OMNIWIN

Advanced Designing and Nesting Software

OmniWin is a simple, clear, and fast designing and nesting software, cane be adapted to your machine and your cutting needs. It processes cutting tasks for order-based production with CNC thermal cutting machines. OmniWin is effective and economical for small production runs in the machine and manufacturing industry, as well as in just-in-time manufacturing with changing quantities at custom cutting operations. You save time, materials, and operationally it is easy to use. OmniWin is the ideal tool for production planning with thermal cutting for oxyfuel, plasma, and laser cutting with CNC machines.

IDEAL TOOL FOR PRODUCTION PLANNING

Thermal cutting workshops have numerous tasks and preparatory work before the production on the machine can start. Part geometries must be designed or imported from customer drawings. Then the parts to be produced must be nested to minimize plate material usage. The NC code for the nesting plan must ensure fast, efficent processing with high quility cutting. While doing this, it will utilize the full technological capabilities of the machine, e.g. with the use of True Hole.

### SPEEDING UP AND SIMPLIFYING WORK PROCESSES

OmniWin combines the highest technical flexibility with fast, efficient processing. At the same time, you will reduce your costs by minimizing plate material usage. The integrated operation with CAD, import, and nesting for vertical and beveled parts permits a dramatic simplification of your working processes.

OMNIWIN IS OFFERED TWO VERSIONS:

- **Enhanced**

- **Professional**

BOTH EDITIONS OF OMNIWIN INCLUDE:

- Fully integrated CAD system.
- 3D part rendering.
- Raster to vector image importing.
- Shortcut keys.
- Undo of all previous tasks.
- Familiar controls for zooming and panning.
- Text conversion for marking or cutting.
- Messer developed process database.
- Part, plate, plan, order, and customer database.
- Messer Hole & Slot technology.

- Tool path simulation.
- Customized reports.
- Process optimization with collision avoidance.
- Automatic dimensioning.
- NC import for re-posting or troubleshooting.
- Part scaling, mirroring, rotating, and bumping.
- Construct custom plates.
- One click data processing.
- Heat dissipation techniques.
- Advanced time calculations.
- Cost estimation.
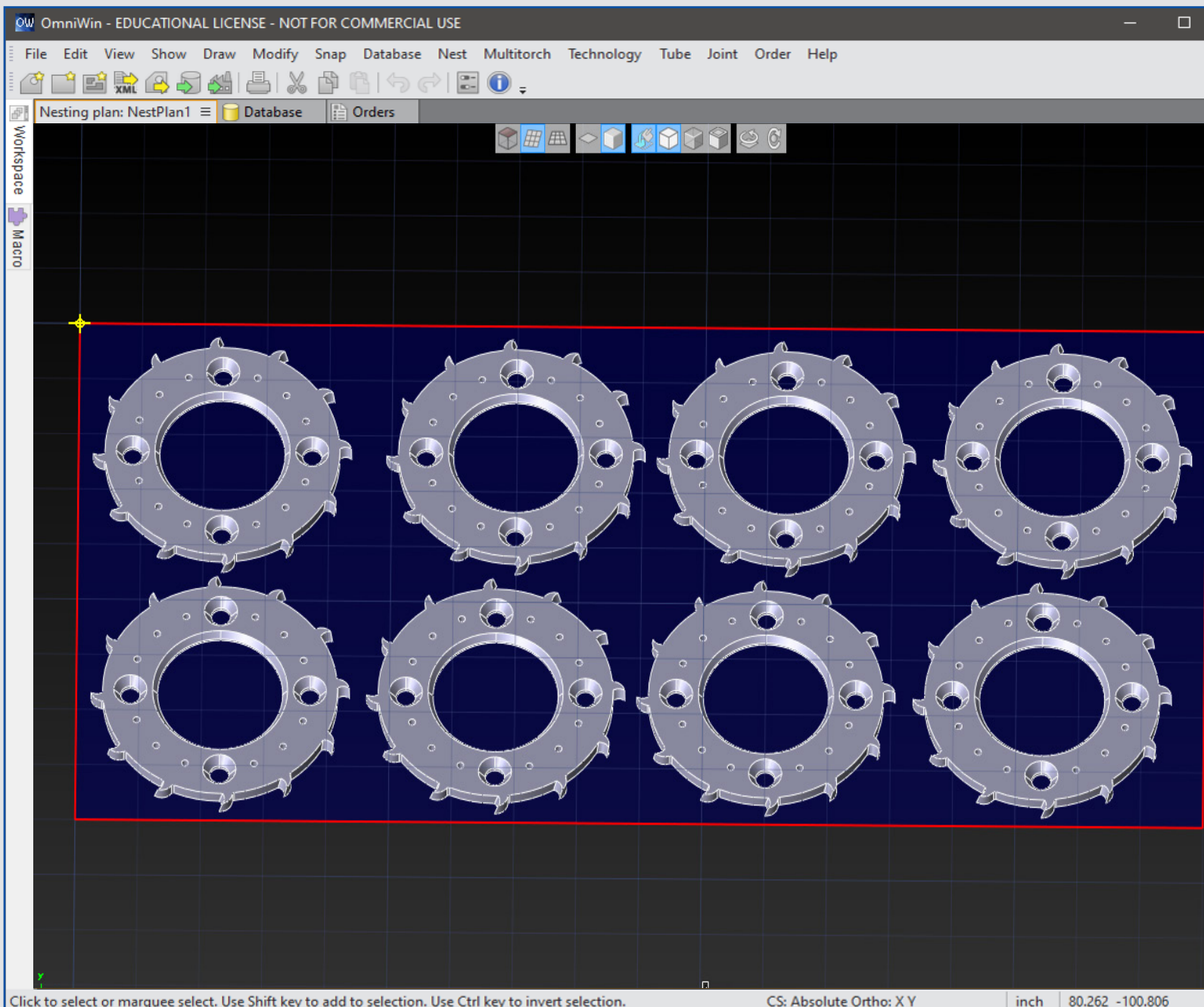
USER INTERFACE AND PART DESIGN

EVERYTHING IN ONE USER INTERFACE

OmniWin provides you with a CAD system in which you have an integrated working environment for drawing parts, importing existing drawings, creating nesting plans, and finally generating the NC output, all within the same application. The operator interface with its clear overview is particularly practical here, it is available in numerous languages and its wide-ranging functionality can be used intuitively for daily applications. OmniWin supports both the Metric (millimeter) and the Imperial system (inch).

DESIGN PARTS QUICKLY

With OmniWin you can create parts simply and quickly in the integrated CAD system. To do this, there are numerous positioning, drawing, modifying, grouping and labeling functions available, which are familiar with other professional CAD programs. Standard parts can be created in seconds using macros with variable parameters. You can apply automatic dimensions to parts or plates easily. Cutting requirements such as converting markings into closed contours or line contours are taken into account. A new 3D view for vertical and bevel parts gives you a realistic view of the part geometry.

OMNIWIN

If a change is made on a part within the nest it can automatically change the identical part within the rest of nests. Messer Hole Technology can also be applied for the plasma cutting of circular, slots and rectangular inner contours to optimize the quality of the cut.

PART IMPORT AND NESTING PLANS
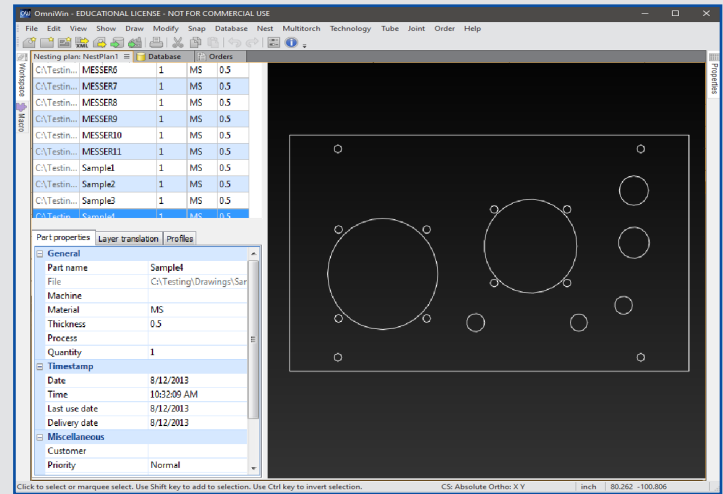

SIMPLE AND RELIABLE PART IMPORT

Part drawings in the form of DXF, DWG, DSTV (NC1), SolidWorks® (SLDPRT, SLDASM)*, Inventor® (ipt, iam)* files are easily imported into the system with the integrated import function. The parts can be converted to the desired process with automatic layer interpretation. Support for various automatic error corrections and the ability to read objects from the bill of material, including the ability to take over component metadata as well. Import bevel information, for all file types.
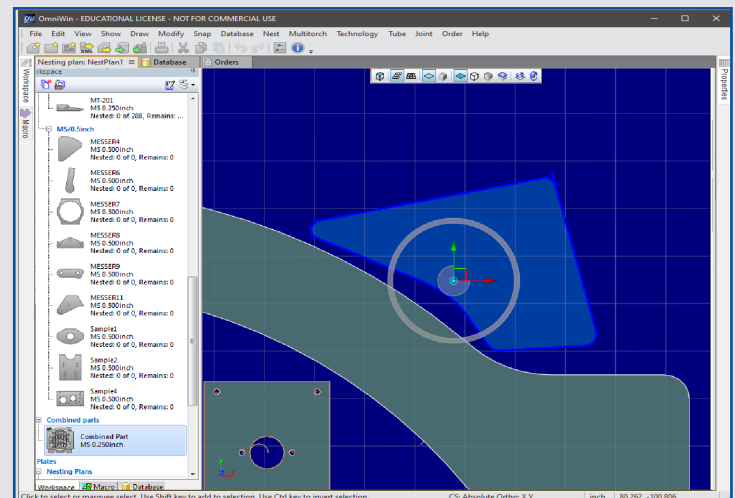

CREATING NESTING PLANS

To create a new nesting plan it is only necessary for you to select your preset machine profile, the material and thickness used, and the cutting process. You can define the plate as new with rectangular dimensions or select it from the database. Finished!

You nest the parts out of an intuitively designed workspace using Drag & Drop with automatic collision control. The part-to-part and part-to-plate distances, as well as the added lead-ins and lead-outs, with their shape and length, are determined by the parameters stored in the configurable technology database. Manipulation of parts such as copy, rotate, mirror, move with collision control is performed with one tool. The sequence of parts and contours can be defined manually or automatically, rule based.
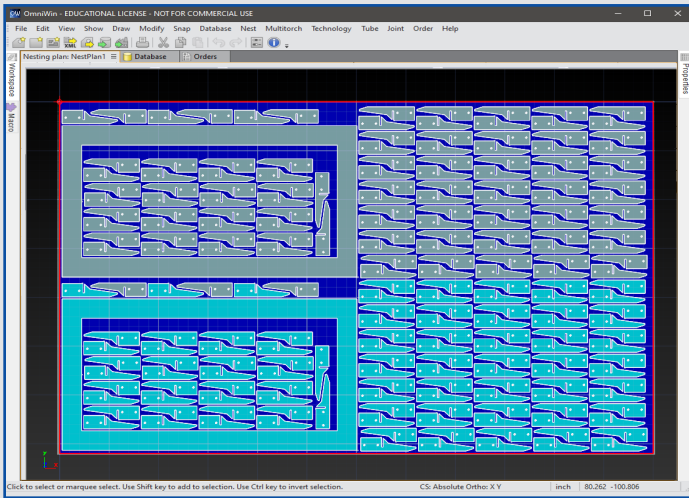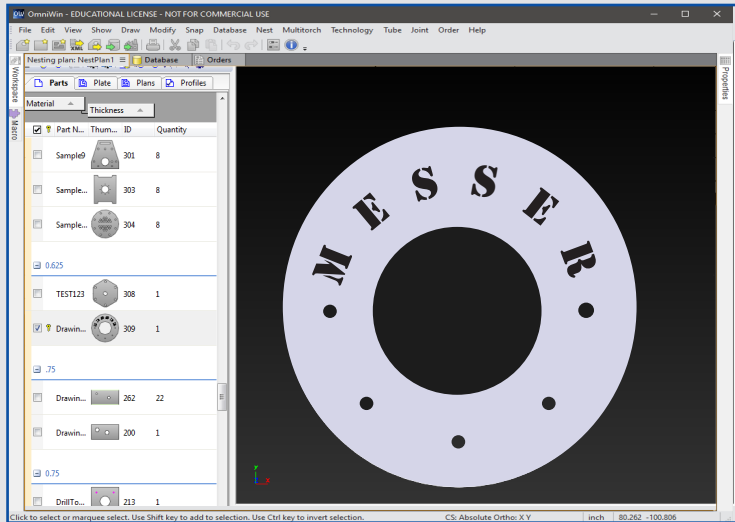
MULTI TORCH NESTING
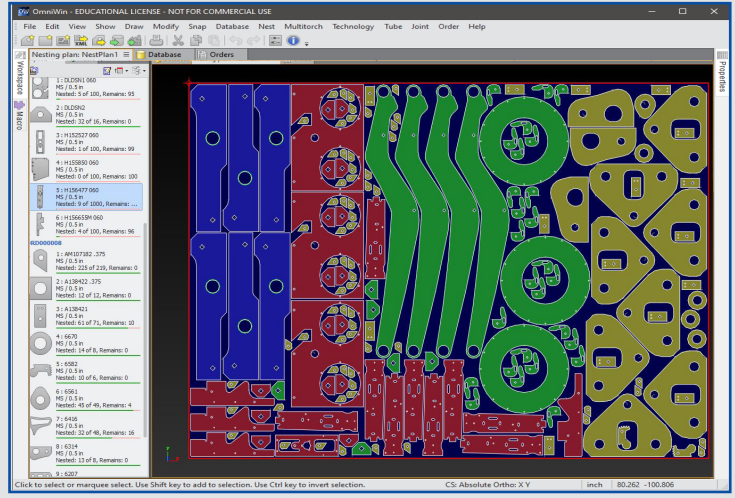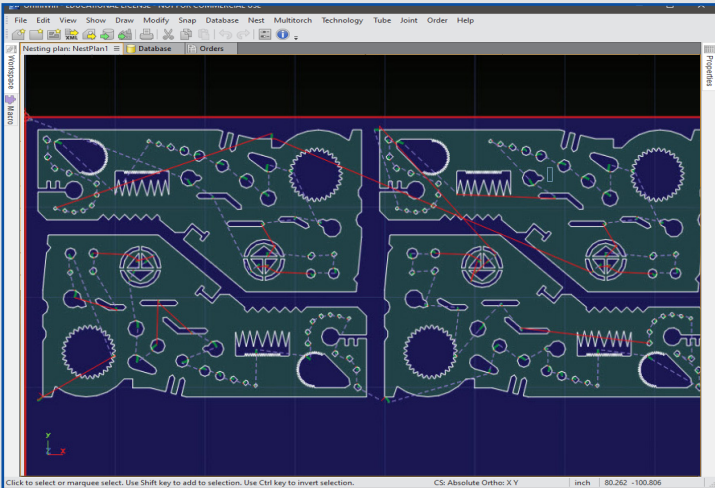

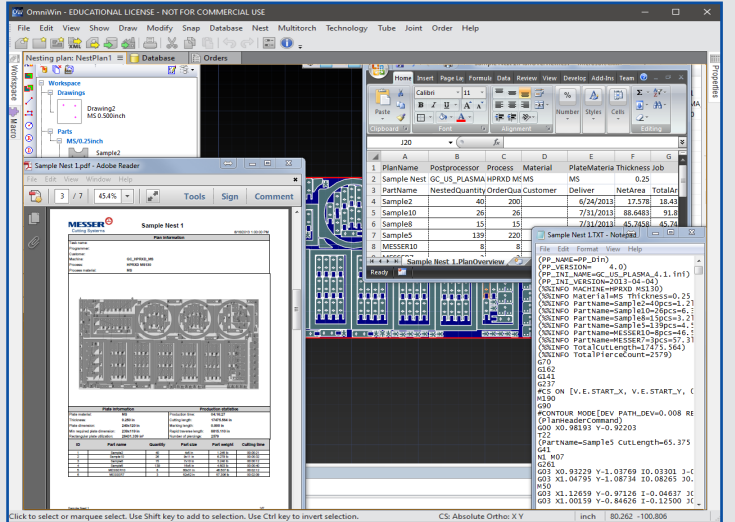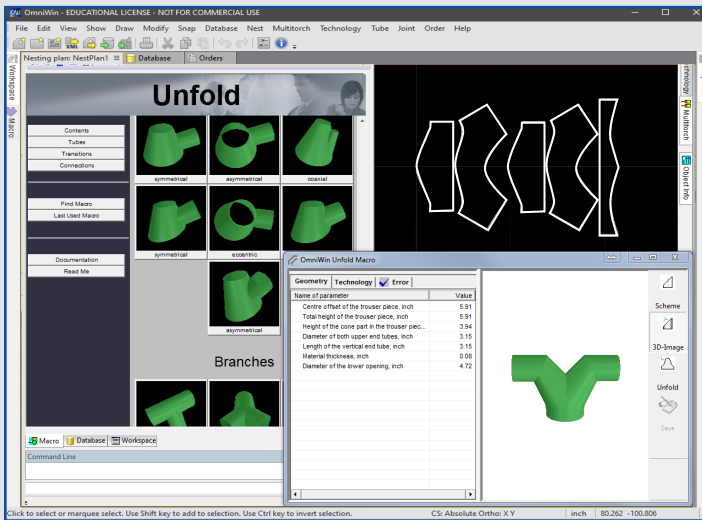**PART, PLATE, PLAN AND CUSTOMER DATABASE AND WORK ORDER PROCESSING**
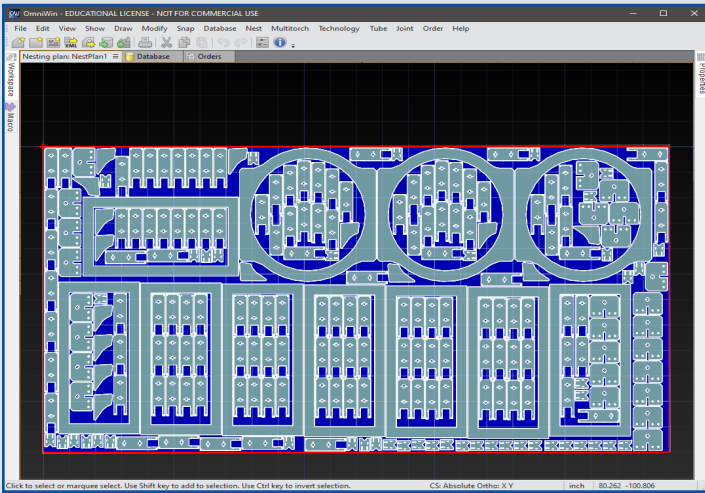
AUTO NESTING

TEXT CONVERSION

MESSER PROCESS OPTIMIZATION, COLLISION AVOIDANCE, AND MESSER HOLE & SLOT

**ONE CLICK PRODUCTION DATA AUTOMATION**

UNFOLD - 3D INDUSTRIAL FITTINGS (Optional)

The unfold option offers a broad integrated palette of 3-D geometries that are defined by parameters and can be unfolded for 2-D cutting. Multiple technological functions are available to adjust the output for further manipulation for bending or rolling machines.

- – Fully integrated unfolding and optimization of 3-D shapes for 2-D cutting.
- – Extensive library of common shapes for container and ducting industries.
- – Sorting of geometric forms by category and subcategory.
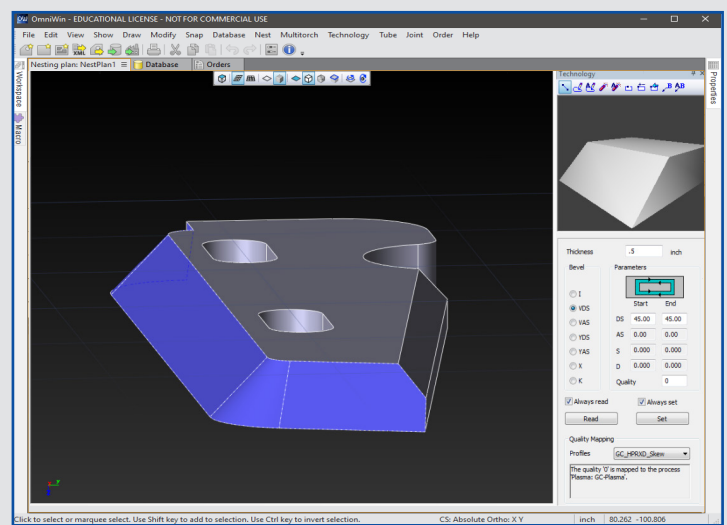
## BEVEL PART CREATION (Optional)

The Bevel Part Creation option integrates nesting of bevel parts using the standard Perfect Cut database with proven compensations for hundreds of different bevels of various material types and thickness. The bevel creation is the fastest route to production with the most flexibility on any beveling application. It is simple to copy and modify a single bevel part and apply the modification to all the identical parts within the nest for faster production.
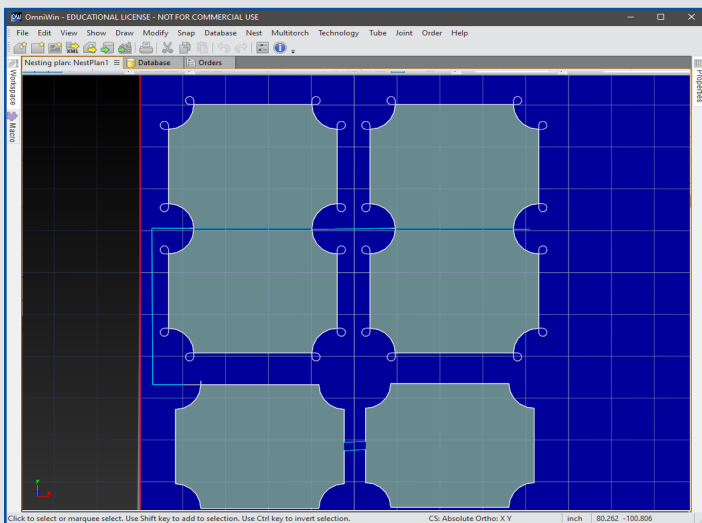
OPTIMIZED TECHNOLOGY (Professional)

Numerous technology functions include:

- – Bridges with crossing and rounding.
- – Chain cutting.
- – Common line cutting.
- – Pre-piercing with several options.
- – Single and multiple tabs with variable widths.
- – Skeleton cut-up.
- – Disabling portion of a contour.
- – Automatic loop creation.
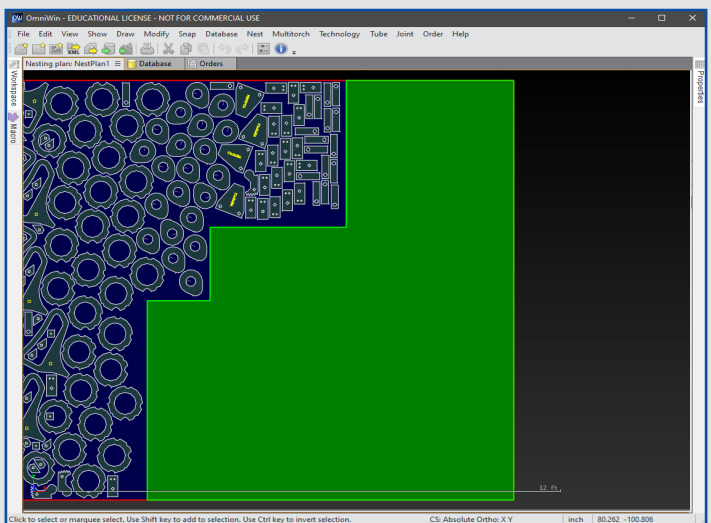
AUTO-REMNANT CREATION (Professional)

Plates which are not fully nested can be selected between diverse algorithms to define remnant plates. OmniWin saves the remnant plate geometry in the database to use it again as a template for nesting. Additionally, remnant plate cuts can be programmed within OmniWin.

OmniWin 2021		Enhanced	Professional
CAD	CAD part and plate creation.	X	X
	3-D visual rendering.	X	X
	Standard shapes library.	X	X
	Text conversion for cut-outs or marking.	X	X
	CAD import .dxf, .dwg, .iges, .dstv,*SolidWorks part (SLDPRT) and assembly (SLDAMP), **Autodesk Inventor.	X	X
	Read and translate administration data.	X	X
	Import images .bmp, .jpg, .png, .tif file formats.	X	X
	Import TRUNEST .dxf, as nesting with single part identification.	X	X
	Reverse import CNC files to .dxf.	X	X
	Excel import of parts and plates (orders with Enhanced Edition only).	X	X
	Automatic dimensioning of parts and plates.	X	X
CAD and Nesting	MS SQL database for parts, nestings, plates, profiles, and machines.	X	X
	Fast Reports® creator.	X	X
	Professional designed workspace.	X	X
	Shortcut keys.	X	X
	Dimensioning.	X	X
	Snap modes.	X	X
	Manipulator tool for rotation, copy, move, and mirror.	X	X
Nesting	Process database.	X	X
	Messer Hole Technology supports True Hole® or contour cut.	X	X
	Production time estimation.	X	X
	Costing.	X	X
	Customize automatic lead-in/out.	X	X
	Cut plan simulator.	X	X
	Interactive nesting (row, column, and pattern matrix) with single or multi-torch.	X	X
	Collision avoidance.	X	X
	Process optimization.	X	X
	Modify part, interior profile, or marking sequence.	X	X
	Automatic nesting.	X	X
	Stone mold cutting.		X
	Interactive nesting with tools including collision control for fast copy, move and rotate of parts or groups of parts.	X	X
	Mirroring of parts, nesting in rows or in a matrix.	X	X
	Activate/deactivate contours.	X	X
	Automatic corner rounding.	X	X
	Transfer of part technology to identical parts in the same nesting plan.	X	X
	Transfer of geometrical change to identical parts on the same nesting plan.	X	X
	Technology parts: Easily reuse previously used technology on parts.	X	X
	Stitch, bridge, common cut, corner loops, chain cut, manual crop cut, and automatic corner rounding.		X
	Skeleton cutup.		X
	Pre-piercing and pre-drilling (option drill required).		X
	Remnant plate creation with auto crop cut.		X
	Work order processing with order database.	X	X
Options	Bevel part creation. (Optional)	X	X
	3-D Step file import	X	X
	Unfold 3-D industrial fittings. (Optional)	X	X
	Boiler-end (requires optional bevel) - dome cutting.	X	X
	Mill - 2.5-D milling support for pocket and through hole milling. (Optional)	X	X
	Drilling and support. (Optional)	X	X

*A SolidWorks license is required with installation on the same PC. **An AutoCad Inventor or viewer is required with installation on the same PC.*