www.optima.it

OPTIMA
hi-way in glass software solutions

Product Catalogue

Enterprise | **ERP Solutions**

Software Solutions

Optima I Exclusive Software for glass factories

For more than 25 years, Optima has been developing vertical solutions specifically designed for the management of glassworks with complete process optimization and optimal integration of flat glass processing machines.

We develop our ideas together with the customer in order to achieve a shared success that leads to economic benefits for both sides. Our common goal is to increase the productivity of your company through a long and lasting partnership.

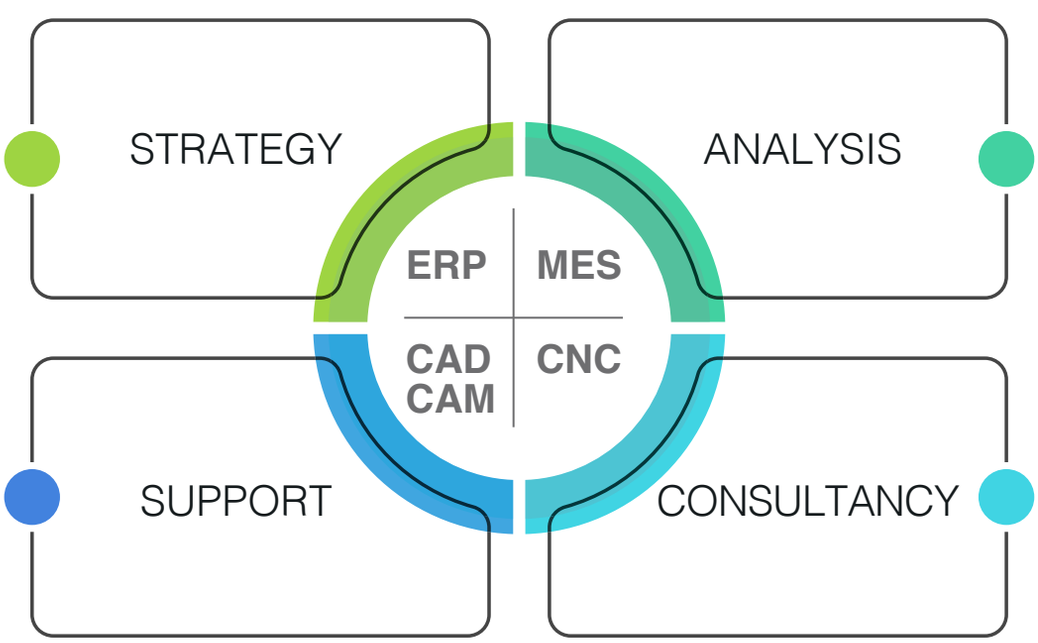
With us, the market leader, as your partner you will be facing the future with trust and confidence!
All our ERP and MES solutions are Industry 4.0 ready.

Our team of experts is always available for any specific requirement and to analyze the needs and possible solutions.

We offer modular products that can be adapted to any reality and that can evolve and grow to meet new requirements.

Our close collaboration with the world's leading machinery manufacturers has allowed us, and will continue to allow us, to fully integrate with all automatic systems for the management of the various processing phases.

Optima, your ideal partner!



OPTIMA
hi-way in glass software solutions

The Company

Optima S.r.l. has been working since 1994 in the field of Information Technology applied to the flat glass processing sector, and in general to all flat surface tooling sectors.
Thanks to the use of the most advanced development technologies, the constant direct contact with technology manufacturers, the availability of a structure of consultants and technicians able to interpret the processes, Optima is able to provide the best solutions for the different market needs.

Always aware of market developments, over the years Optima has strengthened its international vocation by opening several branches abroad in order to be ever closer to its customers and manufacturers.

The team

Born from the experience and professionalism of its founding members as a result of an efficient synthesis of dynamism, competence and motivation, the Optima family is constantly expanding. A team of skilled experts is always at your disposal, ready to respond in the most efficient way for your different situations.
We are dynamic by vocation and everything we do is inspired by the will to reach our objectives without compromising the care and quality of the service we offer.

Sales Manager

Product Manager

R&D Manager

CTO-Delevoper Manager

Support Manager

Software Solutions
General options of Products

Our products adapt to your needs
With extreme simplicity, this is the strength of our solutions. The modular structure allows the software to grow in line with your needs. Thanks to our global approach and the involvement of our technology partners, perfect compatibility of machines and systems with all Optima products is guaranteed, both in the office and in production. With almost thirty years of history, we now open the doors to the future with new web modules.

Application Field	Module
Passive cycle management	Purchase Module
Print management, customization of reports, documents and labels	Report Designer
Advanced Optimization Modules	Opty-Way | Edit-Way
Advanced Shape Nesting Optimization	Nest-Way
Rack Management and Optimization	Rack-Way | Delivery Racks
Processing Time Calculation and Production Planning	Production Planning
Production Monitor (MES) – Industry 4.0	GMC-Monitor
Optimization and online cutting control	Line Manager
Display of cutting Cutting Patterns at breakout	TV-Way
Dynamic Optimization system	Re-OPT
Optimization system with visualization and exclusion of defects in the glass pane	Defect-OPT
Parametrical System for shapes	Geo-Way
Parametrical System for georgian bars	Bars-Way
CAD system for drawing free forms	CAD-Way
Parametrical CAM system for working centers	CAM-Way
Integrated PDO calculation	Glass Advisor
Display of production status and progress	WEB Dashboards
Web-based consultation of progress and order entry	WEB Orders - Web Quotes

OPTIMA
hi-way in glass software solutions

Production System

Sales Management

Enterprise

Basic [Pag. 10]	Production [Pag. 12]	Sales [Pag. 14]	Essential [Pag. 16]
ERP System for managing double glazing production	**ERP System** for complete management of glassware production	**ERP System** for sales management	**ERP System** *Entry Level* for both sales and production management

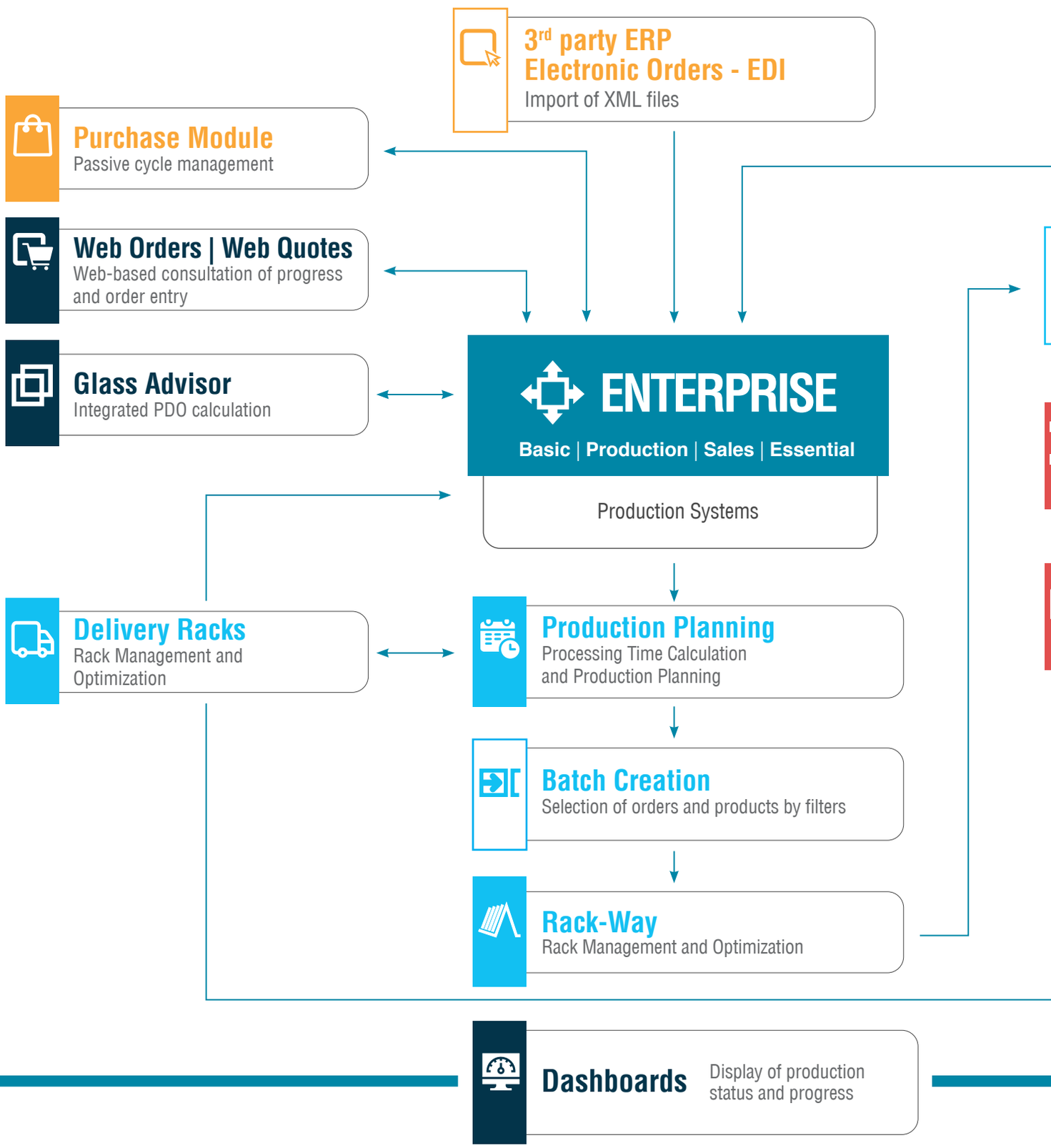
	Page					
	18		-	-	o	o
	20		-	√	√	-
	22/24		√	√	-	√
	28		o	o	-	o
	30/31		o	o	-	o
	32		-	o	o	-
	34		o	o	-	o
	36		o	o	-	o
	37		o	o	-	o
	38		o	o	-	o
	39		o	o	-	o
	40		√	√	√	√
	41		o	√	√	o
	42		√	√	√	√
	43		-	o	o	-
	45		o	o	o	o
	46		o	o	o	o
	47		-	o	o	o

Legend

Included √ | Optional **o** | Not Available **-**

Enterprise | **ERP Detailed workflow**

- **ERP** Module
- **Production** Module
- **MES** Manufacturing Execution System
- **Designer** Module
- **Web** Module



OPTIMA
hi-way in glass software solutions

Geo-Way
Parametrical System for shapes

CAD-Way
CAD system for drawing free forms

CAM-Way
Parametrical CAM system for working centers

Doors Way
Parametrical system for doors

Bars-Way
Parametrical System for georgian bars

Work Orders Management
Printing of paper and label production

Opty-Way | Edit-Way | Nest-Way
Advanced Optimization Modules

GMC-Monitor
Production Monitor (MES) – Industry 4.0

NC-Processing | Connections to: Cutting Tables
IG Line | Spacer Bender | Water Jet | Double Edger
Gantry System | Sorting Systems | Working Center | Laminating Lines

Line Manager
Optimization and online cutting control

Terminus
Direct Feedback from the machines

Re-OPT | Defect OPT
Dynamic Optimization system

TV-Way
Display of cutting plane at breakout

Report Designer
Print management, customization of reports, documents and labels

Enterprise
the best ERP for the glass world

Enterprise is an ERP that has been thought and designed for exclusive use within a glass factory and allows management of the entire production cycle in a simple and extremely effective way.

The verticality on the glass world makes it the best program for the management of orders and production cycles with a specific and extremely effective order entry. With Enterprise, the compositions requested by the customer are entered directly in the order menu without the need to create articles, bills of materials or specific elements for each product as occurs with general purpose ERPs.

Based on a centralized Database, it allows a shared and complete management of customers, orders, processing cycles and production progress.

All versions of Enterprise include the world's most widely used glass optimization module, with over 30,000 installations and a very high performance that enables a significant reduction in cutting waste.

For those who manage a portfolio with many shaped glasses, the addition of the Nest-Way module (automatic nesting of two shapes, even different from each other), makes the daily raw material savings even more significant.

Enterprise has a unique modular structure that allows each glassworks to tailor the solution that best suits its reality.

Enterprise is adapted to your every need, Enterprise adapts to your every need!

Once the base version has been chosen (the choice is between Basic, Production, Sales or Essential), all and only the specific modules required to improve and better manage the needs of individual departments can be added.

All modules are seamlessly integrated with each other and adding new modules or upgrading to a higher basic version can be done at any time without loss of data or the need to switch to a different application.

Enterprise products allow detailed logging of each operation with automatic historicization of user, creation, printing and modification dates, status changes and actions.

OPTIMA
hi-way in glass software solutions

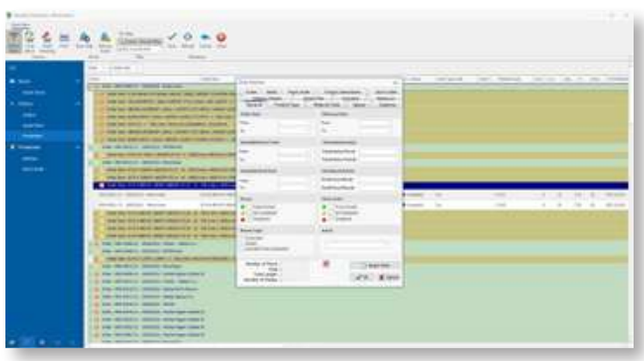
Funzione	BASIC	PRODUZIONE	SALES	ESSENTIAL
Number of users included	1	3	5	3
Maximum number of users	3	-	-	5
Standard prints and reports	●	●	●	●
Print and report customization		●	●	
Advanced Filter		●	●	
Customers' Data	●	●	●	●
Customer Shipping address and delivery route		●	●	●
Customers' Fiscal Data			●	●
Glass Data (Physical and Technological parameters)	●	●	●	●
Fixed set of operations available (1)	●			●
Free Definition of work types (2)		●	●	limited (a)
Bill of material for standard products (3)	●	●	●	●
Customizable Bill of Materials		●	●	limited (a)
Consumable Data		●	●	
Bill of materiai editable in order entry		●	●	●
Parametrica! shape and DXF management (Geo-way)	●	●	●	●
Import in Excel, CSV	●	●	●	●
Import XML	OPTIONAL	●	●	OPTIONAL
Automatic Import	OPTIONAL	●	●	OPTIONAL
CAD-way	OPTIONAL	●	●	OPTIONAL
Connector to 3rd party ERP for automatic transfer of orders, stock and other data	OPTIONAL	OPTIONAL	OPTIONAL	OPTIONAL
Manual Stock sheet management	●	●		●
Batch definition and creation with basic criteria	●	●		●
Batch Definition and creation with complex and customized criteria		●		
Production Orders Management	●	●		●
Cut Optimization	●	●		●
Cutting table management (1 included)	●	●		●
Work Order for operations Management	●	●		●
Other CNC Machine management		OPTIONAL		OPTIONAL
Possibility to add GMC-Monitorf or production tracking	OPTIONAL	OPTIONAL		OPTIONAL
Possibility to add line Manager for cut optimization	OPTIONAL	OPTIONAL		OPTIONAL
Possibility to add Re-opt	OPTIONAL	OPTIONAL		OPTIONAL
Possibility to add Defect-opt	OPTIONAL	OPTIONAL		OPTIONAL
Possibility to add Nesting	OPTIONAL	OPTIONAL		OPTIONAL
Possibility to add TV-way	OPTIONAL	OPTIONAL		OPTIONAL
Possibility to add infinite capacity planning		OPTIONAL	OPTIONAL	
Possibility to add capacity planner optional optional		OPTIONAL	OPTIONAL	
Possibility to add Rack-way	OPTIONAL	OPTIONAL	OPTIONAL	OPTIONAL
Possibility to add Delivery Rack-way		OPTIONAL	OPTIONAL	OPTIONAL
Glass Advisor		OPTIONAL	OPTIONAL	OPTIONAL
Possibility to manage outsourced operations			OPTIONAL	
Possibility to add Purchase&Cost module			OPTIONAL	OPTIONAL
Preferences and custom settings for purchase			OPTIONAL	OPTIONAL
Quotation and sales order management			●	●
List price definition			●	●
Inline price calculation during order entry			●	●
Manual prices and discount management			●	●
Shipping documents			●	●
Loading Lists		OPTIONAL	●	●
Invoicing			●	●
Proforma and payment dates management			●	●
Export to 3rd party accounting program			●	●
Possibility to add Web Orders		OPTIONAL	OPTIONAL	
Possibility to add Web Quote		OPTIONAL	OPTIONAL	
Possibility to add Web Dashboard	OPTIONAL	OPTIONAL	OPTIONAL	OPTIONAL

(1) Cut, Bend, Temper, Seal, Polish, laminate | **(2)** flat polish, round polish, beve l, etc | **(3)** Single, Double IGU, Triple IGU, Structural IGU, laminated Glass

(a) 10 additional processes included **(b)** 20 additional BOMs included

Enterprise | **BASIC**

The perfect solution that grows with you.



The entry level version of the ERP Enterprise designed primarily for companies that produce insulating glass units, it allows management of the entire production cycle in a simple and effective manner.

It offers shared management of customers, production orders, batches and racks, as well as basic information on the progress of processing phases.

It is a minimal software solution perfectly suited for integration with Industry 4.0 systems. Simple and elementary, with the addition of the GMC-Monitor module, it can flexibly and efficiently manage the flow of data from the office to the machines and back from the plants to the office, allowing the updating, in real time, of the status of the progress of each individual workpiece and recording information on execution dates and processing times.

From software for simple glass cutting management, Basic can be transformed into a more comprehensive solution with high-level integration to automatic spacer benders, sealing machines, double-edger, plate loading systems and more.

The addition of specific modules such as Line Manager, Rack-way, Re-OPT and Tv-Way make the control of the cutting line and subsequent production steps even more efficient.

Equipped with its own simple and intuitive order entry interface, through the different connection modes, it allows to easily import cutting data from third-party ERPs and to return data related to both waste and cutting progress.

OPTIMA
hi-way in glass software solutions

Modules included

Opty-Way | Edit-Way | Geo-Way | CAD-Way

Additional modules available

Nest-Way | Rack-Way | Delivery Racks | GMC-Monitor | Line Manager
Tv-Way | Re-OPT | Defect-OPT | Bars-Way | Glass Advisor | Web Dashboards

- Production management of simple products with basic processing
- Minimal solution to be enriched with specific modules for production (GMC-Monitor, Rack Way, Line Manager, Re-OPT, Tv-Way)
- Shared management of the entire production cycle
- Connectable to third party ERP

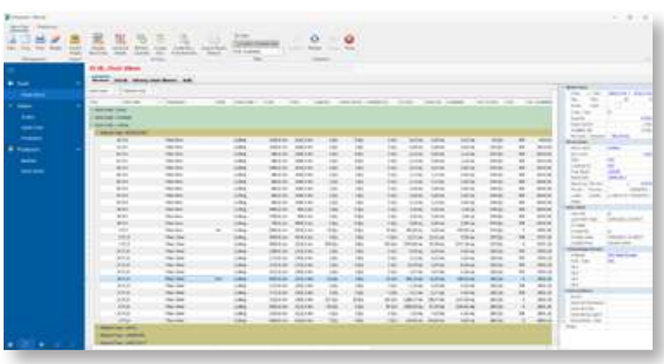
BASIC solution **Benefits**

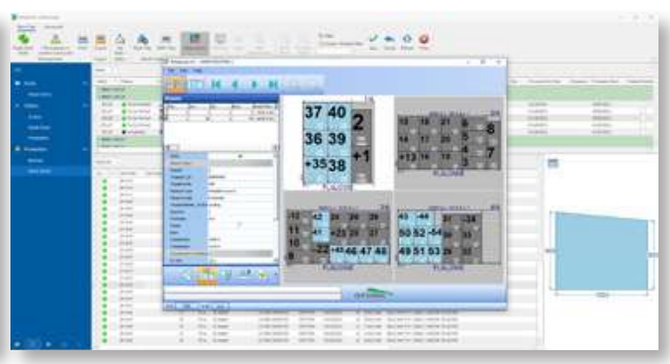
Funzionalità Principali:

- Application based on Microsoft SQL database
- ERP system supporting up to 3 simultaneous users
- Fully graphical management of production order entry
- Import of orders from files in ASCII, XML, XLS and CSV formats
- Customer and material master data
- Management of stock sheet and reusable waste
- Management of basic processing (cutting, grinding, tempering, bending, assembly)
- Library of parametric shapes (Geo-Way) integrated in the order entry and within the bill of material
- Management of single glazing, tempered glass with or without grinding, double glazing, triple glazing, laminated glass and structural glazing units
- Selection of the type of GAS filling and the type of spacer: aluminum, metal, resin or TPS strips
- Customizable Low-E edging for each side (even of shapes imported from CAD)
- Selection and creation of production batches
- Display of production status of orders and work orders
- Pre-defined list of standard production reports with worksheets, statistics and technical data sheets
- Standard barcode labels for production progress
- Use of Opty-Way and Rack-Way optimization algorithms
- Sheet breakout sequences using “A”, “L” and Harp stands (Rack-Way option)
- IG assembly sequence in relation to the sequence of production racks (Rack-Way option)
- Optimization for loading of tempering lines
- Direct connection to cutting, profile bending, IG assembly lines, double edger and working centers
- Optimization of spacer bars cutting for insulating glass units
- Management of standard pieces (sheet fillers)
- Optimization of laminated insulating glass units
- Optimization with reduction of used sheet sizes
- Post-optimization sheet editor (Edit-Way)

Enterprise **Production** Module

The complete management of Production





Enterprise Production is designed for the planning and management of glass production in its entirety and complexity.

Structured to offer a batch production management, Enterprise Production represents an additional step compared to the Basic version and allows the management of any type of glass processing such as tempering, lamination, screen printing, digital printing, grinding, chamfering, milling, drilling and any other freely customizable processing.

Integrated production management makes it possible to reduce the exchange of information in paper format to a minimum, thus projecting the company towards paperless management, i.e. reducing the use of paper sheets to a minimum.

Order entry starts from a structure of product bills of materials integrated with the Geo-Way template management module and includes a wide range of functions for simple, fast and secure data entry.

Enterprise Production can be connected and integrated with third party ERPs through direct connection to the database using the “Connector” or by means of file import/export, allowing all information to be shared and synchronized.

Enterprise Production represents the main structure to be integrated and enriched with specific functionalities for the production management such as the Rack-Way module for the order of racks or the management of shipping racks and other specific programs such as Re-OPT, Defect-OPT combined with TV-Way and Line Manager or with the MES system for the production progress GMC-Monitor.

Modules included

Opty-Way | Edit-Way | Geo-Way | Bars-Way | CAD-Way | Report Designer

Additional modules available

Nest-Way | Rack-Way | Delivery Racks | Production Planning | GMC-Monitor | Line Manager
Tv-Way | Re-OPT | Defect-OPT | CAM-Way | Glass Advisor | Web Dashboards | Web Orders - Web Quotes

PRODUCTION Module **Benefits**

- Complete production management of all types of products and processes
- Free definition of customized processing and BOMs
- Complete solution to be enriched with specific modules for production (GMC-Monitor, Rack Way, Line Manager, Re-opt)
- Ability to customize printouts, reports and labels
- Connectable to third-party ERPs

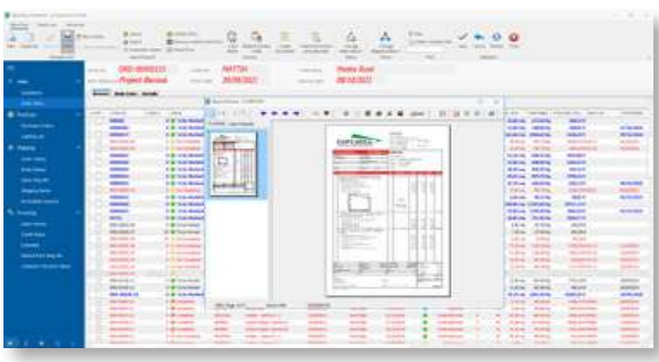
Main Features:

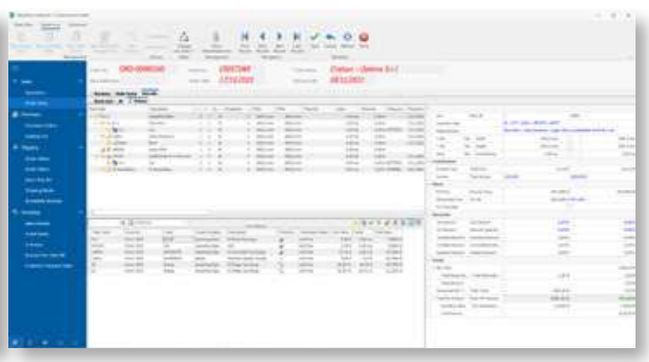
All the functionalities of the Enterprise Basic version are present with the addition of:

- Customized definition of processing types
- Customized management of order creation for each machine or group of machines
- Custom definition of the list of working centers
- Customization of the BOM
- Custom SQL filter creation
- User Account definition
- Report designer allowing the modification of all standard reports and the creation of new customized reports
- Customizable company logo per customer on the final product label or for reports
- Management of attachments on order header and order detail in multiple file formats
- Management of production order progress
- Special management for serial products
- Doors-Way Module Included
- Bars-Way Module Included
- CAD-Way module integrated directly with order creation
- Support for production progress (GMC- Monitor option)
- On-demand integration with other local ERP solutions (Connector or X-Gate options)
- Integrated infinite capacity production planning (option)
- Optional module for finite capacity production planning (Capacity Planner option)
- Possibility to create customized Dashboards related to production progress (WEB Dashboards option)
- Possibility to schedule daily e-mails informing the operator about the day's production
- Possibility of automatic notification via email in case of breakages or other relevant events that may occur in production

Enterprise **Sales** Module

The active cycle, complete and effective





The sales module of the Enterprise system allows the management of all the phases of the active cycle of a glassworks. With the sales module, operators are able to manage the entire sales flow from the offer to the invoice via commercial orders, transport documents and PDOs.

Sales prices are automatically calculated during order entry according to the conditions assigned to the customer and, if necessary, can be easily changed at any time or set manually.

Invoice data can be exported in XML (electronic invoicing) format or sent to any other accounting program. A wide range of reports for generating sales statistics is also included.

The management of order entry is shared with all Enterprise products: a simple, fast and intuitive interface in which the Geo-Way shapes management module or more advanced graphic tools such as CAD-Way are integrated.

All the inserted pieces are displayed in real scale and with graphic support for the selective and punctual assignment of processes.

Enterprise Sales is perfectly integrated and overlapped with the production module: once confirmed, sales orders are automatically converted into production orders for the creation of batches and orders.

The monitoring and progress of the production phase by phase with the GMC-Monitor module is also reported within the commercial orders: each office operator can follow in real time the evolution of the production and be informed about the real status of each product.

Modules included

Geo-Way | Bars-Way | CAD-Way | Report Designer

Additional modules available

Purchase Module | Production Planning | CAM-Way
Glass Advisor | Web Dashboards | Web Orders - Web Quotes

- Complete active cycle management
- Data input shared with the production module and unique for the entire document cycle (from offer to invoice)
- Specific price lists for the glass industry with matrices and calculation factors in relation to units of measurement (length, area, weight, etc.), types of material, presence of shapes, etc.
- Price history by customer or individual article

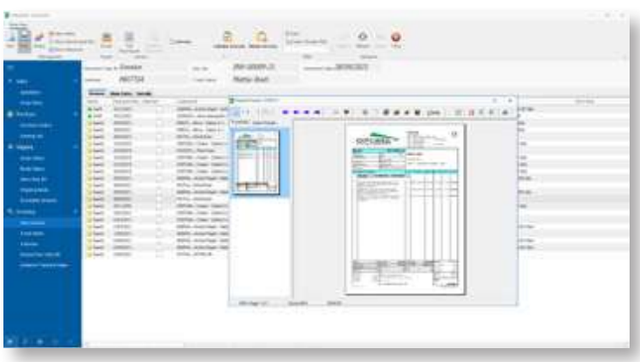
SALES Module **Benefits**

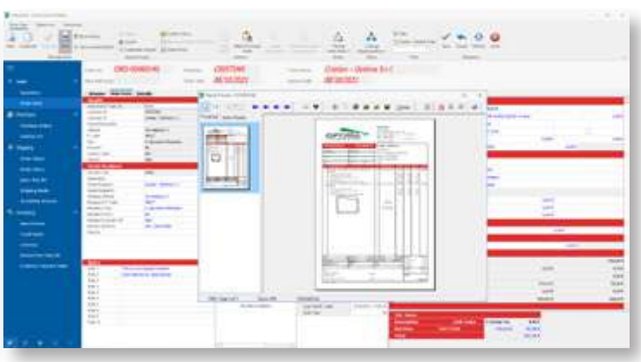
Main Features:

- Management of multiple sales price lists
- Management of quotes and sales orders
- Creation and management of multiple types of contract (projects) per customer with specific sales prices
- Management of historical sales prices for each individual product
- Creation of waybills from orders and shipping racks (Rack-Way option)
- Issuing invoices from waybills
- Issuing of credit notes
- Manual modification of prices in invoice
- Management of price increase / discounts on order header both in value and percentage
- Management of article discounts by customer
- Sales statistics generator
- Automatic calculation of weight, area, perimeter
- Management of rounding of measurements (squaring) customizable by customer
- Management of minimum and minimum billable order amounts per customer
- Document archive
- Management of payment schedules
- Automatic e-mail notification when the order is ready for dispatch
- Costs and Revenues visible for each order line (Purchasing and Costs module)
- Graphical display of production progress of sales orders
- Infinite capacity production planning integrated in both sales orders and offers
- Optional module for finite capacity production planning (Capacity Planner option) integrated in order entry to calculate delivery date during order confirmation
- Shared and sequential document management from offer to invoice, from sales order to delivery note, with the possibility of modifying header data, prices, delivery date, etc., for each type of document issued.
- Management of invoicing from bills and immediate invoicing
- Electronic invoice creation
- Export to other accounting program
- Direct sending of all documents to the customer by E-Mail (Orders, Invoices, etc.)

Enterprise **Essential**

"Essential",
but only in the name…





Enterprise Essential is our entry-level solution for complete glassworks management, covering both sales and production areas. Designed for small and medium-sized companies managing products of reduced complexity, it adds commercial functions for price calculation and management of the active cycle to the Basic version.

The "Essential" version is able to manage the processing of offers, orders, delivery notes and invoices and allows integrated management of production with cutting optimization and creation of work orders.

The calculation of the price of each composition can be referred to the simplified price lists in the database or can be set manually directly on the order line. The data flow is complete and continuous: the data from the sales order are immediately available for production management and then for billing and invoicing.

The printing of labels, with barcode or qrcode, production reports, or commercial documents addressed to end customers, are preset and designed to contain all the necessary and sufficient information depending on the context.

If you need to expand your glass business, the scalability and modularity of the Optima solutions allow you to convert the Essential version into a "Professional" license at any time without loss of data or the need to switch to a different application.

NEW

OPTIMA
hi-way in glass software solutions

Modules included
Opty-Way | Edit-Way | Geo-Way | CAD-Way

Additional modules available
Purchase Module | Nest-Way | Rack-Way | Delivery Racks | GMC-Monitor | Line Manager
Tv-Way | Re-OPT | Defect-OPT | Bars-Way | Glass Advisor | Web Dashboards | Web Quotes

- Integrated management of both the commercial and production areas for simple products with basic processing
- Preset bills of material, processing, price lists and reports
- Can be integrated with specific modules for production (GMC-Monitor, Rack Way, Line Manager, Re-OPT, Glass-Advisor)

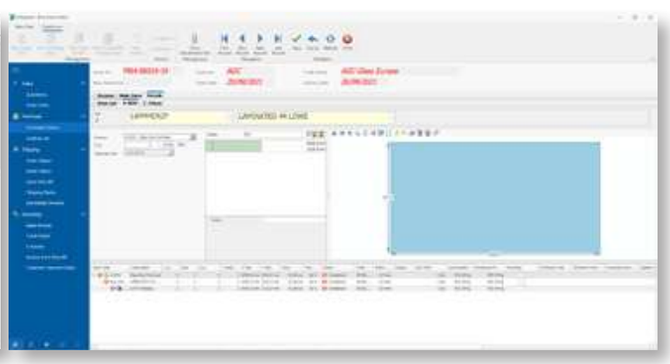
ESSENTIAL solution **Benefits**

Main Features:

- Customer and material master data
- Parametric shape library (Geo-Way)
- Management of single glass, tempered glass with or without grinding, double glazing, triple glazing, laminated glass and structural glass
- Selection of the type of GAS filling and the type of channel: aluminum, metal, resin or TPS strips
- Customizable Low-E edging for each side of a shape
- Selection and creation of production batches
- Standard barcode labels for production progress
- Use of Opty-Way and Rack-Way optimization algorithms
- Direct connection to cutting, spacer benders, double glazing and double edging assembly lines
- Management of preset sales lists
- Management of quotations and sales orders
- Management of sales price history for each individual product
- Creation of delivery notes from orders and shipping racks (Rack-Way option)
- Issuing invoices from waybills
- Issuing credit notes
- Manual modification of invoice prices
- Automatic calculation of weight, area, perimeter
- Management of rounding of measurements (squaring) customizable per customer
- Management of minimum quantity and minimum order amounts invoiceable per customer
- Document archive
- Management of payment deadlines
- Graphic display of production progress of sales orders
- Advanced document management system from offer to invoice via sales order to bill with possibility of modifying header data, prices, delivery date, etc., for each type of document issued
- Management of invoicing from bills and immediate invoicing
- Export to other accounting programs
- Calculation of solar and acoustic factors (optional glassAdvisor function)

Enterprise **Purchase** Module

Integrated passive cycle in the management



The " Purchase & Costs " module of Enterprise allows a complete management of all the phases of the passive cycle from the creation of purchase orders to the warehouse loading operations when the ordered goods arrive at the plant.

Purchased items are identified by the same stock codes used by the production and sales modules. It is possible to set the usual supplier for each material code and manage the purchase lists of the different suppliers.

During the creation of the loading lists for the warehouse, it is possible to record all the data of the incoming material (e.g. lot and date of production) in order to guarantee the historicization and complete traceability of each single purchase.

The cost calculation functions allow you to have an instant estimate of both production costs and income for each product directly in the offer and/or commercial order.

The creation of purchase orders is fully automatic starting from sales orders: all processing that are not managed internally are automatically inserted into purchase orders for regular suppliers without the need to re-enter any data manually.

External phases purchased from suppliers are still managed as normal production phases with registration of the start and end of the processing and control of their progress.

OPTIMA
hi-way in glass software solutions

- Complete passive cycle management
- Integrated and automatic management of external processing
- Creation of loading lists for the warehouse
- Real-time calculation of costs and incomes of each single product

PURCHASE module **Benefits**

Main Features:

PURCHASE

- Suppliers' records
- Creation and management of purchase orders
- Management of multiple purchase price lists
- Historical purchase prices for each product
- Management of multiple units of measurement: Pack, Kg, Liters, etc.
- Archiving of documents, e-mails and faxes
- Creation of orders for third party processing directly from the sales order menu
- Pre-defined article per supplier

STOCK

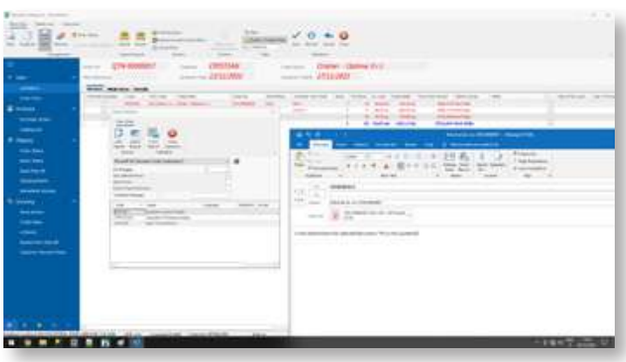
- Management of minimum stock thresholds
- Creation of loading lists for the warehouse
- Warehouse loading by barcode reading
- Inventory management
- Stock sheet code and supplier traceability
- Definition of product locations for purchase orders
- Optimized sheets booking
- Consumables management

COSTS AND INCOMES

- Calculation of production costs on the basis of dedicated price lists
- Immediate estimation of costs and incomes for each BOM item
- Possibility to define the final price to the customer based on the desired total income
- Possibility of defining the final price to the customer on the basis of the desired income for each individual process
- Historical price statistics of costs and revenues

Enterprise
Report Designer

Tailor-made print for documents and label



The “Report Designer” module, integrated into every version of Opty-Way Enterprise, is the application developed by Optima to manage reporting and printing within each program menu.

The module offers full access to data, report design/formatting, report preview and printing, and integration to other applications (e.g. email).

Each Opty-Way Enterprise menu includes a wide range of reports and printouts in standard and predefined formats that are freely accessible by the user.

In the Sales and Production versions, the end-user, coordinated and supported by Optima support, can make changes to each printout in terms of both the fields displayed and the format and structure.

The print menu is full of advanced features that allow the user to set predefined rules for language, printer, number of copies and more for each report.

Printing of 1D barcode or QR code labels is available in every menu of the program.
Barcodes and drawings of shapes or geometric structures can be inserted into any report.

visit our website

optima.it

OPTIMA
hi-way in glass software solutions

REPORT DESIGNER module **Benefits**

- Predefined printouts of documents, labels, production sheets, statistics, etc.
- Specific default settings for each report regarding language, printer and number of copies
- Ability to customize each report
- Direct connection to email programs for sending documents by email

Main Features:

BASIC FEATURES

- Large set of predefined printouts for each program menu
- Print preview on screen
- Export to MS Excel, MS Word or PDF
- E-mailing the report in PDF format
- Management of number of copies and default printer
- Print on single, multiple or full data grid selection
- Printing of templates and geometric structures
- Printing of images associated with accessories and components
- Printing of attachments to the order header or to a single line at the same time as printing the report
- Printing in any format, both standard (A3, A4, A5, letter, etc.) and customized to specified dimensions
- Multilingual management with the possibility of printing the same report in different languages
- Pre-defined reports for daily production statistics with breakage history and temporal details of phase progress

CUSTOMIZATIONS

- Possibility to move, add or delete fields
- Possibility to create new reports
- Possibility to create variants of the same report: print without details, print with grouped details, print with exploded details, etc.
- Possibility of including the company logo in each printout
- Possibility to include the customer's logo automatically in any printout
- Ability to include barcode, data-matrix, QR code in any print job
- Sales and production statistics
- Ability to enter parameters that filter or condition printouts (dates, codes, etc.)
- Possibility of creating personalized statistics

Opty-Way
The optimization module

The world's most widely used algorithm for glass cutting

Our history in an algorithm
Opty-Way is the result of more than 30 years of development and experience in the flat glass industry. It handles optimizations with an unlimited number of piece sizes and stock sheet sizes and guarantees perfect performance in both small and large batches, regardless of the sheet size used.

Designed, developed and improved with glass only in mind
Includes specific modes for both monolithic and laminated glass cutting with respect to machine parameters, minimum and maximum limits given by physical characteristics or automatic cutters. Manages parameters that can increase the complexity of the cutting pattern, ensuring less waste, and therefore increasing the complexity of glass breakout, or simpler solutions that facilitate easy opening and consequently can generate slightly higher waste.

Integrated into ERP and on-board machine programs
The optimization module is an integral part of Enterprise: data entered in orders and offers are directly available in the production module, you can switch from order entry to optimization by simply changing menus! The same algorithms are also included in the dynamic re-optimization modules we provide on board the machine.

Work orders and batches
Within the ERP, when production is confirmed, the pieces of glass to be optimized are automatically split into homogeneous batches by material code, preferred table, production start date and other configurable factors. The operator can "adjust" the orders as desired by moving pieces from one order or batch to another, joining homogeneous orders, re-integrating broken pieces, using filler pieces and repeating the optimization exercise several times until the optimum cutting plan is reached.

Input and Output with and to the warehouse
The optimization module is bi-directionally connected to the warehouse: the optimization form opens providing a precise and detailed view of the sheets available in the warehouse and offering the possibility of inserting "on the fly" new sizes available last-minute. Once the cut has been completed, the warehouse can be automatically or manually updated by unloading the sheets foreseen by the optimization and loading any reusable waste created by the cut.

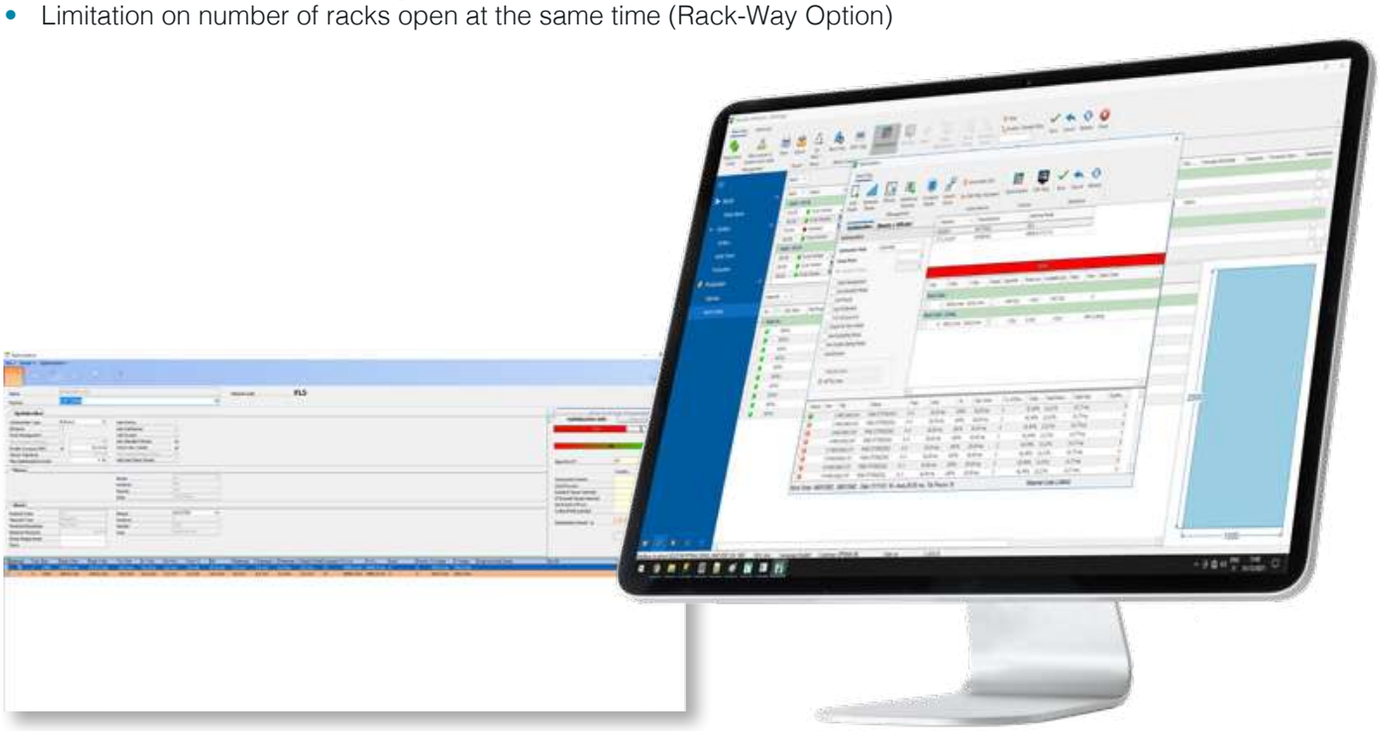
From the office to production with a single click
The files containing the cutting plan obtained as a result of the optimization can be passed to production via shared network folders, copied onto removable media and/or printed on paper at the same time as the labels.

- Optimization integrated into the ERP
- Remarkable calculation speed and better performance than the competition results in savings in glass and time with each optimization.
- Excellent value for money that has made it the standard program from the world's top manufacturers of cutting lines with over 30,000 users worldwide.

OPTY-WAY **Benefits**

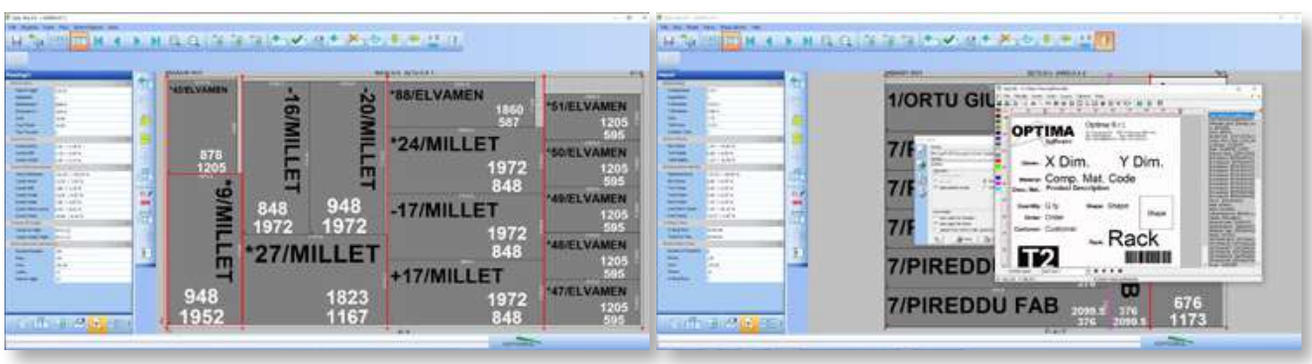
Main Features:

- More than 90 calculation algorithms for best optimization results every time
- No limits on piece or sheet sizes
- Optimization for monolithic and laminated glass
- Priority management on pieces and sheets
- Management of filler pieces
- Tolerance management on measurements
- Automatic management of reduction of sheet sizes available in input and to be used in output
- Automatic "crosscut displacing" function to improve the result in certain situations
- Limitation on number of racks open at the same time (Rack-Way Option)



Edit-Way
The **Editor** for cutting patterns

The manual modification of optimizations



The cutting pattern in a direct and immediate way

Edit-Way is the module included in Enterprise that allows a clear visualization of the cutting patterns processed by the optimization module. The application offers two display modes, a sheet view mode with all cutting planes visible on the screen and an editing mode with each individual sheet in full screen foreground.

Don't just watch

In editing mode, the program allows all manual editing functions: you can add, remove, rotate or move volumes within a sheet, modify the output of cuts, customize or delimit waste areas to be preserved, reverse the cutting sequence of the sheets, perform symmetries and much more.

Each sheet has its own history

For each sheet it is possible to display the percentage of waste of the single cutting plan, display the coordinates of the XYZ cuts and have a complete list of all and only the pieces inserted on a particular job. By selecting one or more pieces it is possible to start printing labels for the selected volumes only, in fixed or parameterizable quantities.

Customize text and colors

Edit-way allows a total configuration of the data to be displayed (customer, order number, stand and more) a customization of the colors of the glasses, of the shapes, with clear differentiation between waste and good part and of the multi-passes for the low emissivity edging.

Link with the management system

All the modifications made during the manual editing phase are reported and stored in the Enterprise database: pieces moved from one sheet to another, pieces removed or added are also visible in the grid of the pieces of the job once Edit-way is closed and the result of the modification saved.

hi-way in glass software solutions

Using the best algorithm in the world is not enough! In certain situations, especially in the last plate, due to specific requirements, only the operator is able to evaluate how to cut the plate to obtain an easier reusable scrap or manually complete it with unplanned or useful measurements in the future.

EDIT-WAY **Benefits**

Main Features:

- Possibility of removing, adding, moving or rotating glass pieces
- Possibility of modifying the direction of outgoing cuts
- Copy & Paste even of multiple selections of entire crosscuts
- Symmetry of the pane in X and Y
- Removal of a cutting pattern
- Re-arrangement of sheets according to user-definable criteria
- ZOOM functions for spot checks
- Modification of sheet cutting sequence
- Automatic sorting by sheet size or waste percentage

Enterprise
Additional Modules

Customise and integrate the Software the way you want it!

Almost 30 years of experience in the market and an installed base distributed worldwide have made us the leading Italian company in the sector and one of the most important players at international level!

The range of functionalities in our ERP is truly amazing and allows you to configure the system so that the software solution adapts to your specific needs and not vice versa.

The choice of the modules that make up the solution is made only after a careful analysis of the needs of the individual production reality. Flexibility and scalability are the strengths of our offering: as versatile as a chameleon, as perfectly tailored as the finest tailor-made suit.

For us, each installation is just the beginning of a partnership that will continue and grow over time. Our solution can grow with you by adding modules to what you already use.

Our products, designed exclusively for use in glassworks, are continually expanded and updated to incorporate new industry directives or to meet new and evolving needs in the field.

Our highly specialized team is available for all evaluations of integration with other management or accounting programs, for the recovery of data from previous systems and for the evaluation of specific requests, problems or customized developments.

The assumption that a 'single solution' is preferable in many ways to a solution made up of many different parts is certainly still valid, but over the years we have specialized in providing integrated solutions with third-party software products.

Currently it is possible, and relatively easy, to integrate production modules such as Geo-Way for pattern management, our Opty-Way optimization module or even MES for production monitoring with existing third-party ERP software. On the other hand, it is always possible to integrate our basic ERP Enterprise modules with third-party production management systems, optimization programs or CAD/CAM.

Our aim is only one: to analyze the current situation and, if possible, to provide what is needed, without necessarily replacing what is present, in order to meet customer satisfaction through the customized solution that best suits the glass reality.

What is the “Connector”

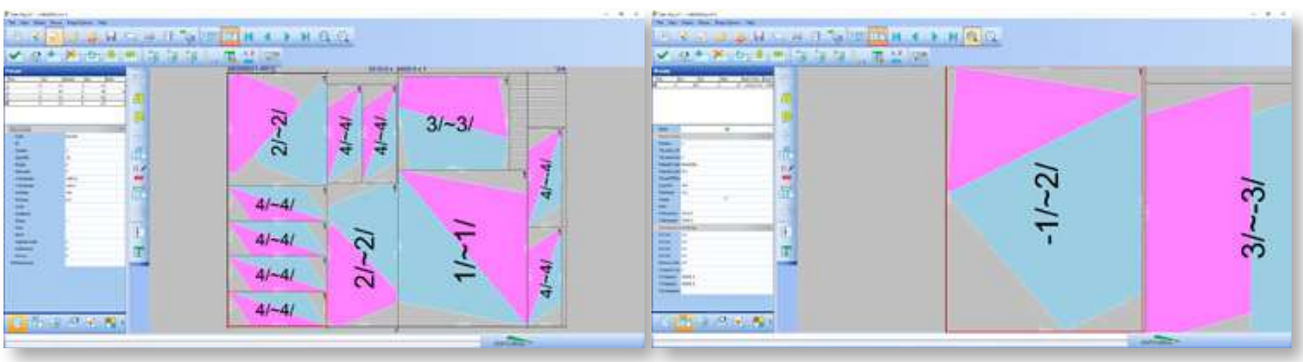
The term “Connector” refers to a software application specifically created for automatic data exchange between two or more applications. The user is not required to take any particular action, the “connector” works autonomously, transferring data according to the defined flow and guaranteeing correct transfer over time, even if the applications are updated.

“Terminus”

With the arrival of Industry 4.0, Optima immediately took steps, in parallel and in conjunction with equipment manufacturers, to integrate all the information coming from the machine into the centralized system in the office using our MES software. By using protocols such as Modbus, TCP-IP, OPC-UA or file exchange, we are able to establish two-way communication with all modern machines that are “set up” and retrieve what is needed to complete processes automatically, saving time and errors and increasing productivity.

Nest-Way
Additional Modules

Reducing waste, has always been our priority!



Nest-Way is an advanced module for the optimization of shaped glass that allows a further reduction in waste with results that can lead to savings up to 30% of more raw material!

The system is able to couple equal or different shapes within the same primitive box: by means of rotations and flips (if allowed by the type of glass), the combinations that lead to the minimum waste within the bounding box are identified.

The primitives containing the coupled shapes are then optimized together with the other rectangular pieces, guaranteeing a much smaller gap than would have been the case if each individual shape had been considered within its own primitive.

The algorithm works both on parametric shapes and on more complex shapes derived from DXF. In any case, the coupling created will be easy to open thanks to the automatic addition of outgoing cuts.

A coloring system makes both the outline of each shape and the area of waste inside each primitive clearly visible.

The module is available as an additional option to the optimization algorithm included in every version of Enterprise (and available as a single user solution) thus allowing the operator to carry out checks and modifications manually from the office.

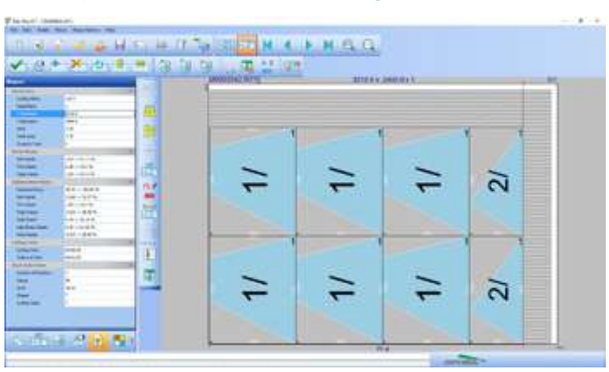
- Significant reduction in waste with increased productivity due to fewer plates to cut
- Fast optimization times
- Easy opening of glass panes obtained by combining templates on the longest straight section (if present)

NEST-WAY **Benefits**

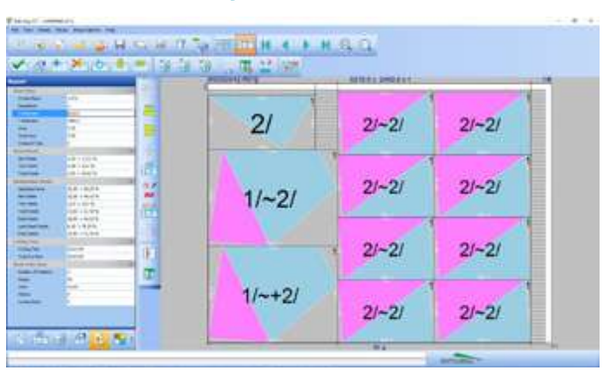
Main Features:

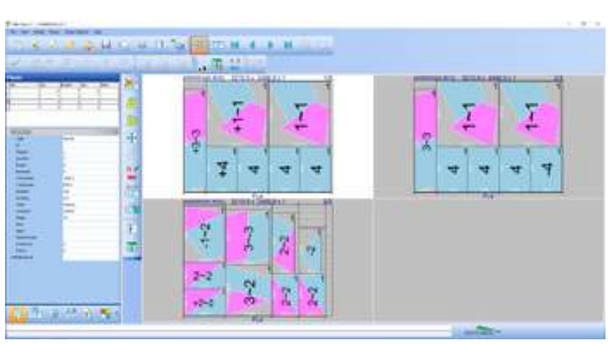
- Automatic nesting of equal or different shapes
- Operation with parametric shapes and DXF
- Automatic addition of trims and outgoing cuts
- Respect of material constraints (attention to flipping for materials with coatings or grains)
- Rotation and symmetry of parts
- Respect of minimum distance
- Clear and detailed identification of the individual glass within each primitive
- Integrated in the office optimization module

Examples without Nest-Way



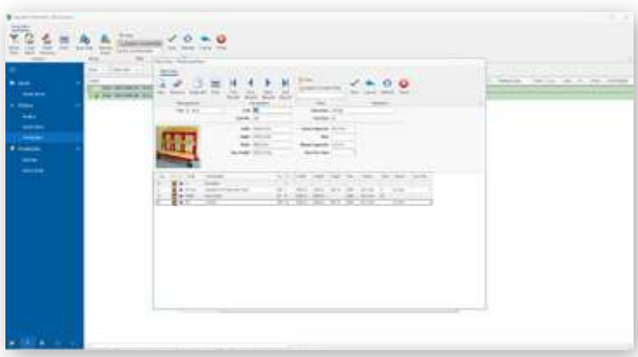
With Nest-Way





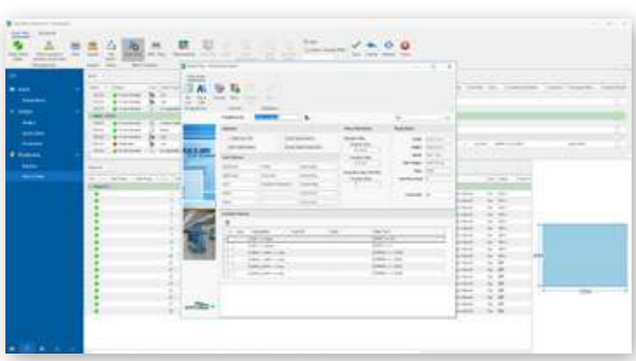
Rack-Way
Additional Modules

Optimization for racks:
an incredible increase in productivity!



The Rack-Way module is able to organize the entire production using a set of intermediate racks (called production racks) in order to obtain the desired results when loading the shipping rack. It allows the use of traditional “A” shaped racks, “harp” racks or mixed modes using harp racks for glass up to a certain size or quantity and traditional racks for windows or other special glass.
It also makes it possible to limit the number of racks to be used at the same time, which is useful if there is little space available for storing glass.

Starting from the loading sequence foreseen at the end of the production cycle, Rack-Way is able to create all the intermediate sequences up to the initial cutting phase, trying to use as few racks as possible. By means of a specific optimization algorithm it is then able to guarantee an excellent optimization result in terms of waste while maintaining the planned sequence. In this way, the glass is always ordered and there is no need to manually re-order the glass during assembly, thus reducing the risk of scratches and loss of time.

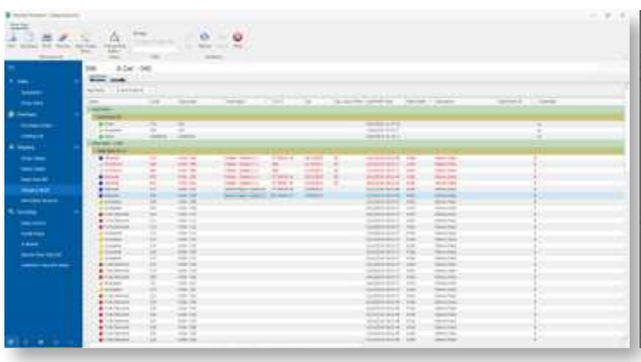


RACK-WAY
Benefits

- Rack Pre-allocation from the office
- Use of minimum number of racks
- Guaranteed sequence to cut
- Minimal impact on optimization
- Glasses ordered on racks in sequence without the need for re-ordering, thus eliminating the risk of scratches and wasted time

Delivery Rack
Additional Modules

The organisation of shipping racks simple and efficient



The management of delivery racks has always been a painful point for glassworks: poorly used and often half-empty racks, the need for manual reordering, loss of racks are just some of the most common problems.

The Delivery-Rack module makes it possible to efficiently organize the entire shipment management and related production flows. Through this module we are able to define the loading sequences of the glass panes to be shipped, sorting by zone, tour, customer, order and size, selecting the most suitable type of delivery rack and then reporting the relative sequences to the optimization program for the use of both traditional and harp racks.

The program is also able to send the required production sequence to the insulating glass production line and to communicate bidirectionally with supervisory programs of sorting systems for the storage of semi-finished products.

With the GMC-Monitor module, it is possible to confirm the loading sequence of the racks (with the possibility of having several racks active at the same time) and to print packing lists and labels per pallet.

- Significant time savings in the assembly phase (glasses from the same panel will always be immediately available or close to each other).
- Reduction in the risk of scratches or glass breakage caused by moving or manually rearranging the racks (there is nothing to move, everything is already sorted)
- Clear visualization at both line loading and unloading
- Tracking of shipped racks with entry in the delivery note and immediate view of the allocation of the fleet of racks to customers.
- Automatic warning in case of non-return

DELIVERY RACK
Benefits

Production Planning
Additional Modules

Production capacity
Always under control!

The “Planning” module is an indispensable tool for planning production processes so that delivery deadlines can be met without overloading existing resources. With this tool, the production manager can allocate the work on each machine while respecting the capacity and workload of each resource.

Production forecasting and scheduling can be carried out automatically during order confirmation, allowing all program users to quickly answer the frequently asked question: “When will my order be ready?”. Using manual modes and Gantt charts, the work plan can then be moved over time or assigned to different machines.

The Planning Module integrated in the ERP is entirely developed and designed by Optima to take into account the specificities of glass production.

By means of sophisticated calculation algorithms, right from the order entry phase, the ERP Enterprise is able to calculate in an extremely precise and reliable way the time required by each process, with discriminating and corrective factors that vary according to the type of material, process, presence of shapes and planned machine.

The management of the production capacity of each single machine, with dedicated calendars for each plant, allows then to allocate in JIT or ASAP mode the time foreseen for each processing in the calendar of each machine with a very reliable estimate of the occupation time of each resource.

- Vertical time estimation algorithm for glass with variants for material, shape, process and machine
- Production flow optimization
- Definition of processing start dates that allow compliance with delivery dates while respecting the maximum load on existing resources
- Integrated with orders and quotations
- Immediate visualization of production peaks with the possibility of using alternative resources
- Timely identification of potential delays and criticalities

PLANNING module **Benefits**

Machine Workload:

- The estimated execution time can be fixed in the BOM or calculated in real time during the order entry according to the type of glass, the type of processing, the presence of shapes and the capacity of the individual machine.
- The most relevant physical unit of measurement is taken into account for each process: square meters for cutting, linear meters for perimeter processing, quantities for holes and notches, etc.
- Each machine has its own calendar with defined working times and shifts.
- Each machine is included in a group of homogeneous resources.

Planning:

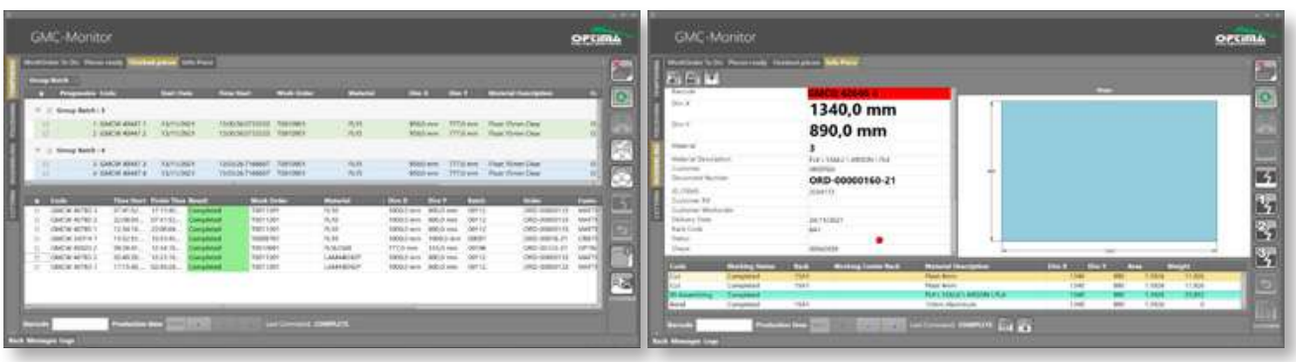
- Planning defines what has to be done, where it has to be done, when it has to be done.
- Calculation of start and end date of each operation in relation to the capacity of each machine.
- Two different scheduling strategies available: ASAP (As Soon As Possible, calculates the earliest possible delivery date compatible with planned loads), JIT (Just In Time, allows production to start as late as possible but within the required delivery date).
- Different machinery allocation strategies: distribution of work over several machines, saturation of a single machine, sequential distribution (each resource can be preferential, mandatory or alternative).
- Possibility of " binding " an operation to a specific date and machine
- Optimization of flows on a single machine (glass sorting by size to minimize set-up times for each machine)

Visualization:

- Gantt chart to display batches and operations on a time scale.
- Detailed planning result shown on each order
- Detailed work lists for each resource
- Capacities and workloads shown on a histogram chart

GMC-Monitor
MES

The Optima MES for controlling Production Progress Monitoring Industry 4.0



ERP is not only office business management, but also and above all production monitoring and management with progress of individual steps, emergency management, tracking of working hours, recording of breakages, downtime and more. The Optima ERP software is fully integrated with the GMC-Monitor infrastructure that tracks production progress in an integrated way. Time and quantity tracking processes within the production environment are automated and integrated with the ERP, and the data collected in production is directly available to the office side of the ERP.

GMC-Monitor has been designed to supervise and control the input and output flows of each work center, controlling the production status of the various production phases both in terms of managing the progress of the phases and in terms of historicizing the various operations (traceability). This module makes it possible to manage queues of incoming and outgoing pieces, calculate the processing time of each individual piece, display error messages in the event of previous non-validated processing, declare breakages and so on. Depending on the type of plant or the type of production, it is able to manage different progress modes: production of single pieces where each piece has its own barcode, series production with a single barcode for a set of pieces, mixed production where the two types alternate.

GMC-Monitor has been designed to operate on a touch monitor and can work integrated with fixed or wireless barcode readers, with presence sensors configured to detect the passage of pieces or work in perfect symbiosis with the machine in an Industry 4.0 context. The synergy between Optima and the machine manufacturers has allowed, and will allow in the future, a continuous increase in the number of equipment with which the GMC-Monitor is able to communicate in a bidirectional manner by passing the list of incoming parts to the machine and receiving information from the machine that the work has been completed.

OPTIMA
hi-way in glass software solutions

- MES fully integrated with ERP
- Indispensable tool for Industry 4.0
- Multiple production management
- Full-scale display of work sheets and attachments
- One simple and intuitive interface for each machine
- Breakage declaration and direct printing

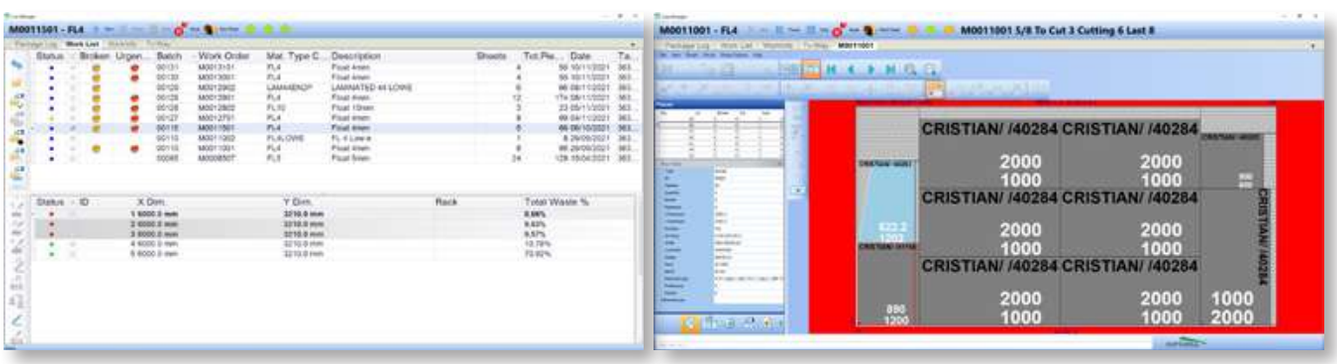
GMC-MONITOR **Benefits**

Main Features:

- List of production batches and production orders prepared by the office
- Data collection from different barcode readers for each individual manufacturing process
- Wired, wireless and fixed barcode reader support
- Single piece, work order, order or batch reading via label or production report
- Store all information on central database for traceability management
- Data recording of operators, validation times, workstations and work centers
- Recording of machine tooling and consumables used
- Full traceability of all machine activities
- Accurate alarm management
- Management of input and output lists
- Online feedback to Enterprise database
- Direct re printing of labels
- Broken pieces management with integration to ERP and to the Re-Opt re-optimization program
- Real-time display of incoming pieces and pieces declared complete in the previous phase
- Visualization of shapes and work sheets of each single piece
- Assignment of production rack (Rack-Way Module Optional)
- 3D visualization of the composition of the rack (Optional Rack-Way Module)
- Bidirectional interface with machines (Industry 4.0)

Line Manager
MES

Specific management for the delicate cutting phase



Line Manager consists of a cutting monitoring station installed near the cutting table. It is designed for the integrated management of complete cutting lines with loaders, automatic breaking and display systems (Re-Opt, Defect-OPT and TV-Way), waste storage and sorting systems.

It is the perfect supervisor able to synchronize the on-board machine applications in the “Industry 4.0” context, operating on work lists prepared by the office, receiving the cutting information directly from the cutting table and transmitting everything to the office management system.

Using the Line Manager workstation, the cutting line operator can view the batches prepared by the office, obtain information on the quantity of sheets required, the relative formats, the data on the pieces to be produced, the number of racks required and the number of free positions (slots) within the sorting system, if present.

For each work order, the planned start date, the planned cutting sequence and the presence of urgent parts or rework are clearly indicated.

Line manager is able to automatically control the HMIs of the cutting table and of any automatic magazine and receive feedback information on the progress of the cutting process.

If a quality control scanner or an MES station intervenes to indicate the need to carry out a restoration, Line Manager interrupts the cut and, using the optional Re-OPT module, can carry out a dynamic optimization from that particular point in the batch onwards, inserting the urgent glass to be restored into the first useful pane.

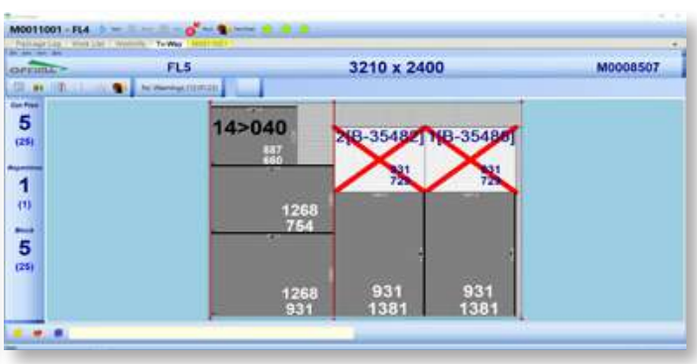
The use of a monitor on the cutting line shows the cutting plan always up-to-date with indications regarding the stand or slot the glass must be unloaded.

- Management of sheet-by-sheet cutting
- Two-way communication with the cutting table
- Complete view of daily/weekly work plan
- Integrated with loaders and sorting systems

LINE MANAGER module
Benefits

TV-Way
Additional Modules

Cutting layout on TV monitor with automatic feed



This module has specifically been designed to display the cutting plans at the console on the machine or on a separate PC near the cutting table. Usually fitted on a large monitor/TV placed in front of the operator in the cutting and unloading area on the racks, it guarantees a constantly updated display of the cutting plan on the sheet present on the cutting table.

TV-Way provides a full-scale graphic display of the cutting plan with customizable colors and information for each piece. The program automatically synchronizes itself with the software on the NC of the cutting table and with the Line Manager and Re-Opt applications together with which it represents the perfect trio for unparalleled management of the cutting line.

Main Features:

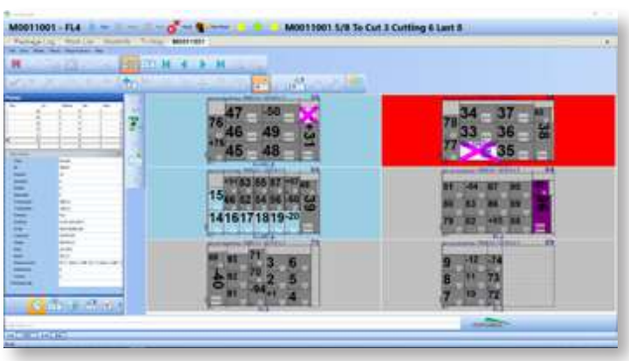
- Visualization of cutting patterns on the cutting table
- Graphical display of shapes with different colors for waste
- Graphic display of the resting side on the rack
- Graphic display of defects (Defect-OPT)
- Customizable choice of data to be displayed (dimensions, customer, order, rack, etc.)
- Customizable choice of pieces' colors
- Complete view of the cutting table and crosscuts
- Manual advancement of the cutting table through the use of a pedal or automatic synchronization with the NC of the cutting table (if supported by the table itself)
- Automatic printing of labels sheet by sheet
- Automatic synchronization with Line Manager / Re-OPT / Defect-OPT

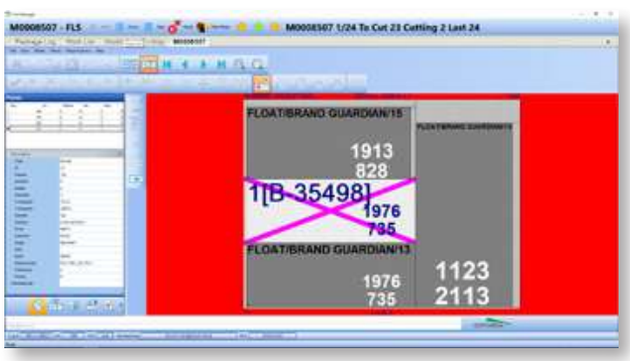
- Always updated display
- Custom coloring
- Paper-less system without the need to print cutting plans

TV-WAY module **Benefits**

Re-Opt
Additional Modules

Dynamic re-optimization
according to Optima





Re-OPT is an innovative system designed to dynamically manage piece breakage and allow constant updating of the cutting program in order to decrease latency times for recovery of broken pieces and reduce (if not avoid) waste on the last sheet. Breakages in the cut can be declared on the field using a touch-screen monitor and letting the re-optimization to intervene so that the piece is immediately re-inserted into the next available cutting plan. Re-OPT is integrated with all the other Optima modules, in particular with the production progress MES system: breaks declared by GMC-Monitor stations or by automatic systems such as quality control scanners around the production line are immediately visible to Re-opt and can be reintegrated into production from the next sheet.

Re-OPT is an add-on module of the table supervisor “Line Manager” and can be used at any time to add parts from other orders (e.g. to fill the last sheet), to include emergencies, to perform immediate restorations, to join two orders of the same material and to manually modify a cutting plan directly on the field few seconds before to start the cut.

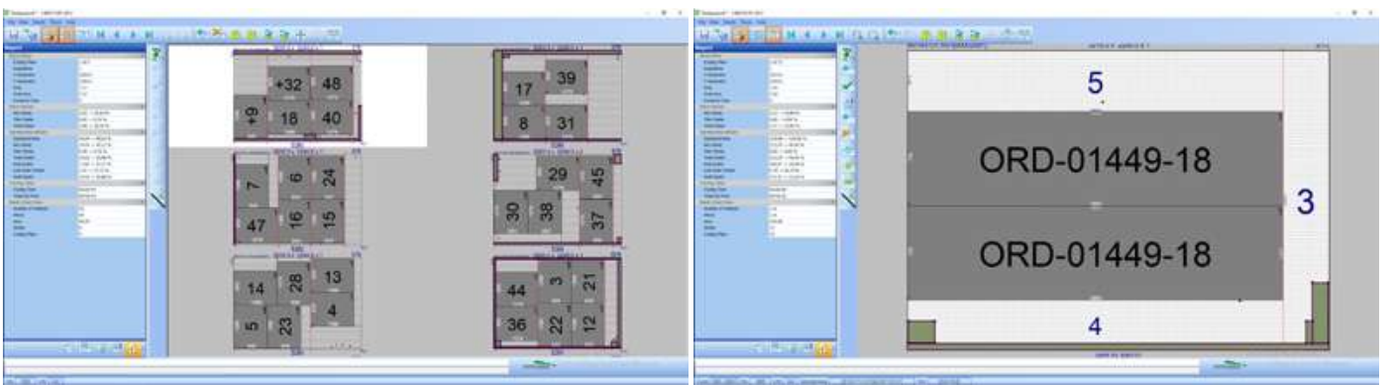
The module can operate on call or be configured to take action automatically if there are broken parts in the system.

- Fully automatic management of restorations or emergencies
- Touch interface
- Integrated with ERP and MES
- Significant reduction in waste with potential elimination of “last sheet”.

RE-OPT
Benefits

Defect-Opt
Additional Modules

The world's most advanced system
for the optimisation of sheets with defects



Defect-OPT is the world's most advanced optimization system for avoiding defects and excluding entire sections of sheet.

It is a dynamic optimization system, available as an additional module of the Re-OPT, which is able to exclude areas recognized as defective by the GlassInspector® scanner produced by Deltamax, or similar scanners, which is installed between the loading machine and the cutting system.

In the event of defects, the Line Manager module (supervisor system of the cutting table) acquires the map of the defects, automatically suspends the cutting of the sheet and, thanks to the integrated Re-OPT module, re-optimizes the job in progress, excluding the defective areas and sending the new cutting plan to the numerical control of the cutting table, which then restarts the current program.

Excluding the defect before cutting, compared to (or in combination with) the more common quality control usually placed downstream in the production sequence, saves time and raw material. A defect intercepted at the beginning of the production line avoids wasting resources and, above all, the processing of pieces that would then be discarded: a glass with a defect that has arrived at the end of production is in any case a glass that has undergone all the processing foreseen but which will have to be repeated on a new glass that will be produced, while the paired glass(es) that is already ready will have to be parked waiting for restoration (new time and new material).

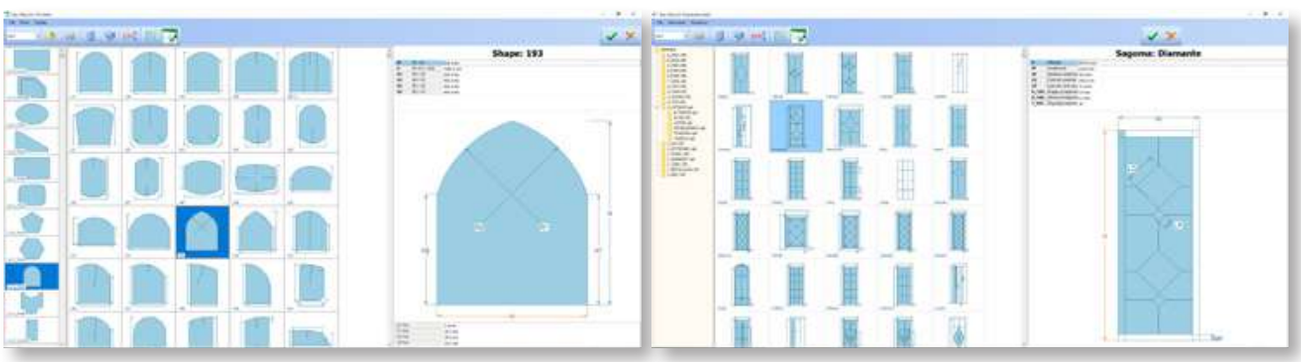
DEFECT-OPT
Benefits

- Saving time for processing that does not have to be repeated.
- Raw material savings
- Fast optimization times
- Full integration with scanners and cutting tables

Shape Management

Geo-Way
Additional Modules

Creating shaped glass
It has never been so simple!



The “Geo-Way” module, included and integrated in every version of Enterprise, is the application developed by Optima to use parametric shapes for advanced geometric management in the world of glass. The use of this module does not require any geometric knowledge: every single template in the library can be used with the same ease with which rectangles are handled, the value of each dimension is easily identified and modified.

The parametric shape, whether a rectangle or a more complex shape, is inserted into the order entry page. The dimensions of the shape adapt in real time, making every operation easy and intuitive, including visual verification of any input errors. This module allows automatic management of the size increase in the case of grinding, offering the possibility of operating selectively on each side both in the case of rectangles and parametric shapes or even complex shapes imported from DXF.

Processes Management:

- Automatic Trim application according to glass thickness with the possibility of manually modifying the value and adding outgoing cuts.
- Automatic grinding offset according to glass thickness and/or type of machining on any parametric template or any profile imported in DXF
- Possibility of selecting the sides on which to apply processing on both rectangles and shapes
- Differentiated LOWE grinding management for structural glass

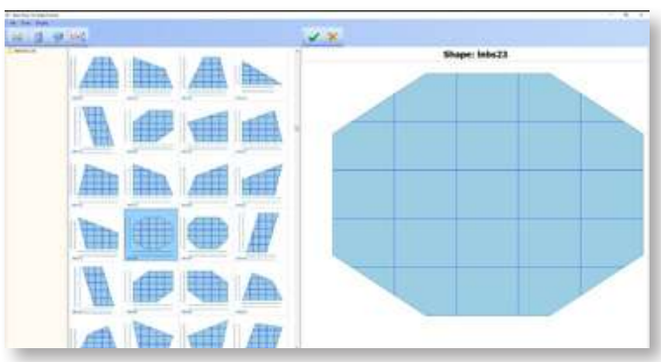
Shape/DXF:

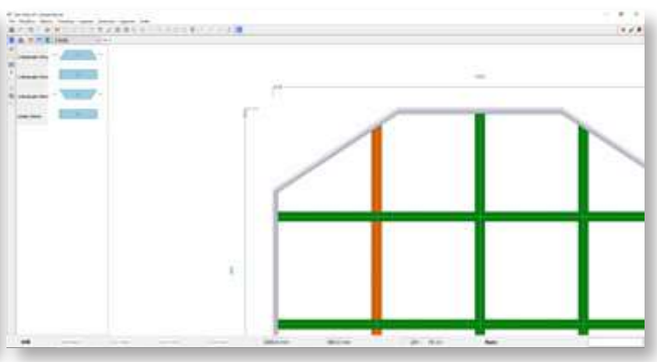
- Display of rectangles and full-scale shapes
- Library of shapes with more than 350 prototypes
- Selection of shapes from library catalogue or by simply entering the shape code
- Automatic footprint reduction function
- Printing of full-scale shapes
- Manual nesting of parts
- X and Y series for mirroring and chaining
- Horizontal, vertical and rotation tilting
- Import / Export files in DXF/DWG and other CAD formats

Shape Management

Bars-Way
Additional Modules

A powerful system for managing
Insulated glazing with Georgian bars





Bars-Way is an indispensable tool for manufacturers of insulating glass units who produce glazing with Georgian bars inside. The module is based on a library of parametric shapes to which it is possible to associate the subdivision of the internal profile by rows and columns.

The software is able to automatically calculate all the geometric data of the product: after defining the dimensions and the geometric shape of the product, it is easy to define the division into cells and from there to calculate all the data for production such as the cutting length of each bar, the position of the holes and so on. Bars-Way is integrated with the sales module and it is possible to perform all price calculations in relation to the customer price list (by number of cells, number of crossings, bar length), with adjustable surcharges in case of complex shapes. Drilling information and dimensions can be automatically sent to the profile bending machines or to the assembly line.

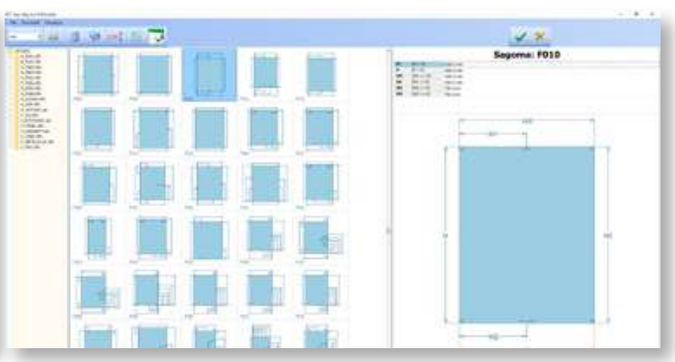
Main Features:

- 70 predefined parametric shapes
- Adjustable X and Y grid division for bar positioning
- Fixed bar position or equal cell calculation mode
- Full-scale display of windows, spacers, sealants and bars
- Product definition with crossing type management and milling type settings
- Full-scale production document printing
- Price calculation via ERP Enterprise
- Evaluation of axis and bar limits
- Sizing of bars for manual cutting
- Sending of hole positions to automatic bar bending systems and automatic double glazing lines
- Use of both symmetrical and asymmetrical grids
- Calculation of cutting angle if shaped glass is used

Modules for shapes management

CAD-Way I Doors-Way I Scan-Way
Additional Modules

The management of Complex shapes

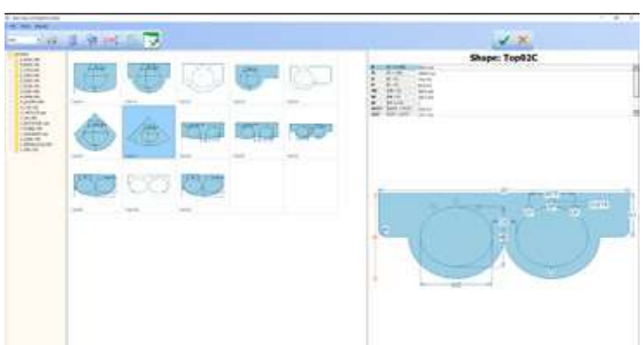


Where the combination of Geo-Way and the possibility of importing drawings via DXF and DWG formats is not enough, Optima has developed specific solutions with special functions and macros for the glass sector. For advanced technical drawing, we offer solutions ranging from the acquisition of a template with a camera (Scan-Way) to a specific module for the production of doors or shower boxes (Doors-Way) to complete 2D CAD tools (Cad-Way) and CAM products for vertical or horizontal working centers.

The use of vector programs specific to glass production allows better control of the special processing features of machines in this sector. Functions that would be complicated in a general-purpose design program have been integrated into specific functions that lead to the desired result with a single click.

Cad-Way, for example, includes automatic functions for the geometric reconstruction of a polyline starting from a sequence of points detected by a laser, the “Doctor” function that checks the external profile and automatically corrects any irregularities found. In our CAD there are functions that allow the reduction of the number of entities to be processed to eliminate or at least limit the risk of errors during execution on the machine and functions to correct broken tangents or discontinuities.

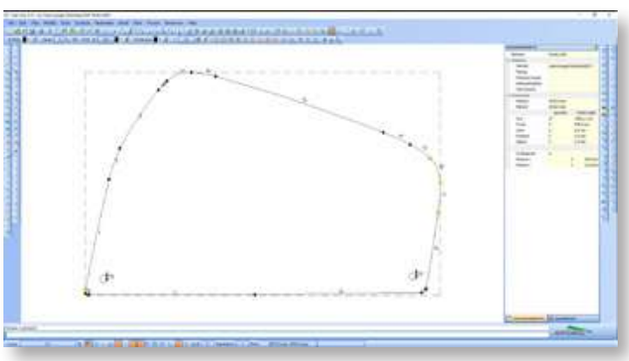
All new numerical control machines are now equipped with specific CAD products, but often the work is left to the operator in production who should be doing something else instead. The inclusion in the office of a simple and intuitive centralized CAD system that can either manage the drawings received from customers and check and correct them or that allows new ones to be created and then sorted to the various machines, is much closer to the concepts of “Industry 4.0” that are today essential for proper work organization and planning.

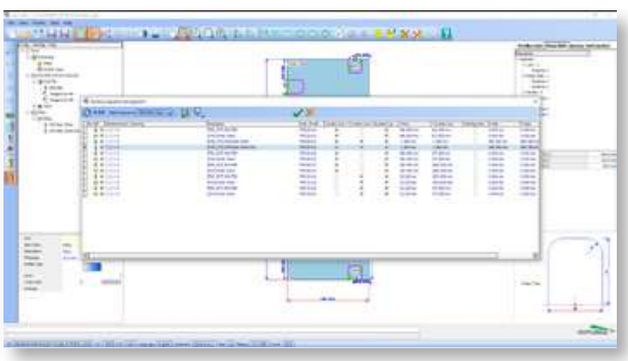


Modules for shapes management

CAD-Way I CAM-Way
Additional Modules

The advantages of a parametric CAD/CAM for vertical and horizontal working centers





Cam-Way is based on a parametric engine and is designed for processing up to 2.5 axes. It manages the master data of work cycles, processes, tools, tool paths and the various modes of entry/exit from the part. It can be integrated with the ERP Enterprise, includes a vast library of notches subdivided by manufacturer (Doors-way) and exploits an automatic recognition of the profiles and holes present in the drawing which, through a “drag & drop” association, allows a simple but precise assignment of the processing to the profile.

The integration with the ERP Enterprise allows the full commercial and production management of the project: holes, notches and possible slots with related internal and external profile processing are recognized by the ERP and managed both for production and price calculation.

A powerful automatic dimensioning module is also able to create detailed processing sheets that can be printed or simply displayed on the GMC-Monitor MES stations on the machine.

CAM-Way supports CAM-Dxf output, a standard format accepted by most plant manufacturers and compatible with a very wide range of machines on the market today

Enterprise's WEB functionalities
Additional Modules

"Be Always Connected"
With the WEB tools of Optima

On 6 August 1991, the first web page in history was created. Today, 30 years after that distant summer, the World Wide Web has become a key player in our private and professional lives. In recent years, the Web and E-commerce have further influenced our way of thinking and working: ordering from a website, monitoring the progress of your order at any time of the day, integration between services of different platforms are just some of the practices and services that have become "indispensable" for every user.

The world of glass production has made no exception, the Web has changed everyday practices even within the glassworks: orders that used to be sent by fax or dictated by telephone are now sent by e-mail, very often generated automatically by management systems, or by photos sent by mobile phone.

It is increasingly common for a glassworks, as a service provider, to be "seen" in the same way as an online purchasing platform: the customer expects, in complete autonomy, to be able to place an order, monitor the state of production, receive information on shipping, communicate the availability of racks to be collected and much more

Optima, which has been active for over 25 years in the search for advanced solutions for the glassworks, has long understood and taken on board these needs and worked to integrate ERP/MES systems as far as possible with WEB functions capable of offering customers and glassworks latest-generation services and tools for an "**Always Connected**" glassworks:

- Initially by working on the integration between applications and programs created and designed to operate independently, making them become a single whole in which the different worlds are able to "talk" to each other and transfer data via the Web.
- More recently, by developing WEB pages, directly linked to the ERP and MES, which allow customers of a glassworks to authenticate themselves and proceed autonomously to place orders, check production progress and verify the delivery schedule.
- By offering its own BI package that allows the analysis of performance and KPIs through interactive graphic dashboards that can also be consulted from tablets and mobile phones.

GlassAdvisor
DOP Automatic and Fast

Dashboards
Company monitoring via WEB browser

Web-Orders & Web-Quotes
The simple WEB configurator for your customers

GlassAdvisor
WEB functionalities

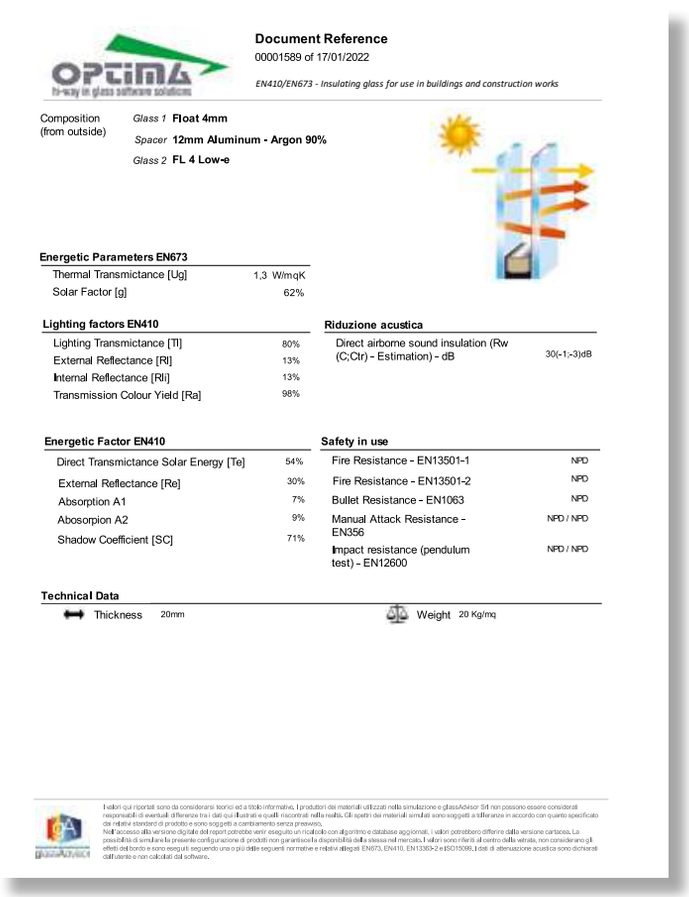
Connection with Glass Advisor: PDO Automatic and fast

Preparing simulations and printing PDOs is often a time-consuming and labour-intensive task that often encounters structural limitations. While it is true that flat glass manufacturers offer “free” applications, it is also true that those applications are “limited” to the manufacturer’s glass types, resulting in difficulty and time-consuming creation of the certification or PDO in cases where the glass is composed of glass from different manufacturers.

The integration of the glassAdvisor portal within Enterprise works in the background and requires nothing to the user: during order entry, once the composition of the insulating glass unit has been defined, the ERP connects to the Glass Advisor portal and retrieves the data on the technological parameters required by the PDOs in real time. The certificates can then be printed directly from within the Optima ERP without the user having to make calculations, use external programs, connect to portals, save documents on the computer or anything else.

When an quotation, an order or a delivery note is made in the Optima ERP, an automatic service takes care of sending the compositions to glassAdvisor which processes it, allowing the use of glass from different manufacturers, and returns the values certified by the glass testing station.

The documents produced are saved in PDF format and can be sent by e-mail or inserted in the customer’s WEB portal and downloaded directly by the end user.



Document Reference
00001589 of 17/01/2022

EN410/EN673 - Insulating glass for use in buildings and construction works

Composition (from outside)
Glass 1 **Float 4mm**
Spacer **12mm Aluminum - Argon 90%**
Glass 2 **FL 4 Low-e**

Energetic Parameters EN673

Thermal Transmictance [Ug]	1,3 W/mqK
Solar Factor [g]	62%

Lighting factors EN410

Lighting Transmictance [Tl]	80%
External Reflectance [Rl]	13%
Internal Reflectance [Rli]	13%
Transmission Colour Yield [Ra]	98%

Riduzione acustica

Direct airborne sound insulation (Rw (C;Ctr) - Estimation) - dB	30(-1;-3)dB

Energetic Factor EN410

Direct Transmictance Solar Energy [Te]	54%
External Reflectance [Re]	30%
Absorption A1	7%
Abosorpion A2	9%
Shadow Coefficient [SC]	71%

Safety in use

Fire Resistance - EN13501-1	NPD
Fire Resistance - EN13501-2	NPD
Bullet Resistance - EN1063	NPD
Manual Attack Resistance - EN356	NPD / NPD
Impact resistance (pendulum test) - EN12600	NPD / NPD

Technical Data

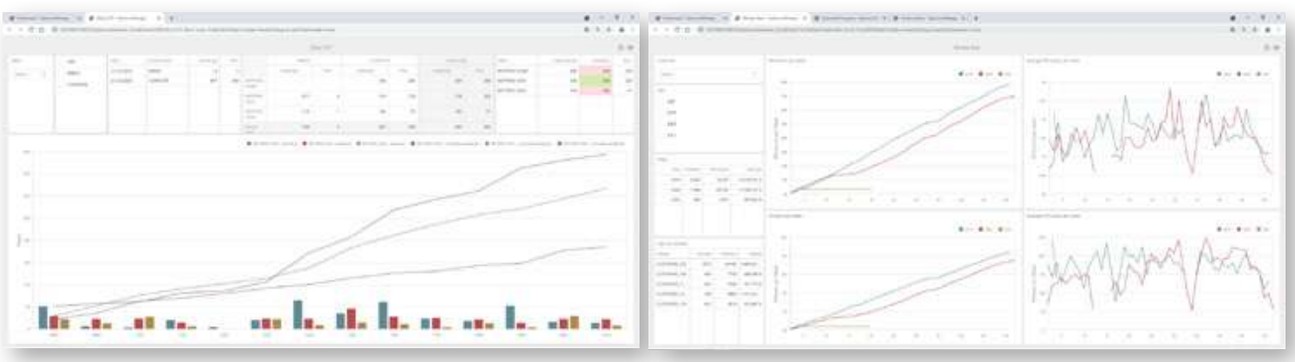
Thickness 20mm Weight 20 Kg/mq

I valori qui riportati sono da considerarsi teorici ed a titolo informativo. I produttori dei materiali utilizzati nella simulazione e glassAdvisor Srl non possono essere considerati responsabili di eventuali differenze tra i dati qui illustrati e quelli riscontrati nella realtà. Gli spettri dei materiali simulati sono soggetti a tolleranze in accordo con quanto specificato dai relativi standard di prodotto e sono soggetti a cambiamento senza preavviso.
Nell'accesso alla versione digitale dei report potrebbe venir eseguito un ricalcolo con algoritmo e database aggiornati. I valori potrebbero differire dalla versione cartacea. La possibilità di simulare la presente configurazione di prodotti non garantisce la disponibilità sulla stessa nel mercato. I valori sono riferiti al centro della vetrata, non considerano gli effetti del bordo e sono eseguiti seguendo una o più delle seguenti normative e relativi allegati: EN673, EN410, EN13363-2 e ISO15099. I dati di attenuazione acustica sono dichiarati dall'utente e non calcolati dal software.

- Connection transparent to the user
- Possibility of using glasses from different manufacturers
- DOP printing integrated within Enterprise
- Technological data stored in the database and always available for future consultation.

INTEGRATION
Benefits

Dashboards
Web functionalities
Company monitoring via WEB browser



The WEB Dashboards add-on module available for the ERP/MES Enterprise allows you to display, using a common WEB Browser such as Explorer or Chrome, a wide library of “dashboards” with production or sales statistics related to the data stored in the ERP database. These “dashboards” are configurable in various ways and can be fully customized by the Optima support team or, using the included editor, edited by “expert” staff.

It is possible to view all statistical information inside or even outside the organization and the use of tablets and smartphones is permitted.

The display of the dashboards is controlled by an advanced user management system with the possibility of access or exclusion for groups, customized groups up to the control on the display of the single dashboard.

Automatic update functions allow the dashboards to be used on monitors and smart TVs installed in production for real-time display of all information related to the progress of batches, orders or comparison between actual and planned jobs.

The wide range of options and tools available in the package allow you to indicate, in a clear and detailed manner, any orders that are overdue, resets to be carried out quickly, information on the efficiency of the machines, the situation of the shipping racks and much more.

The library of available dashboards is constantly expanding, but specific ones can be created for special needs. Pie charts, bar charts or colored fields in different modes and font sizes can be modified at any time to display the desired information clearly and immediately.

DASHBOARDS
Benefits

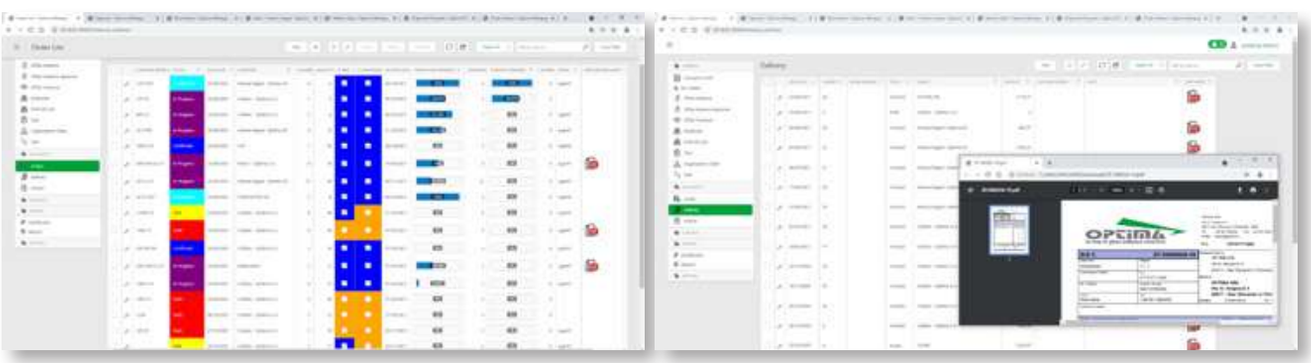
- Timely, immediate, clear and up-to-date monitoring of the business
- Standard and customized KPIs
- Consultation from intranet or even mobile devices
- Data analysis across all modules and menus

NEW

Web-Orders & Web-Quotes

WEB Functionalities

The simple WEB configurator for your customers



Access to your order data from a PC, tablet or Smartphone is now widespread, well-established in everyday life and often taken for granted in every working environment. The glass sector has not yet fully adapted to these practices and Optima has tried to fill the gap and lead the way for the glassworks of the future. In this context, we have created a simple and intuitive WEB application that guarantees privacy and data security and allows two levels of iteration:

- Web-Orders: offers the display of the progress of orders in production, the history of previous orders, bills, invoices and PDOs with the possibility of downloading courtesy copies in PDF format directly from the portal and in a totally autonomous manner.
- Web-Quotes: allows orders or quotations to be entered directly from the WEB portal. The management of these orders is based on an advanced configurator that allows the use of shapes, the addition of specific processing or the use of pre-existing BOMs.

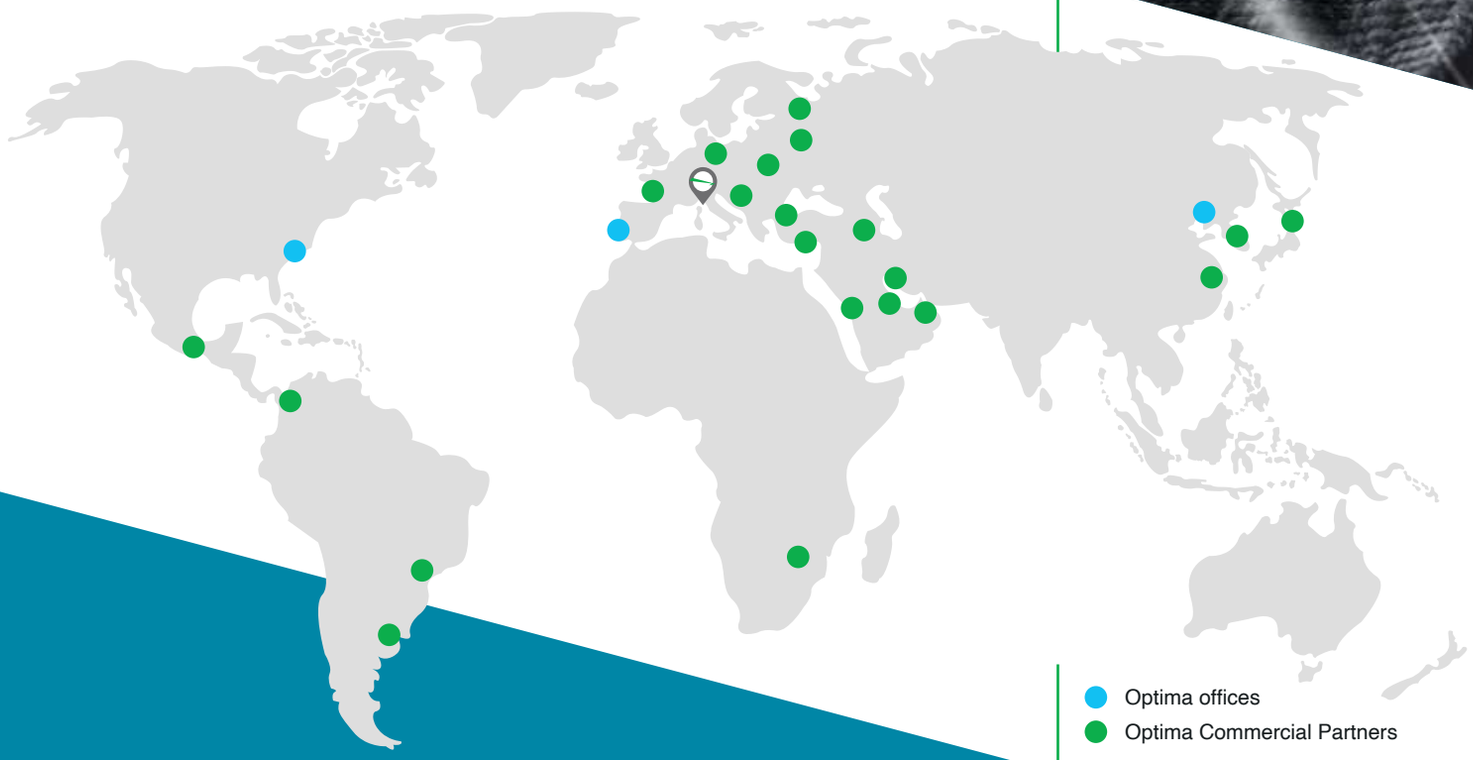
Web-Orders and Web-Quotes are WEB applications that are independent from the Enterprise management system but are connected to its database for reading (to read the order status) and writing (to enter quotes).

Orders placed with Web-Quotes are sent directly to the Optima ERP, which processes them and calculates the price (not available in the WEB application), thus relieving employees of the work of manual entry.

An advanced access control system ensures that each user, be it an administrator, an agent, an employee or an end customer, has access to a limited number of data for viewing, editing or inserting: agents, even multi-firm agents, can see orders placed for their customers, employees of the glassworks can have full access while the individual end customer is granted access to data related only to the master data linked to them.

WEB-ORDERS & WEB-QUOTES **Benefits**

- Autonomy of the end customer in placing orders
- Autonomy of the end customer in controlling the progress of their orders
- Reduced workload for employees
- Full user access control



Optima has been a leading company in the glass industry for more than 25 years and has always been available for your needs, through its own subsidiaries and an extensive network of partners located all over the world. We make our experience and expertise available to all your needs! Do not hesitate to contact us for any request.

Optima S.r.l.
Via Vespucci, 4
40017 San Giovanni In Persiceto
(BO) I Italy
Tel. +39 051 826336
Fax +39 051 825182
info@optima.it
www.optima.it