THE BEST SOLUTIONS
FOR THE GLASS INDUSTRY

ENTERPRISE

Client/Server system in native Windows environment for the integrated management of glassworks activities. Cutting optimization for automatic cutting tables. CAD systems. NC machining center and production advancement control and monitoring. External data acquisition on terminals and via bar code.

OPTIMA Software

www.optima.it

OPTIMA SOFTWARE TECHNOLOGIES

The best solutions for the Glass Industry

Customer and item master data

Offers and sales orders

Price list

Delivery notes and invoices

Production management

Cutting optimization and link to automatic systems

Production and shipping rack management

Production tracking (through bar codes)

Opty-Way® Enterprise is a sophisticated ERP system for the integrated management of glass companies. Designed and developed for Client/Server environments based on Microsoft DBMS®, taking full advantage of all their features. Opty-Way® Enterprise has been developed to run at top performance levels in a database environment with SQL standard engines.

The **Enterprise** project has been designed to meet the requirements of those businesses where information distribution is of crucial importance. Therefore, special efforts were made to integrate the product into the Windows environment and the software available for this operating system, which has now become the market standard.

Enterprise is a modular, built-in, latest-generation ERP system that can meet the requirements of the Sales and Production functional areas in the glass sector. Its integration with the wide range of Optima systems to optimize cutting, draw and process profiles, and manage racks makes Enterprise one of the world's most important and complete software systems.

Simple and efficient

The **Enterprise** software system has been designed, based on Windows logic, to make the application simpler and easier to use, thus structuring the user interface according to pre-defined specifications. When **Enterprise** is run for the first time, you will note how most of the interface set-up follows a predetermined and uniform scheme. This ensures rapid and precise understanding right from the start.

Studying and applying this philosophy has led to a significant reduction of the resources and times needed to learn and start-up the application program.

Multiple table graphics structure, customizable display grids, and multiple column sorting methods are just some of the features **Enterprise** offers to make the customer's work that much easier.

Rack-Way: integrated system for product racking.

Database integrity and security

Optima's ERP system relies on SQL technology to guarantee maximum processing speed and, at the same time, the highest-level of security for company data. Last but not least, SQL ensures the highest interfaceability with other systems.

Enterprise also tackles the problems of confidentiality and access control. The SQL database user authentication system guarantees maximum confidentiality and ease of use.
The system administrator can authorize users and groups of users directly through Enterprise, and also indicate what functions each group can and cannot access.

Printouts and Editing Reports

Enterprise offers the operator a real tool to create and customize print reports. The user can edit the structure of the print reports available in the basic software as required, without any need for written code or specific information technology knowledge. This makes the application program extremely flexible and allows the user to take any type of action.

Like any other ERP product that offers global management of a firm, Enterprise utilizes a set of basic archives that contain all the information that in some way is repetitive and standard for that specific company.

Customer master data archive

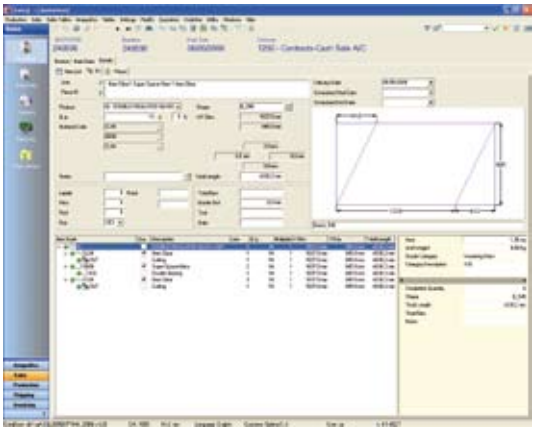
External contact names and data, such as Customers and Suppliers, or all the names related in some way to the firm can be managed using the corresponding Master Data archive. Likewise, a specific Master Data archive can be used to code stock items starting from the materials to be worked to coding of the finished products.

Machining operation master data archive

Different types of machining including a list of cost centers and departments in which the machining operations will be carried out can be entered.

Bill of materials and cycles

Bill of Materials (BOM) built on various levels. Possibility of managing a set of restrictions regarding the "replacement" of list items. New concept of "variants/options" of the classic bills of materials. Predefined work cycles can also be entered in the BOM structure.



Production control and tracking through bar codes.

Module to generate print reports.

Price list

Product price lists based on different criteria. Due to the extreme variability of the glass sector, it became necessary to adopt a very complex and articulated system to draw up sales price lists. In brief, **Enterprise** implements the following techniques:

- size-based
- x/y dimension range-based
- piece-based
- component sum-based (machining operations included).

It is also possible to define price lists by customer category or specific customer or by linking products to a specific customer.

Supply agreements

A glass company typically signs supply agreements with its customers. **Enterprise** allows the user to define special supply conditions for customers, for a certain number and type of product and for a certain period. This system is so simple that the number of price lists to manage is reduced to a minimum.

Offers to and from customers

Together with Master Data archive management, Order Management is one of the cornerstones of the **Enterprise** application. In fact, it can be used to process and define all the information relative to a work order received from a customer. This includes customer specifications, definition of the characteristics of the material to be worked as well as the single machining processes to carry out on the piece.

In this phase, which is certainly the most important in the entire data definition cycle, **Enterprise** carries out various processing functions. It is obvious that correctly defining data while they are being entered guarantees precise and efficient management of the entire production cycle. Data acquired from external sources can be processed by **Enterprise**.

Fiscal documents

Additional **Enterprise** features include creating fiscal supports, such as transport documents and invoices, and exporting (optional) these documents to accounting and/or administration systems. **Enterprise** offers users a wide range of functions:

- to produce the documentation needed to expedite goods shipping to the end customer
- to create an invoice starting from the shipping document or from scratch
- to manage the progress of order lines processed and existing in the document
- to manage the bill-book based on created documents
- to export document information to external systems (both accounting and statistical).

Production start-up and lots

Through the program's Selection functions the user can "select what" to put into production according to the available information, and to the capacities of the company production system (in-house or not).

After production start-up and for each type of machining operation specified, **Enterprise** generates many Work Orders that are subdivided, if needed, by the type of material to be worked. Work Orders generated in this way can be viewed and changed in the relevant sections they refer to (cutting, bending and all other machining operations the installed version can manage). Lot management provides a view of the different work orders linked to a specific production lot or run and the work order status.

Cutting optimization

In Enterprise, the optimization applies to various work stages and is dealt with differently according to the different requirements. Enterprise can be used for: Optimizing flat material cutting (glass, marble, sheet metal, plastics, etc.), Optimizing linear material cutting (spacer strips, bars, etc.), Optimizing the tempering furnace charge, and Optimizing piece racking.
Each type of optimization takes into account a set of parameters for calculating waste, or uses a specifically developed calculation algorithm.

Rack management

Through the optional Rack-Way module, **Enterprise** acts on the waste optimization system in order to generate cutting and piece delivery sequences, sorting everything according to various parameters, such as customer, order, delivery date, etc.

The Rack-Way module, integrated with Enterprise, supports both main families of racks: traditional A-frame racks and harp racks (typical of the American market). Rack-Way manages two different production flow sorting modes:

1. Production rack optimization - calculates the sequence of piece delivery from the cutting stage. This sequence depends on the number and type of racks available in the warehouse and on the physical characteristics of the rack (height, width and depth).
2. Shipping rack optimization - calculates the sequence of piece delivery from the cutting stage. This sequence depends on the number and type of racks available in the warehouse or supplied by the end customer and on the physical characteristics of the rack (height, width and depth).

Starting from the order indicating what glass items are to be placed on the shipping racks, the Rack-Way module can organize the entire production by using a set of intermediate racks (called production racks) to obtain the desired results.

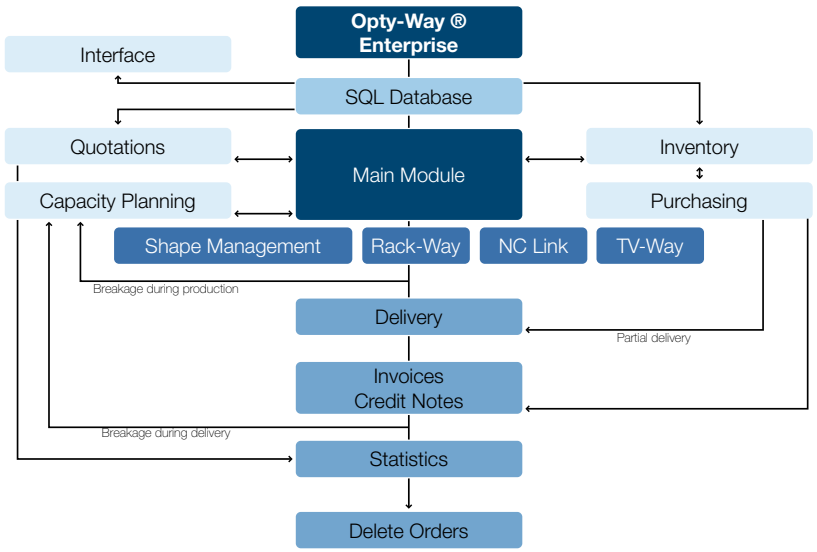


Production control

Once production has been activated, **Enterprise** can be used to control and manage the status of a work order at any time. These Enterprise tools provide users with a powerful and efficient means of controlling their production lines and, as a consequence, allow them to evaluate each action to be taken.

Through the Production Lot Control/Status and Work Order Control/Status functions, the operator can track the entire production cycle and obtain the information needed relative to the execution status of a customer order, the regular production progress, and the evaluation of how much and what to put into production.

As an additional means of supporting the control and checking phase, if the Link to the TV-Way industrial monitor or the use of bar codes for the production tracking is activated, the user can receive information in real time about the progress and execution of the cutting phase on automatic cutting plants.



Add-on modules

Shape drawing systems

Geo-Way - Library containing parametric or commonly used shapes. All geometric data for creating such shapes have already been set, so the user just needs to specify the relevant dimensions one by one, when prompted by the program on the screen.

Cad-Way - Two-dimensional CAD system to generate parametric and free shapes. Drawing system for all graphic primitives. Import/export of general and sector-specific graphic formats.

Doors-Way - Software module to easily and interactively create door profiles, including "notches" to be traced by the cutting machine, using the special predefined library.

Glazings - Software module to easily and interactively create complex "mosaic" glazings using the special predefined library.

Bars-Way - Module to create simple and complex glazing units with the application of "Georgian" glazing bars. The operator only has to enter the basic data relative to the required dimensions, the type of material and the glazing bar grid dimensions.

Data exchange

XML Link - Powerful customizable tool to read and export data in the standard XML format. Data structures can be described and pre-defined to create data links to other IT systems.

Production control

Post-Processor - Automatic creation of the data file to be sent to the automated system NC. Data outputs are available for the following machining operations: cutting, bending, sealing, as well as links to automated warehouses. For the list of machine makes and models, please refer to Optima's technical specifications.

Rack-Way - Material delivery or flow management module. The system is integrated with the optimization algorithm to calculate flows and reduce waste.

TV-Way - Module to display the machine on board cutting sequence on an industrial television monitor and to manage sheet break-out operations.

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