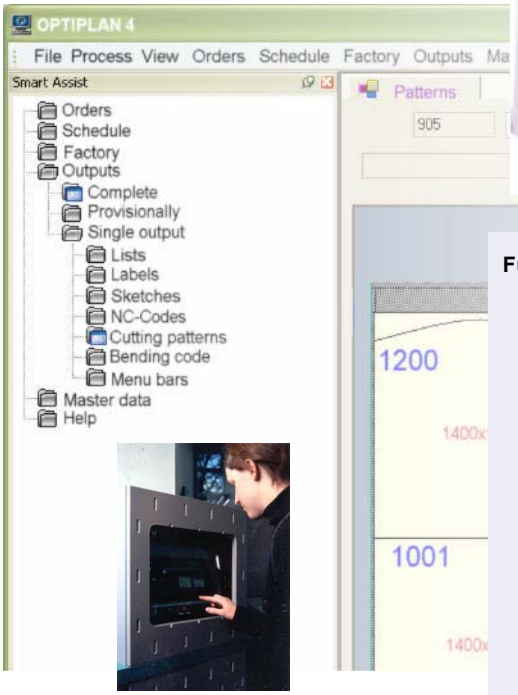
OPTIPLAN4 - Flexibility and modern designs

OPTIPLAN4 *is a completely Windows based optimisation system for glass cutting/processing companies and cutting table manufacturers. Featuring the highest flexibility in today's market, this new system has been developed under the Microsoft Visual Studio.net® environment and tailored for use with the new operating system generation Microsoft® Windows® XP.*

TPLAN4 *installation – direct inputs on cutting table CNC operating console*



Functional Highlights

- Comfortable use – all glass types are sorted and available as optimizing groups immediately after input.
- Product range – easy entry of item lines with single glass, double glazed units, toughened glass may be easily entered.
- Shapes – integrated shape catalogue, defined processing (round corners, cutouts), upgradeable to full **HANIC** CAD functionality
- Optimising procedures – modern and powerful mathematical and stochastic algorithms achieve superior yield
- Scalability – office version and cutting table console **TPLAN4**, upgradeable to full production control functionality
- Configurable outputs – individual definition and setup of lists and sketches; labels adaptable to individual needs using a label editor
- CNC outputs – all current cutting tables (for rectangles or shapes) and spacer benders are supported, DXF code may be output for processing centres
- Flexible master data configuration – cutting line parameters (transport direction, reference point, breakout trims, breakout sequences), raw glass parameters as well as optimisation settings to be configured by the user
- Interfaces to external systems via standard ASCII or direct integration into other **HANIC** program packages
- Supports keyboard, mouse, or touch screen
- Online help and assistants

Data Input

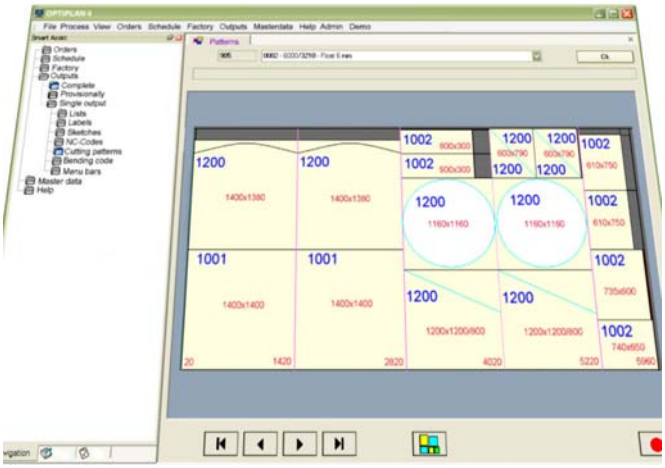
Enter item lines using minimal basic input data. **Order header data** will be loaded from master data once customer number has been entered. Customer name, address, delivery address, route, route stop and dispatch type may be overwritten or amended at any time.

Line item entry requires basic input of a product code, quantity, width, height, and, if necessary, information about pattern direction, reference and item text. All basic data for **line item input** like product, product type (single, DGU, TGH) including bill of material, spacer type, color and width, gas data and coating data are loaded from the master data.

Shape Catalogue

OPTIPLAN4 comes with an integrated shape catalogue. The user enters all shapes in graphic mode. Dimensioning triggers a plausibility check and the shape may be displayed on-scale. All necessary breakout trims for cutting will automatically be determined.

OPTIPLAN4



Processing
Graphical input increases the ease of input of important processing information like edge processing (grinding, polishing, mitering) and shape processing (corner cutouts, rounded corners), to be entered with rectangles and shapes. All processing dependent trims necessary for cutting are automatically added to the cutting dimensions. These features are updateable to full **HANIC CAD** functionality making the comprehensive and complete range of processing available.

Stepped Units
All size reductions for steps may be entered per edge with rectangles or shapes, depending on customer requirements. In addition, non-parallel edge shifts and curved steps are possible. The cutting contour is calculated automatically.

Optimisation
All orders entered are automatically sorted by glass types, which are then made available to optimisation as optimising groups. All single glass types are optimised automatically. Cutting table parameters and other parameters like breakout trims and minimum breakout distances may be changed. Optimisation is executed after considering the predefined restrictions (maximum traverse width, number of Z-cuts, pattern rotation) and uses various highly sophisticated and powerful mathematical algorithms, resulting in a superior glass yield.

Outputs
The optimisation result is displayed in table and graphical form after termination of the optimisation. Additional information is displayed: yield or waste, planned area, number of sheets and raw glass plates used. The user may intervene at any time to influence the result (resolve any pattern or residual plate, add fill up/depot plates) or discard the optimisation groups.

CNC output for all currently available cutting lines and benders, as well as DXF output for processing centers may be generated automatically by **OPTIPLAN4** after accepting the optimisation result. Any necessary mirroring of shapes and edge deletion of coated glass are accounted for by the system. Automatic crane control for raw glass feed may be supplied with data if requested. Data output to breakout pattern visualization, as **HANIC's OPTIVIEW 3**, is also available. CNC output may be supplied either via network connection or by floppy, dependent on machine supplier and type.

Printouts may be individually defined with lists (cutting list, production list DGU, TGH, and processing lists) and shape sketches including spacer information being available.

Supplied with **OPTIPLAN4** is an automatic label editor to define your individual label layouts including customer logos and barcodes. A thermo printer being recommended, printout on special laser labels is also supported.

Master data
Master data includes raw glass stock, machinery (cutting line, bender, shape sealer) as well as general restrictions.

Raw glass stock may contain A or L racks with different stock sizes. Several stock sizes are possible on one rack, containing information important for optimisation, such as necessary edge cuts, minimum breakout distances, pattern direction, coating, and general stock information.

Cutting line master data includes general machine restrictions as minimum/maximum width/height, thickness, breakout restrictions, the position of X, Y, Z, V, and W cuts, sorting of traverses, and line parameters such as setup, automatic breakout, feed direction, 0-point, and breakout sequence.

Settings to define parameters such as turning of stock sizes, shape catalogue, shape distribution and residue sheet use are defined as general restrictions.

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