SYSPRO in the

Configure-to-Order

Manufacturing Environment

Essential to success is having integrated systems that can foster customer and supply chain collaboration, provide comprehensive visibility to your operations and address the specific challenges inherent in your operational environment.

SYSPRO enables configure-to-order manufacturers to differentiate their product offerings, improve delivery performance and customer service, and streamline constituent configure-to-order processes and operations.

SYSPRO embodies the customer-centric philosophy. We focus on enabling our customers to excel by providing world-class integrated solutions that span multiple functions and place as great an emphasis on collaboration as transactions.

SYSPRO software incorporates integration and business process management layers into existing Enterprise Resource Planning (ERP) applications that manufacturers can use to create their own customer-centric business processes.

SYSPRO Manufacturing software integrates seamlessly with SYSPRO Financials and Distribution.

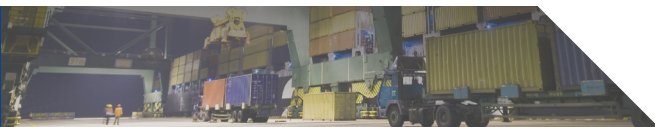# SYSPRO solutions for the Configure-to-Order manufacturing environment

SYSPRO's integrated nature provides real-time, complete visibility across your operations. Its easy-to-use, powerful functionality promotes improved manufacturing and operational efficiency, as well as excellent customer service, throughout the entire enterprise:

- The rules-based **Product Configurator** mitigates the need for multiple bills of material, facilitating the capture of permissible configuration design and con-straint knowledge via the definition of multiple rules and selections. This enables the building of a pre-defined logic engine, including automatic costing and pricing, that facilitates rapid and accurate order taking by non-technical staff and thus reduces the involvement of experts in routine transactions. Additionally, it enables the automatic generation of factory orders and purchase orders with all the relevant detail required to configure the ordered product, thereby reducing configuration errors and streamlining the sales cycle. Furthermore, the Configurator Wizard can be used to generate quotes, estimates and bills of material, and configurations may be stored in a library for the rapid generation of repeat orders.
- Planning the manufacture of commonly used sub-assembly stocks and the purchase of their constituent materials is facilitated by SYSPRO's **inventory optimization** and **material requirements planning** features.
- The **Inventory Optimization suite** of modules enables the analysis and ranking of stock for the modeling and creation of suitable stock policies to drive optimal inventory levels and reduce obsolescence.

- SYSPRO's multi-level master production scheduling provides the capability to optionally master schedule standard stocked sub-assemblies based on the configurable inclusion of sources of demand and supply, as well as the application of requirements rules and order-point replenishment policies.
- Purchasers can use the resulting purchase suggestions to plan material procurement, while planners can use the resulting jobs as input to whichever scheduling tool within SYSPRO is most suited for modeling their capacity and scheduling requirements. Scheduling functionality extends from manual load leveling in the **Work in Progress** module through to automated single- or multiple-constraint-based scheduling and sequencing in the Factory Scheduler module.
- SYSPRO's **Work in Progress** features enable the efficient execution of jobs, as well as day-to-day monitoring of job-related activities, costs and excep-tion events. Detailed job information, including: costs for material and scrap; internal and external labor; and fixed and overhead costs is immediately acces-sible via the system's querying, reporting and excep-tion management features.

Key features and functions in SYSPRO for the Configure-to-Order manufacturing environment

- **Backflushing**
  In SYSPRO, backflushing enables you to record the manufacture of items without having to create works orders. This is particularly relevant in situations where production runs are short and the benefits derived from creating a works order to track the activity on the shop floor do not justify the cost of processing all the data normally required for a works order.
- **Blanket purchase orders**
  SYSPRO's blanket purchase orders enable you to create, maintain and use contract purchase orders, as well as monitor purchase order receipts against a supplier's contract. The purpose of these contracts is to allow a fixed price to be recorded for a specified period and/or volume, plus an agreed delivery schedule.

- **Configuration libraries**
  Useful for improving the time taken to process quotations and orders for commonly sold configurations of configure-to-order products, SYSPRO's Product Configurator libraries enable you to store and rapidly retrieve specific configurations. During quotation or order processing, you can simply select the relevant library code instead of going through all the selection criteria and options with your customer.
- **Configuration selection criteria**
  Selection criteria can be used to decrease the number of options/components/operations that can be chosen by the person running a product configuration. This is done by linking options/components/operations to selection criteria. The invalid selection criteria feature enables the linking of selection criteria

in such a way that, if a criterion is chosen (during configuration), all subsequent criteria linked to that choice are not available for selection. This prevents the selection of invalid combinations and ensures that the configuration functions correctly.

■ **Costing per warehouse**

SYSPRO's costing per warehouse feature gives you the option of using different costing methods per warehouse where the nature of the items held may require different methods of valuation for accuracy. For example, you may manufacture as well as distribute a product and therefore wish to apply standard costing to your work-in-progress and average costing to your distribution warehouse; or you may stock high-value, low-usage raw materials which require last or FIFO costing for valuation accuracy.

■ **Estimating**

SYSPRO's estimating functionality enables the definition of the materials and manufacturing processes required for the manufacture of custom-made items. Further more, it provides cost and lead-time calculations to enable you to derive accurate price and delivery information.

■ **Forecasting**

SYSPRO's Forecasting enables the entry of manual forecasts, as well as the automatic generation of forecasts via a variety of forecast algorithms, including those that compute for trends, seasonality and cyclical events. In addition, the module provides a competition fore casting method (also known as focus forecasting or the tournament method) which attempts to select the most suitable forecast algorithm based on a selected error measurement and your recent SYSPRO sales history data.

■ **Inventory optimization**

The reason for holding inventory is to provide service to customers while dealing with uncertainties in demand and supply. Inventory optimization allows the drivers of inventory to become visible and measurable, thereby providing an understanding of what can be changed and how easily. It quantifies the relationship between the different drivers so that the effect of change can be modeled and the best strategies for optimization identified.

■ **Product configuration**

SYSPRO's Product Configurator enables manufacturers to differentiate their product offerings through the ready customization of product to meet customer specifications. The Product Configurator provides a rules-based configurator that will primarily help companies efficiently process products that are manufactured to order, assembled to order or sold in many configurations.

■ **Production scheduling and sequencing**

SYSPRO scheduling tools offer the flexibility to address different levels of complexity and the automation required to balance scheduling priorities, constraints and conflicts. While SYSPRO's Material Requirements Planning and Work in Progress modules offer infinite capacity scheduling, as well as basic single-level forward finite loading for single constraints, SYSPRO Factory Scheduling (SFS) offers powerful finite backward, forward and bi-directional scheduling by job or resource. Creation and manipulation of schedules can be done manually or via automatic methods which allow for multiple constraints, including material availability in a multi-level bill of material environment.

■ **Quotations**

The quotations function is an indispensable tool in the Configure-to-Order manufacturing environment, reducing client quote turnaround times through its structured design, ease of use and capability to copy from existing quotes. Central to the Quotations module, it provides an ordered approach to formulating multiple offers to sell products and services, and is fully integrated with the rest of SYSPRO, thereby ensuring the currency of associated data and integrated with the rest of calculations.

■ **Replenishment rules by warehouse**

In SYSPRO, order policies refer to the rules that SYSPRO applies when calculating suggested replenishment orders for purchased or manufactured stock items; you use these rules to apply the order policies that your company has formulated. SYSPRO order policies are extremely flexible and enable you to cater for the possibility that different warehouses in your organization may have different replenishment rules for the same stock code; for example, branch warehouses with different local costing and storage issues. To this end you can configure order policies at warehouse level, specifying such criteria as major and minor order multiples, and minimum and maximum order quantities.

■ **Safety stock**

The specification of safety stock is a key technique for mitigating the problems associated with demand or lead-time uncertainty. In SYSPRO, exception reporting highlights stock below safety at a snapshot in time, while the Material Requirements Calculation can be configured to include below-safety-stock levels as demand triggers. Furthermore, SYSPRO's Inventory Optimization suite of modules enables the tracking and calculation of optimal safety stocks based on your inventory investment and service-level profiles.

■ **Trial kitting**

The Multi-level Trial Kitting program helps you to establish which jobs need to be raised through several levels of a bill-of-material structure, as well as the purchasing requirements required to complete the build. All sub-assemblies and components are processed, with the program multiplying the quantity by the net requirement of the parent. This result is then compared to the net quantities on hand to determine any shortages.

■ **Work in progress tracking**

Work-in-progress tracking enables you to track the progress of jobs until completion. Standard reports and queries provide information on complete and outstanding operations; they also highlight where variances are encountered to date between expected and actual material costs and quantities, and expected and actual labor costs and hours. ❖

About SYSPRO

SYSPRO is an internationally-recognized, leading provider of enterprise business solutions. Formed in 1978, SYSPRO was one of the first software vendors to develop an Enterprise Resource Planning (ERP) solution. Today, SYSPRO is a global business solutions vendor, represented on six continents and by more than 1500 channel and support partners. Over 14,500 licensed companies across a broad spectrum of industries in more than 60 countries trust SYSPRO as the platform on which to manage their business processes.

Customer focus is a core component of SYSPRO's corporate culture and is one of the key reasons why SYSPRO maintains a strong leadership position in the enterprise application market. By focuing on people and building lasting relationships with customers and partners, SYSPRO consistently excels at guiding customers through all aspects of their implementation and ongoing usage. The aim is to deliver world-class software that gives customers the control, insight and agility they need for a competitive advantage in a global economy. As such, SYSPRO provides a unique combination of robust, scalable technologies that ensure minimal risk and a high return on investment.

SYSPRO is continually developing remarkable software that simplifies operational effectiveness and keeps customers in control of their businesses. Our vision is focused on meeting customer needs today and in the future.

The most integrated, uncomplicated
and effortless business software solution
for small and medium enterprises

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