maintaining appropriate safety information for both raw materials and finished goods MSDS. The system also issues container labels, as needed, for any drum, pail, carton, or box containing potentially hazardous materials.

Batch/Continuous Processing

Sage ERP X3 Process affords complete command of process production. Production runs can be scheduled based on user-defined criteria: An hour, a shift, or any other period of time that fits the production cycle. Work orders are updated as production moves through work-in-progress, while any required changes in ingredient quantities are easily reported as they occur. Standard quantities can either be backflushed or recorded as completed production. Sage ERP X3 Process also allows the user to plan a production run and, based on availability, instantaneously rescale the batch up or down to reflect availability of ingredients or resource constraints. Ingredient quantities may be scaled by automatically calculating the expected batch yield.

MRP/MPS/CRP

Sage ERP X3 Process provides the capability to analyze purchase orders, scheduled batches, and batches in progress so planners can view the impact of demands against available inventory. Independent demand (orders, forecasts, and others) and dependent demand (lower level demands generated by a top level or intermediate level need) are matched against available inventory. When demand exceeds supply, the system recommends placing either a production or purchase order to satisfy the need. This suggestion takes the form of time-phased requirements so that material is either completed or scheduled to arrive exactly when needed.

Sage ERP X3 Process supports both finite and infinite capacity requirements planning. Finite capacity planning can be done automatically through use of a powerful, integrated optimization facility that helps resolve bottleneck areas according to user-defined constraints. Material planners can also use an interactive drag-and-drop scheduling tool—in GANTT format—for manual viewing, simulation, and update of outstanding work orders and routing operations.

Optional Nutrition Value and Label Interface

An optional add-on interface to Genesis® R&D, the leading software application for product development and nutrition facts labeling, enables food manufacturers to perform nutrition analysis (calories, RDA, and more), create allergen statements and nutrition facts labels, comply with HACCP requirements, and more.

Optional Weighing Scales Interface

The Weighing Scales Interface is an optional add-on that integrates weighing scales data into Sage ERP X3 processes. It offers expanded container and box level management, promotes unit of measure conversion and accuracy, provides hazard material precautions and notifications, generates multiple labels, and more.

Features and Functions

Comprehensive Product Data

Product attributes and categories
Families of products for MPS | Multiple manufacturing modes—ATO, MTO, CTO, MTS, process | Multiple replenishment rules with seasonality | Multiple material handling controls—lots, expiration dates, potency | Multiple units of measure

Formulas and recipes
Multilevel | Supports variants and options | Validity dates | Mass maintenance

Technical Data Management

Factory calendars

Work and cost center management
Machine, labor, subcontracting

Routings
Multiple routing | Operation dates and time | Master routing | Library of standard operations

Setup rules
Subcontracted operations | Forward and backward scheduling | Plan association

Replenishment

Minimum/maximum

MRP

User-defined replenishment rules (net requirements, lots, fixed period coverage, and safety stock adjusted for seasonality)

Pegging

Intersite based on contracts and transfers between two partnering sites

Cost Accounting

Definition of cost elements

Calculation of planned costs (standard, revised standard, simulated, budgeted)

Actual production costs

Variance analysis per item

Accounting interface

Planning

MPS (multisite, planning bills of material, bills of labor, operational orientation, budget, simulation)

Calculation of material requirements
Multisite | Analysis of suggested requirements | Replanning messages

Order Release

Multi-item release

Feasibility reasons

Material and load allocations

Forward and backward scheduling

Order smoothing

Shop traveler

Production status reporting (by work order or batch)

Control without production order (rate-based scheduling)

Decision-Making Tools

MPS and MRP schedules
Analyze multiple sites by product families or products | View of stockouts and past due orders

Work plan
Analyze single sites and single products | Order grouping | Material planner workbench

Manufacturing analysis
Resource utilization | Late order analysis | Delayed operation analysis | Operational yield | Material yield | Production yield

Interactive drag-and-drop scheduling using GANTT Diagram
Load simulation | Finite capacity planning

Inquiries

Work-in-process by product

Work-in-process by load

Projected stock by date

Analyze loads in graphical format

Allocation details

Order replanning

Progress of production orders

Production order status reporting

Automatic Processing

Mass allocation and deal location

Mass forward and backward scheduling

Work order releases

Automatic work orders

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