

Materials Management

The Basis of Logistic Control

The central components of the proALPHA® Logistics Control System are shaped by the fundamental principles of materials management: requirements planning and inventory control. These constitute the basis of successful sales, economic purchasing, and efficient production. The comprehensive processing logic behind the proALPHA Materials Management module and its well thought out data structures permit fine-tuning of company-specific requirements.

proALPHA guarantees the synchronised flow of materials and their corresponding values throughout the system. Material stocks, inventory movements, and usage appear identically whether accessed in financial or cost accounting records. This not only satisfies accepted accounting standards, but also makes real-time business data available quickly and at no additional expense.

Warehouse Management - More than the Usual Functions

In addition to the orthodox management of internal or external fixed or multiple storage areas where an item can be located, proALPHA also supports random storage. This means that the same product can be placed at any number of different locations within a defined storage area to account for any stockholding restrictions.

proALPHA can manage certain items solely as commissioned stock. This manner of control over such inventory not only simplifies tracking the level of customer specific configurations, but can also be advantageous for important, high value purchases.

Inventory can be differentiated by an unlimited number of product characteristics such as colour, quality, inspection status, size or weight.

The user can control whether the product is to be listed on a bill of materials and whether it is subject to production planning. It is possible to implement batch control of these products.

proALPHA controls any special activities required at a receiving dock or bay, or for restricted stocks. Consignment stocks can be managed on behalf of the customer or supplier. The use of stock can be controlled by storage area. In this way, the common mistake of counting stock intended for a prototype as on hand cover for sales or production can be avoided.

proALPHA Inventory Control is automatically triggered when an invoice is processed. The correct storage locations, quantities, and values for every transaction are always recommended and then posted. Every posting updates the product's moving average cost. Release of inventory for production orders is simultaneously debited against the particular cost driver and the issue of expendable items is assigned directly to an appropriate cost centre.

Highly Responsive Delivery with Low Inventory

Finely tuned inventory planning and an efficient purchasing system are prerequisite to maintaining responsive delivery rates while minimising inventory holding, ordering, and shortage costs.

proALPHA inventory control supports all known methods and accurately calculates inventory requirements for end products, sub-assemblies, raw materials and purchased items.

Materials requirements are established based on firm orders or the Master Production Schedule (MPS). Planning horizons can be adjusted based on the re-ordering times for items.

proALPHA supports both types of random demand inventory planning - independent as well as dependent demand. With dependent demand planning, an inventory requirement is created as soon as a critical stock level is reached.

Independent demand or market-oriented inventory is driven by a requirements (sales) forecast based on historical demand patterns. The quantities and the time horizon can be adjusted for every item.

Required quantities and dates are calculated by proALPHA for in-plant production or external sourcing. The type of procurement is interchangeable. Rather than a simple conversion of demand directly to purchase orders, proALPHA optimises the ordering and warehousing costs using economic ordering quantities and the re-ordering point method. For those items that must always be supplied at fixed intervals, order cycling is used.

Modifications to the suggested materials requirements plan are flexible in nature and simple to implement. These include a summarise function, and displays based on date, item, supplier, and by type of order. When the same management does not run the planning, release and procurement functions proALPHA WorkflowAutomation can take over the co-ordination of these tasks. In these circumstances, tasks are directed to the activity manager of the supervising employee where they can be processed and if necessary passed on to other co-workers. In the case of external suppliers, production orders or enquiries and purchase orders can be prepared directly from the materials requirements plan.

Taking Stock - Perpetual or Periodic Inventories

In addition to periodic stock counts, proALPHA supports all recognised inventory accounting methods. Whilst perpetual inventory systems may be most popular, physical beginning and ending inventories or, for high value stocks, an accurate random sample inventory, also have their places.

The preparation of the year-end inventory depends primarily on the accuracy of the count so that a valuation is produced consistent with generally accepted auditing standards.

The acquisition costs incurred for the raw materials inventory are normally calculated using the average cost method for each of the items. proALPHA manages other approaches as well, such as the specific identification of actual costs or a notional flow of costs, like FIFO. Generally, the lower of cost or market (LCM) rule is observed.

Convenient, flexible management and a number of alternative calculation methods make the valuation of finished goods and work in process inventories an efficient process. This flexibility is essential to provide the many costing options needed to support the requirements of national and international standards and legislation. Freely definable valuation schemas make it possible to simulate the impact of different calculation methods on the balance sheet before the inventory valuation is finalised.

Chaotic - without the Chaos

The management of random warehousing demonstrates the power of proALPHA to support alternative storage methods and business processes.

Every inventory storage area can be sub-divided into many different areas. Each of these areas can be organised differently. The type of storage in use describes this organisation, for example, high rack shelving, floating and circular storage designs, or, free storage zones partitioned into single storage areas. A high rack area for example, can be further sub-divided into shelves, rows, and bins.

The choice of a location for the storage and release of inventory can be automated according to various strategies. Standard strategies can be easily adapted to meet individual company procedures. However, all inventory movements must respect certain pre-set restrictions; so, for example, suggesting a small storage location for large container items can be avoided. proALPHA can also control weight restrictions on an individual and aggregate basis; for example, every storage bin is checked against any weight limitations as well as the cumulative total for the entire shelf.

It is still possible, of course, to manually enter inventory transactions as well as employ RF or other devices in more complex implementations.

Batch Production - Detailed Breakouts, Completely Traceable

For many companies today, detailed traceability in batch manufacturing has become a necessity in the light of the increased risk of hostile legal action and demands for compensation for damages resulting from product faults. It is also an indispensable component of quality management.

In proALPHA, it is an easy matter to trace an item's complete history back to its origins and usage. In this way, a user can identify from which batch a particular item was taken, which supplier delivered it, and any other orders potentially affected.

Once an item is subject to batch traceability, a batch number is recorded against every stock movement. During inventory allocation, an automatic selection can take place in accordance with various strategies. For example, the preferred selection may be the batch with the oldest expiration date or, the one with the smallest batch size. It is equally possible to use a notional allocation method, such as first in first out (FIFO). Mixed batches can be approved or intentionally prevented depending on the product and its intended use.

Visible Logistic Operations - Stocks, Movements, and Statistics

Of all the information available from proALPHA Materials Management, the optional planning data is perhaps the most useful. Inventory, stock orders, or production orders are displayed by totals or by storage area. At one glance, a user can be seen what quantities are currently available after taking into account buffer stocks, minimum stock levels and those pick-listed. The inventory status account provides a perspective over time where actual demands and on-hand balances for a given period are displayed and the notional inventory forecast provides instantaneous information about future delivery capabilities.

Even with this powerful inventory related perspective, proALPHA can offer still more interesting information retrieval possibilities. In addition to master data files, numerical and financial statistics are all available and stock movements can be reviewed not just by item but also by storage area.

The proALPHA Information and Controlling System is designed to prevent the user from drowning in the sea of available information. From a general overview, more, and more detailed information arrives, level by level, as desired, simply by pressing a key or clicking the mouse.