SYSPRO solutions for the
Job Shop manufacturing environment

Remaining competitive and profitable in a job shop environment demands flexibility, speed and accuracy in meeting customer requirements. SYSPRO provides an end-to-end solution for to-order manufacturers by helping to streamline quote-to-invoice processes and improve operational, planning and financial management.

Our comprehensive solutions help job shop operators manage the challenges inherent in the custom-order fulfilment process, including improving customer collaboration and service, ensuring quality and on-time delivery, maintaining accurate job costing and pricing, and optimizing shop floor scheduling and sequencing.

Our enterprise performance management (EPM) capabilities enable you to measure and monitor Key Performance Indicators (KPIs), and set up digital dashboards. A set of pre-configured KPIs, based on industry standards, is provided for different areas of the business, as well as the option to create your own.

By leveraging SYSPRO’s powerful technology and features, you can streamline your processes and gain complete visibility to shared business intelligence across your operations.
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SYSPRO’s outstanding flexibility ensures a comprehensive set of solutions to help you manage a complex production environment, enhance operational decision-making and improve organizational visibility.

For configure-to-order environments, SYSPRO promotes improved delivery performance and streamlined constituent processes through its rules-based Product Configurator. It facilitates rapid and accurate order-taking by non-technical staff, and enables the automatic generation of factory orders and purchase orders, with all the relevant detail required to make the correct customer-specific configuration of the product.

Upon confirmation of a quote, SYSPRO has the capability to automatically raise all actions related to fulfilling the customer order, through its sales order, purchase order and job linking features, thereby ensuring the integrity of quoted and margin information, and the accuracy of order details. You can print or produce quotations and order acknowledgments in multiple user-defined formats, and email or fax electronic versions directly from SYSPRO to your customers.

SYSPRO’s e.net Solutions facilitates 24/7 electronic processing of customer orders and order acknowledgments.

Integration with selected CAD systems allows you to import multi-level bills of material from the design models, and thereby reduce double-entry and the margin for error, as well as provide a solid basis on which to calculate costs, prices and lead times for quotations. In addition, you can store and link technical drawings, photographs, video clips and other multimedia files to key data in SYSPRO such as quotes, jobs and products for on-demand viewing.

Key features and functions within SYSPRO for the Job Shop manufacturing environment

- **Approved manufacturers**
  SYSPRO enables you to record a list of manufacturers whose parts you are prepared to accept when ordering a specific SYSPRO part. You define (per stock item) the specific manufacturers’ part numbers that are acceptable. This ensures accurate purchasing, and provides the facility to link a specific supplier to a preferred manufacturer.

- **Bill of jobs**
  Creating a bill of jobs enables you to view the links and progress of related jobs, as well as to query and report on the rolled up costs. You can create a bill of jobs (automatically or manually) for all manufactured components that exist in a product’s bill of material chain. This is particularly useful in a make-to-order environment where a customer order is received for a product whose components include other manufactured products for which jobs must be raised.

- **Bill of material routings**
  The routings functionality enables you to define the operations required to manufacture your products, as well as to cost the labor, and fixed and variable overheads incurred in these operations. Tooling, progressive scrap and transfer quantities are all catered for, as is the facility to record detailed manufacturing instructions.

  You can define the expected times for the different elements of internal operation time, such as setup,
start-up, run, teardown, wait and movement times, and can track these against actual times in jobs. Subcontract operations are also catered for, with the facility to define supplier, costs and lead times. Multiple routes allow for the definition of alternative operation resources, such outsourced production, contract labor hire, and substitute machines or work centers, as well as for the separate definition of routings for items under engineering change control. Multiple recovery rates allow for costing of the different routes, as well as what-if costing simulations. The routing provides the mechanism for calculating accurate lead times, as well as for calculating labor requirements and expected labor costs for jobs.

Bill of material structures
The structures functionality facilitates the definition of multi-level assemblies, formulae or recipes for manufactured products, including detailed material narrations and planned scrap, and provides input to the calculation of expected material requirements and costs for jobs.

You can construct quantity or percentage relationships between assemblies, sub-assemblies and components, including relationships where the number of fixed components required is related to a quantity of the batch, and where the number of components required is fixed regardless of the batch. The Component Where-Used Query enables you to quickly establish exactly where a raw material or sub-assembly is used within a bill of material structure. The Replace Where-used program enables you to quickly replace an item with a valid substitute component in those bills of material in which it is used, thereby helping you to streamline the introduction of product design changes.

Blanket releases
SYSPRO Blanket Sales Orders and Releases provides you with the tools to record contracts with your OEM customers, as well as an accurate means of tracking and reconciling cumulative release quantities and converting them into sales order quantities. These features enable you to easily update call-off schedules for your OEM clients, as well as to reconcile the cumulative position against the OEM contracts. Confirmed customer schedules, in turn, become an input to production and purchasing requirements linked to the relevant schedule requirement dates.

Cash flow management
SYSPRO provides a powerful cash-flow modeling tool which enables you to create multiple cash-flow models based on optional inflow and outflow criteria from receivables, payables, cash book, general ledger, purchasing and sales. The Cash flow Forecasting model enables you to view the company’s projected cash position into the future by applying outstanding payables (cash requirements), receivables (payment projections) and other cash projections to the current bank balances. The information is presented in graphs and listviews in customizable panes.

Component to operation tracking
SYSPRO enables you to specify at what point in a job materials are required: job start or operation start. If you select the latter, you can indicate on which production operation a component or raw material is required, thus facilitating just-in-time material requirements planning. Material allocations are pegged to the start of the operation, rather than to the start of the job, thereby helping to reduce unnecessary inventory and work-in-progress.

Estimates
Job cost accuracy is essential in attaining correct pricing and profitability, as well as to assess the reliability of the quoting process. SYSPRO’s Estimating functionality enables the specification of materials, labor and overheads involved in carrying out the specified work, thereby providing a complete view of costs and lead time for job shop or project-based work. Additionally, its’ what-if capabilities enable you to quickly model the cost and lead-time impacts of using alternatives, such as different suppliers, routings and materials.

Flexible production transaction posting
SYSPRO provides for manual, semi-automated or fully automated posting of production data, and for standard or actual quantities and time. Specific issue, kit issue and back flushing features allow for manual and semi-automated processing, while SYSPRO e.net Solutions facilitates secure integration to best-of-breed shop floor control systems for fully automated posting of production data.

Inspection
You can flag purchased items as requiring inspection so that during receiving, detailed records of counts, inspection, scrap, rejects and returns is recorded. Units in inspection are visible, but unavailable for use until accepted into stock. Similarly, work in progress inspection gives you the tools to inspect manufactured product quality and, depending on the results, select to receipt, scrap or rework quantities. You can perform inspection items as the original product to manufacturing, or as a different product or products, which is useful for end-products of variable grade. Also, you can receipt items into a warehouse different from what was originally planned.

Manufacturing unit of measure
You can define and process both manufactured parent and component quantities in a unit of measure other than stocking. Unit costs, quantities, values, run time and time taken (where applicable) are displayed and printed according to the relevant unit of measure selected.

Multi-constraint scheduling and sequencing
SYSPRO Factory Scheduler enables you to build a complete profile of your factory capacity by facilitating the definition and modeling of capacity loads around multiple constraints, such as machine availability, efficiencies, relative efficiencies and utilization;
labor shifts and calendars; tooling; and in the advanced scheduler around material availability for bills of jobs. Sequence-dependent changeovers, transfer quantities and operation make, span and slack times are all catered for.

The system also caters for the definition of finite resources, such as lathes, which have the capacity to handle only one job at a time, or infinite resources, such as ovens or drying rooms, which have the capacity to handle multiple jobs in parallel, and includes the capability to designate resource states and preferred resources. Furthermore, it enables you to define capacity based not only on machine availability, but also on the characteristics or match properties (such as firing temperatures) of the product being scheduled.

Quotations

The Quotations function enables the creation of detailed quotes based on the work to be done and provides an ordered approach to formulating multiple offers to the client. It facilitates the automatic creation of jobs, purchase orders and sales orders based on approved quotes, thereby ensuring the integrity of the quoted and margin information throughout the system.

For project and service environments, this same functionality is available, with the added benefits of hierarchical analysis of costs and margins per head and section.

Traceability

Particularly for companies in highly regulated industries, the tracking and replacement of defective materials, as well as the efficient management of product recalls are compliance-critical activities. SYSPRO’s traceability features facilitate the tracking of materials through the receiving, manufacturing, assembly, inspection, stocking and final dispatch stages. This comprehensive traceability helps streamline product replacement and recall activities.

User-defined shop-floor documentation

SYSPRO provides you with tremendous flexibility in delivering electronic and paper-based instructions to the shop floor.

Using SYSPRO’s user-friendly stationery format program, you can design multiple formats for documents, such as works orders, job tickets and material pick lists. For each format, the design tool enables the rapid selection of the relevant pieces of data, such as the job master details, component requirements and routing details, as well as the various types of narrations. The system provides the option of using anything from simple text-based documents, through bitmap-overlays and Word templates, to sophisticated documents formatted with SYSPRO’s Crystal-based report writer.

Further enhancing this capability is SYSPRO’s Multimedia facility, which enables product-relevant multimedia instructions and designs, such as video, drawings and technical documents, to be linked and viewed online.

Work-in-progress tracking

SYSPRO’s fully integrated solution enables the capture, tracking and analyzing of job and product costs, and profitability in real-time. Details of expected versus actual costs for material and scrap, internal and external labor, fixed and overhead costs per job, or group of jobs, is available through SYSPRO’s querying, reporting and exception management features. These enable the identification of exceptions and problems as they occur, such as areas of high cost expenditure, production scrap and rework, and problems in the quoting process. Furthermore, the Job Cost Recalculation program allows you to re-calculate the job expected cost totals for labor and material, thereby providing a more realistic comparison if allocations are added after the job has been created.

About SYSPRO

SYSPRO software is an award-winning, best-of-breed Enterprise Resource Planning (ERP) software solution for on-premise and cloud-based utilization.Rated among the world’s finest enterprise-resource planning solutions, SYSPRO software’s powerful features, simplicity of use, scalability, information visibility, analytic/reporting capabilities, business process and rapid deployment methodology are unmatched in its sector. Formed in 1978, SYSPRO has earned the trust of thousands of companies globally for its suite of visionary, cost-effective software.