

# OMNIWIN CAD/CAM SOFTWARE

CAD/CAM on professional level





# OMNIWIN

## DESIGN AND NESTING FOR NUMEROUS TASKS

### **SPEED UP AND SIMPLIFY PROCESSES**

The integrated operation of CAD, import and nesting for straight and bevel parts drastically simplifies your work processes. Technology functions such as tabs, bridges, common cuts and matrix nesting shorten your process times.

### **NETWORK CAPABLE**

Use the flexible license models at your individual workstation or in your network. Share and update parts, nesting plans, orders and plates via a database.



OmniV



## Simple, effective, and fast constructing and nesting.

OmniWin is a simple, clear, and fast designing and nesting software, which adapts intelligently to your machine and your cutting needs. It takes over all cutting tasks for order-based production with CNC thermal cutting machines.

### HIGHEST CUT QUALITY GUARANTEED

With OmniWin you nest your parts offering you material savings. The NC nesting plan generated in OmniWin ensures fast, efficient processing with high cutting quality. You fully utilize the technological possibilities of your machine such as True Hole®, Contour Cut, Q Hole, or Silent Cut.



### IDEAL TOOL FOR REPORT PLANNING

OmniWin is the ideal tool for report planning with thermal cutting for oxyfuel, plasma and laser cutting with CNC machines.

## The result:

**You achieve maximum technical flexibility with efficient work and reduce your costs through minimal material waste. Save up to 30% time thanks to the clear operating concept and simple computing,**



OMNIWIN

# READY FOR

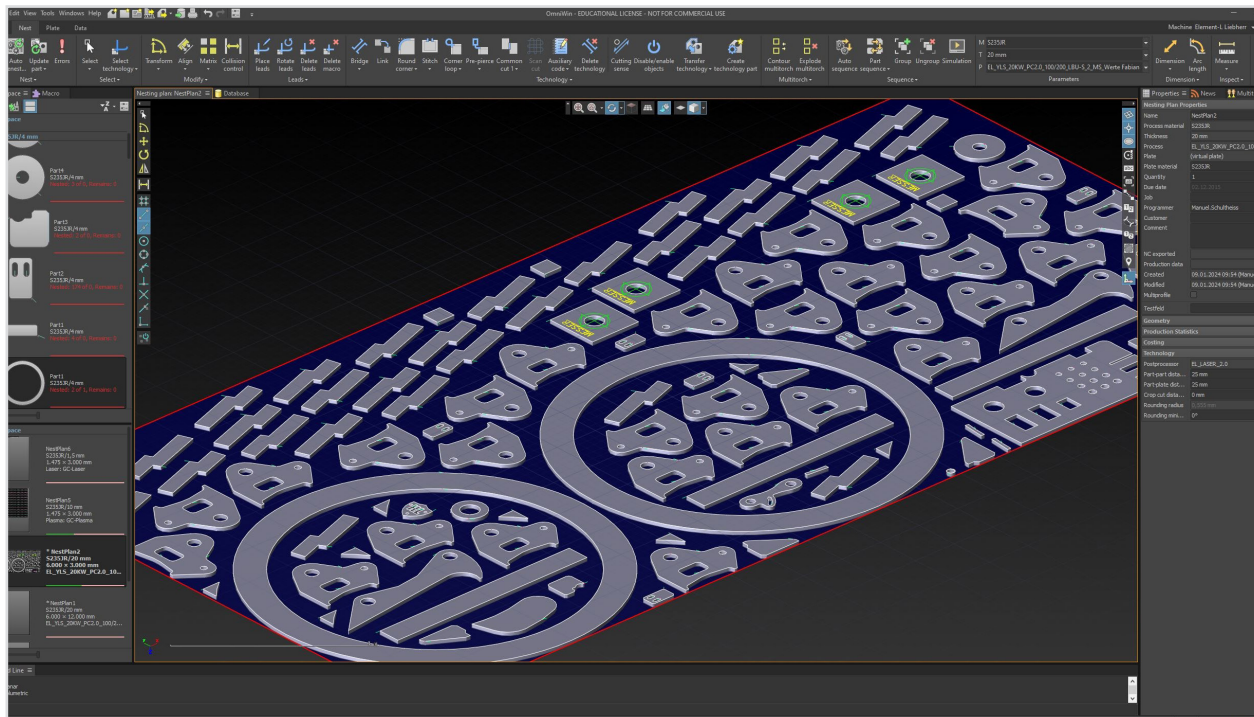
INDUSTRY

# 4.0

WHAT'S NEW IN OMNIWIN?

- + Extension and revision of the 3D import:  
STEP, Autodesk Inventor, Dassault Systems CATIA,  
Siemens SolidEdge, NX and Parasolid, Rhinoceros 3D
- + Dark mode for ergonomic working.
- + Improved selection mode within nesting plans.
- + Marking of remnant plates.
- + Copying of nesting plans.
- + DXF export of customized fields.





## READY FOR INDUSTRY 4.0

### Digital - Next Level

In Industry 4.0, production is interlinked with the latest information and communication technology. Messer machines and software from a single source ensure maximum utilization of your resources.

The OmniWin CAD/CAM system is technologically future-proof and ready for full integration into your Industry 4.0 applications. In interaction with OmniFab, you use OmniWin for the pre-calculation of quotations, live machine monitoring, assignment to cutting jobs and job monitoring as well as the exchange of data with your ERP system.

## USER INTERFACE

### Intuitive Design

The practical user interface with its extensive functionalities is intuitive to operate in daily use. Create parts or plates easily and quickly.

With comprehensive support for processes such as cutting, marking, and drilling, contours and text labels are correctly generated and converted. A 3D view for straight and bevel parts gives you a realistic view of the part geometry.

#### CAD/CAM SYSTEM WITH INTUITIVE OPERATION



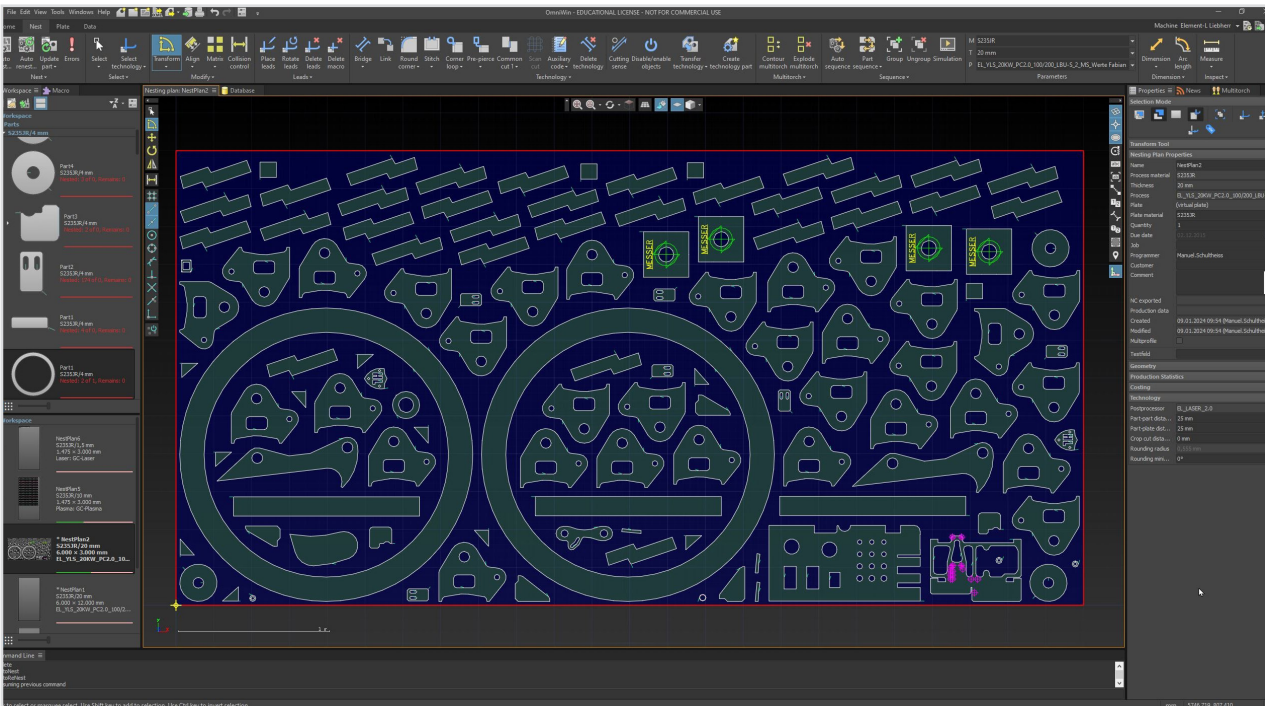
- + Draw parts, import existing drawings, create nesting plans and generates the NC output in one application.
- + Available in numerous languages.
- + Supports both the Metric (millimeter) and the Imperial system (inch).

#### EFFICIENTLY DESIGN PARTS OR PLATES



- + Dark/light mode for ergonomic working.
- + Numerous positioning, drawing, modifying, grouping and labeling functions.
- + Automatic dimensions to parts or plates.
- + Ribbons make operation easier.





## OMNIWIN STANDARD

### Simple Part Import

Import 3D parts and 2D part groups easily via the Solid Works or Autodesk Inventor interface. Transfer the technologies of nested parts to identical parts. Messer Hole Technology can be applied to small internal contours during plasma cutting. This optimizes the cutting quality.

### Multi-Torch Nesting

Nesting for machines with multiple, identical torch heads is part of OmniWin's functionality. This gives you highly optimized plans in the shortest possible time, with drastically reduced production times.

### Optimized Nesting

Select the machine profile, material, thickness and cutting process for your nesting plan. You can create the plate geometry from scratch with rectangular dimensions or take it from the database. You can nest parts from the clearly arranged work area by drag & drop with automatic collision control.

The spacing, as well as the automatically created shape and length of the lead-ins and lead-outs, are based on the configurable technology database. Manipulation of the parts by copying, mirroring, rotating and moving with collision control is carried out with a single tool. Part and contour sequences are automatically optimized based on rules or defined manually.

#### PARTS IMPORT: SIMPLE AND RELIABLE



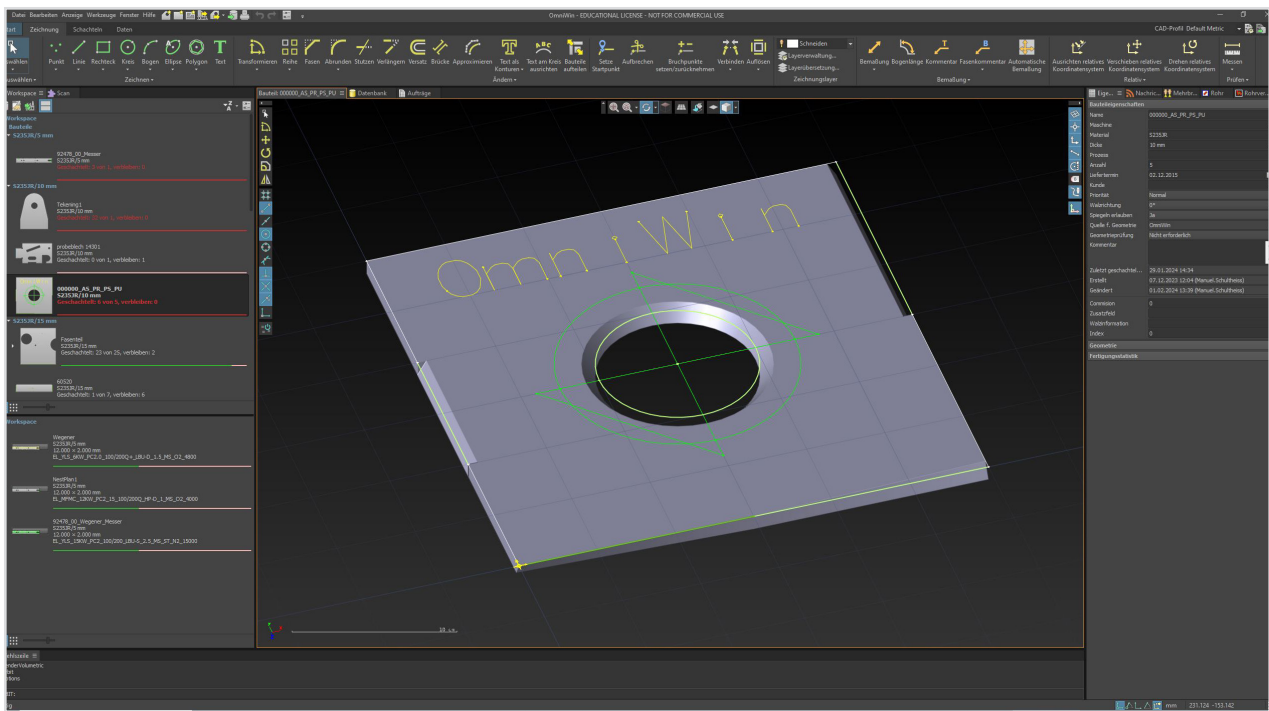
- + Import of DXF, DWG, DWF, DSTV or IGES, ESSI, and XML.
- + Image import JPG, PNG.
- + Automatic error detection.
- + Transfer of part metadata.
- + Automatic layer translation.
- + Compare and update part metadata.

#### MULTIPLE TORCH NESTING



- + Supports machines with and without automatic carriage positioning.
- + Changing of torch distances in the same plan.
- + Dynamic connection and disconnection of torches.
- + Automatic nesting for multiple torch heads.





## OMNIWIN STANDARD

### Design Professionally

Define standard parts using numerous custom macros and drawing functions for geometric shapes and labels. Use absolute and relative as well as orthogonal and polar coordinates. Convert text objects into contours or align them to circular arcs.

Extensive zoom, object snap, convert, and grouping functions makes construction easy. Add dimensioning objects. Set bevel information and quality indicators on sub-contours as well as starting points per contour. Dimensions can be applied with one simple click.

### Machine Support

The process databases for all Messer Cutting Systems machines are already included and ensure fast integration. OmniWin supports all common cutting processes such as oxyfuel, plasma, and laser.

With OmniWin you can use a wide range of marking processes such as OmniScript, Rea-Inkjet, powder, laser, and plasma marking. Cutting on multiple plates in a single plan is also supported.

#### INTEGRATED CAD SYSTEM



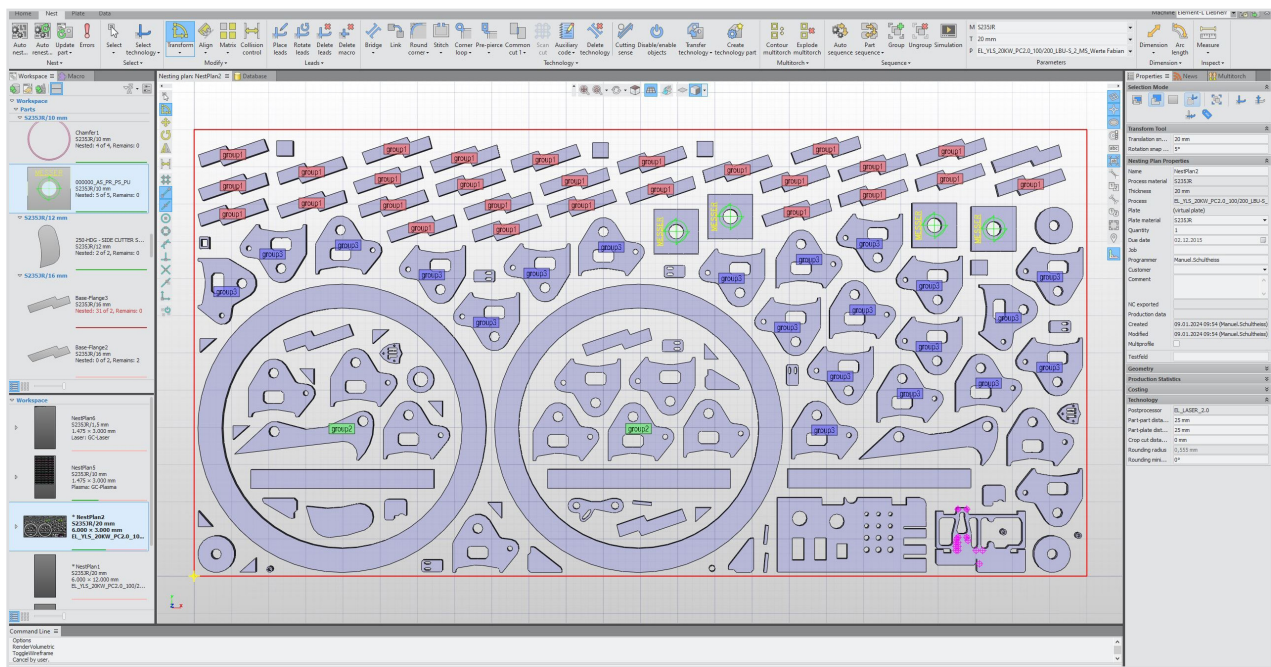
- + Error detection, nesting and generation of production data without intermediate steps in one user interface.
- + Generation of NC outputs for similar machines (multi-profile support).
- + Protected zones on plates.

#### EXTENSIVE CONFIGURATION OPTIONS



- + Pre-configured post-processors and machine profiles for standard machines.
- + Preconfigured process databases.
- + Profiles for individual configurations.
- + Parallel installation with previous version and data migration from OmniWin Classic.





## OMNIWIN STANDARD

### Interactive Nesting

Interactive nesting while copying, moving and rotating parts or groups of parts with collision control in a nesting plan. Mirror parts, nest in a row pattern or matrix. Automatically generate lead-ins and lead-outs matching the technology for the selected material and thickness with precise speed control.

### Optimal Use of Space

OmniWin optimizes part, inner contour, and process sequence and reduces non-productive time by minimizing rapid traverse moves. Up and down movements of the torch are also minimized with collision avoidance. Adjust shapes, parameters and positions of lead-ins and lead-outs or change the cutting direction. Activate and deactivate contours or round corners automatically.

### Production Data

Maintain an overview with the individually configurable preview of NC programs and the export of NC part programs. Define machine profile-based settings of storage locations for production data. Work with pre-configured reports for parts and nesting plans.

Configure automatic printing of shop floor papers. Customize the supplied reports with the integrated report editor or create your own new reports.

#### PROFESSIONAL TIME CALCULATION



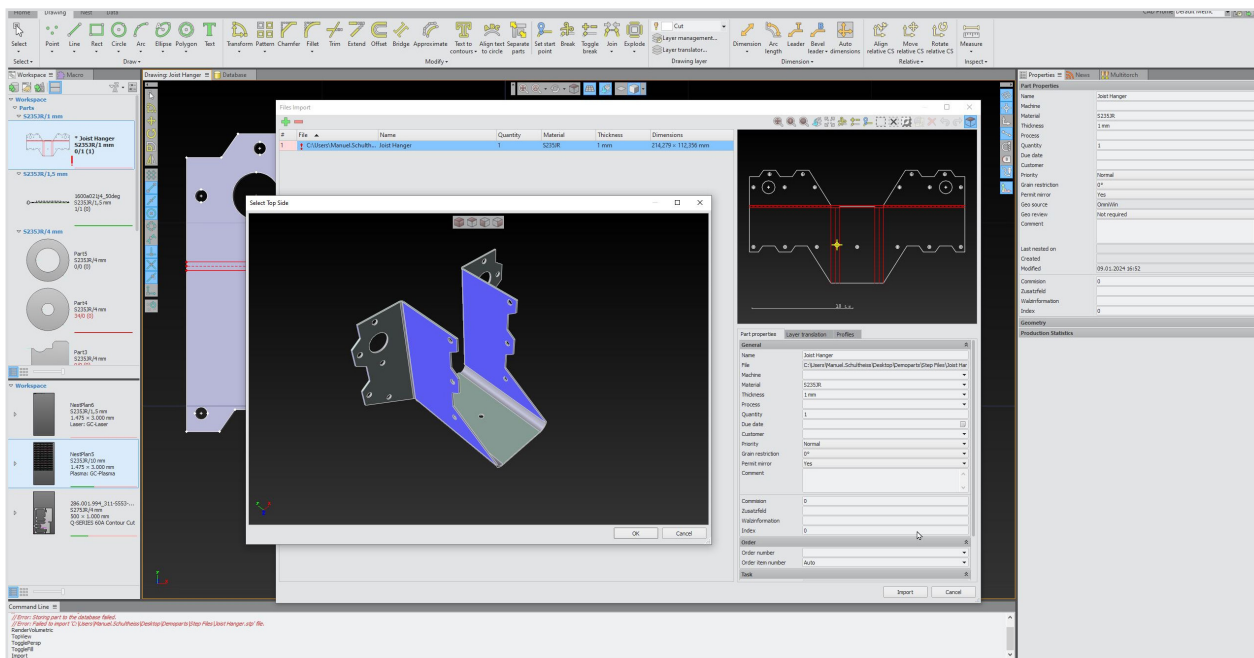
- + For straight cut parts.
- + Based on geometry and the applicable process data such as cutting time, piercing time, machine specific times like rapid traverse and activation time.
- + With material, personnel and process costs, depending on cutting time.

#### PROFESSIONAL PRODUCTION DATABASE



- + Manage parts, drawings, customers, plates, combined parts and nesting plans
- + Easy retrieval of objects and sorting of result lists.
- + Single-user or network license.
- + Based on Microsoft SQL Server.





## EDITIONS

# OmniWin Enhanced

Two other editions are available: OmniWin Enhanced and OmniWin Professional. Both extend the Standard Edition with different functionalities.

Autonest automatically nests parts with minimal time and maximizes material utilization under a wide range of conditions in your production.

OmniWin Enhanced and Professional gives you the ability to enter, manage, and track orders.

Import your geometries directly from the files of the most popular 3D design tools such as SolidEdge, Autodesk Inventor and many others with the 3D import integrated in OmniWin Enhanced and Professional.

# OmniWin Professional

The OmniWin Professional edition offers more technology functions.

Single and multiple stitches as well as skeleton cut-up cutting is also included in the range of functions.

Achieve the best utilization of Messer Cutting Systems laser machines with specialized lead-in and lead-out technologies and laser-specific stitches.

## AUTOMATIC NESTING & ORDER FUNCTION



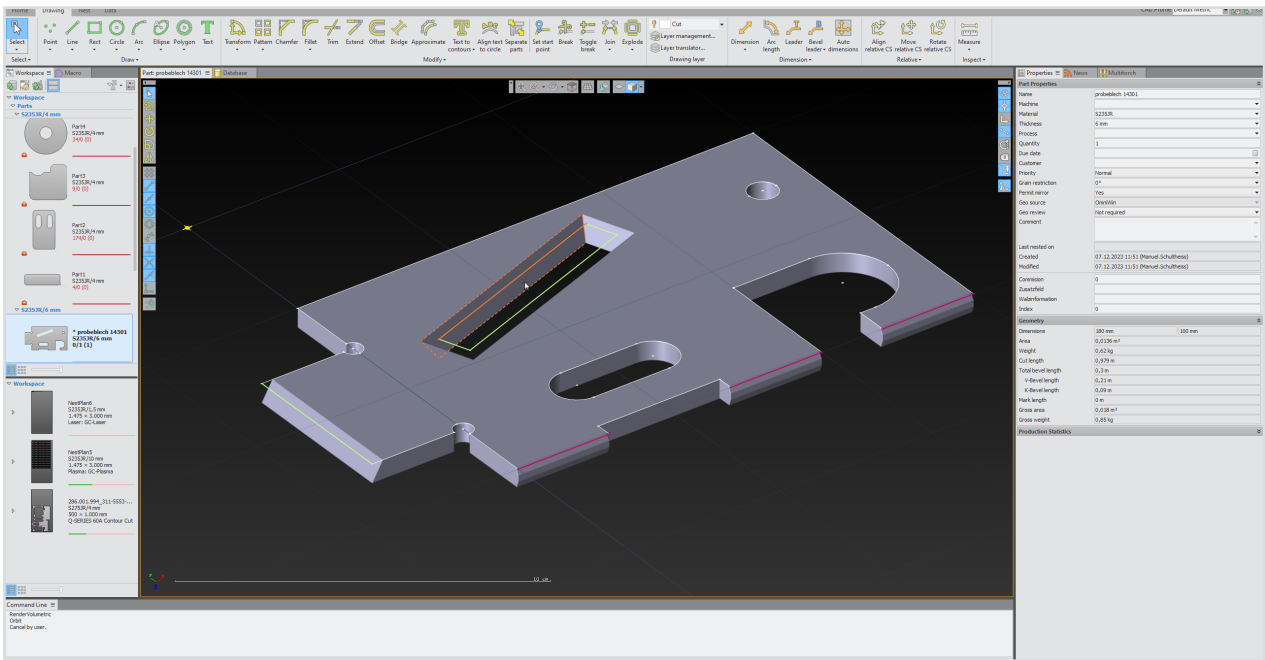
- + Import of 3D parts including unfolding and bend line visualization.
- + Order entry and management with order tracking function.

## TECHNOLOGY FUNCTIONS IN OMNIWIN PROFESSIONAL



- + Bridges, also crossed.
- + Rounded connections.
- + Common cuts and corner looping.
- + Any remnant plate geometries.





## OPTION PACKAGE

### Bevel

Our bevel option adds support for fully integrated nesting of beveled parts to your OmniWin Edition. You nest, create reports and production data, manage and store parts, plates and plans in the database.

The Bevel option uses the OmniWin nesting functions of the respective edition except for the technology and costing of the standard nesting plans for straight parts.

The technology databases and post-processors used are almost identical to OmniBevel.

## OPTION PACKAGE

### Boiler End

Boiler End Package enables the processing of dished ends according to DIN28011 and DIN 28013. Specially developed for the Infinity Rotator and designed for the requirements of tank and apparatus construction, you cut cylindrical pipe penetrations with or without additional VDS bevels.

You mark lines in the X/Y plane projected onto the domed base or use penetration projections of round cylinders to the ground.

Available in addition to Bevel Option.

#### BEVEL PARTS AT THEIR BEST

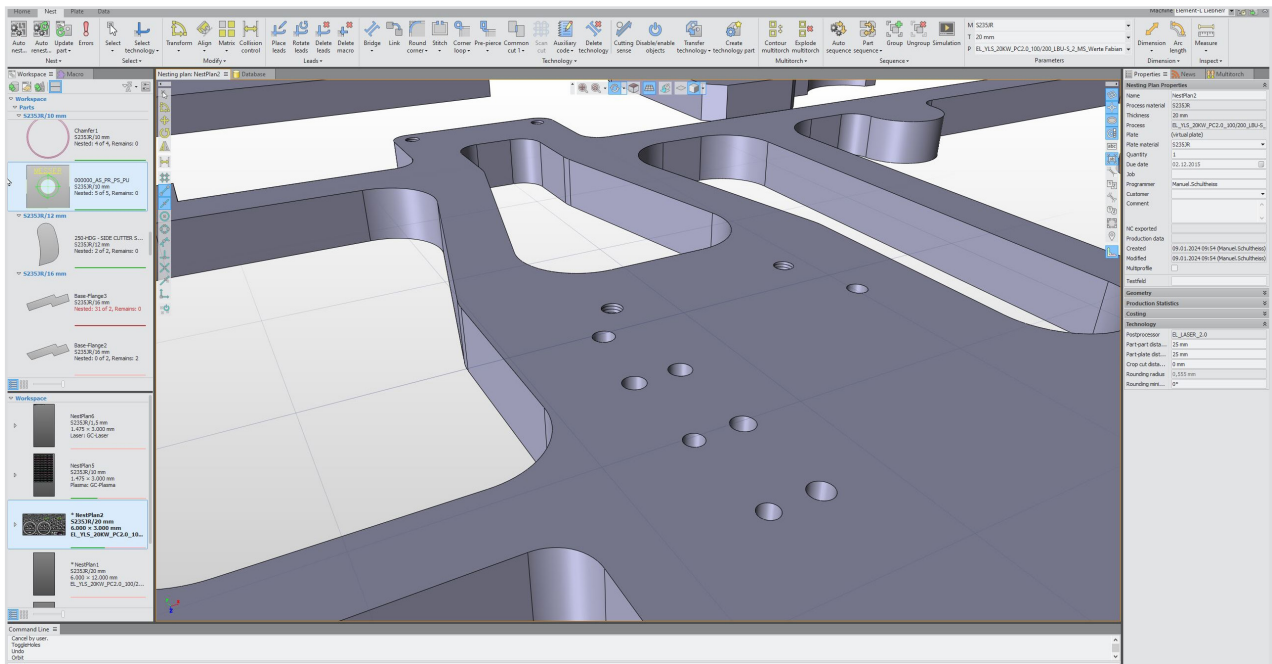


- + Fully integrated bevel cutting.
- + Integrated time calculation ensures predictability of your bevel nesting plans.
- + Based on the proven OmniBevel post-processors and process databases.

#### MACHINING DISHED ENDS



- + IParametric creation of piercings through domes.
- + Generation of NC code for MCS plasma beveling machines with support of dished heads.



## OPTION PACKAGE

### Drill

With the Drill option, you import and create all drilling operations supported by the machine. You can view and check drilling's with the 3D visualization. The integrated post-processors with drilling creates optimum programs.

You can display and check drill holes with the 3D visualization. Numerous sequencing options and tools minimize the number of tool changes. The integrated post-processors with drilling support provide the required machine output.

## OPTION PACKAGE

### Unfold

The Unfold option package offers a wide range integrated 3D geometries for tubes, transitions and joints with multiple technology functions for subsequent machining on a bending or rolling machine.

#### PRODUCT OPTION DRILL



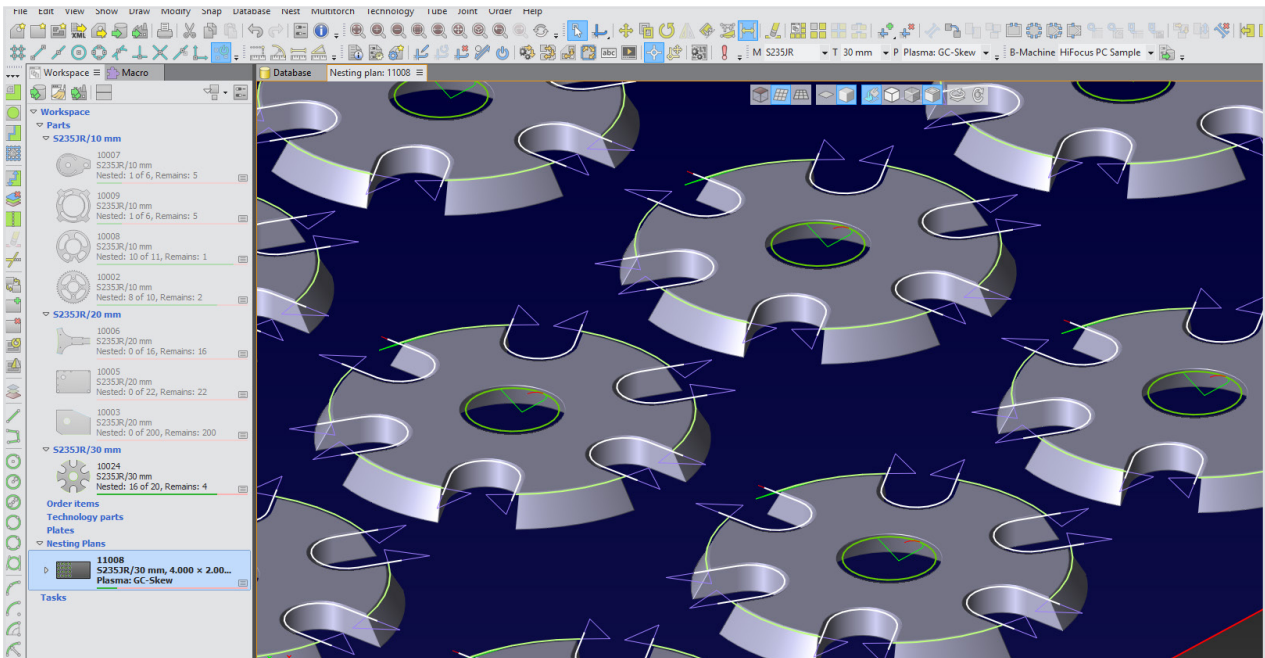
- + Integrated drill tool database.
- + Draw drill points.
- + Holes, countersink, tapping, deep hole drilling, and bore hole cutting.
- + Post-processor support for drilling operations.

#### FOR BENDING AND ROLLING MACHINES



- + Flattening of three-dimensional bodies into flat, sheet-metal parts.
- + Variety of patterns typical for apparatus and vessel construction.
- + Sorting of geometries according to criteria in categories and subcategories.





# OMNIWIN SYSTEM REQUIREMENTS

## Hardware requirements:

- + 8 GB RAM, 4 GB hard disk space, 2 GHz CPU with 2 cores.
- + Screen resolution at least 1280 x 960 pixels, recommended 1680 x 1050 pixels or more.
- + Graphics card supporting OpenGL 1.1 or higher without shared memory.
- + USB port for local software protection dongle or network access to a license server.

## Supported operating systems:

- + Windows 10 64 bit as well as Windows 11 64 bit.

## Software requirements:

- + Microsoft Edge.
- + Microsoft .NET Framework 4.8.
- + Microsoft Access Database Engine 2016.
- + Microsoft Visual C++ 2015-2022 Redistributable (x86) (vc\_redist.x86.exe).
- + Microsoft SQL Server 2017 LocalDB or higher.
- + Microsoft SQL Server 2012 Native Client.

OMNIWIN		Standard	Enhanced	Professional
CAD	Professional CAD Part and Plate Creation	X	X	X
	3-D Visual Rendering of parts and plates	X	X	X
	Standard Shapes Library	X	X	X
	Text conversion for Cut-outs or Marking tasks	X	X	X
	CAD Import - DXF, DWG, IGES, DSTV	X	X	X
	Import of SolidWorks* Part (SLDPRT) and Assembly (SLDAMP), Import of Autodesk Inventor* parts and assemblies	X	X	X
	Import of 3D drawing formats** (STEP, SolidEdge, and others)		X	X
	Read and Translate Administration Data	X	X	X
	Import of images in BMP, JPG, PNG or TIF file formats	X	X	X
	Import of nesting plans as DXF i.e. Auto Desk TRUNEST	X	X	X
	Reverse import of CNC files to DXF	X	X	X
	Automatic dimensioning of parts and plates	X	X	X
CAD & NESTING	MS SQL Database for Parts, Nesting, Plates, Profiles and Machines	X	X	X
	Fast Reports® Creator for professional reports	X	X	X
	Professional designed workspace	X	X	X
	Short Cut Keys	X	X	X
	Extensive dimensioning	X	X	X
	Extensive Snap Modes	X	X	X
	Manipulator Tool for rotation, copy, move and mirror	X	X	X
NESTING	Process Database	X	X	X
	Messer Hole Technology supports True Hole® or Contour Cut	X	X	X
	Production Time Estimation	X	X	X
	Costing	X	X	X
	Automatic Lead-in/out with Customization	X	X	X
	Cut Plan Simulator	X	X	X
	Interactive nesting (Row and Column, Pattern Matrix) with Single or Multi-Torch	X	X	X
	Collision Avoidance	X	X	X
	Process Optimization	X	X	X
	Modify Part, Interior Profile or Marking Sequence	X	X	X
	Technology Parts	X	X	X
	Manual Crop Cut	X	X	X
	Work Order Processing with Order Database		X	X
	Automatic Nesting		X	X
	Excel import of parts, order items and plates			X
	Stone Mold Cutting			X
	Stitches, Bridges, Common Cut, Corner Loops, Chain Cut, Automatic Corner Rounding			X
	Skeleton Cut Up			X
	Pre-Piercing and Pre-drilling (Option Drill required)			X
	Remnant Plate Creation with Auto Crop Cut			X

\* A SolidWorks license required with installation on the same PC

\* An Autocad Inventor or viewer required with installation on the same PC.

\*\* Please use the QR code for the current list of supported import formats.





## DIGITAL WORKFLOW

# DIGITIZE YOUR PRODUCTION

The digital solutions perfectly complement the wide range of products, automation, services, and know-how.



ERP CONNECT

SALES QUOTES

JOB MANAGEMENT

MATERIAL FLOW

PRODUCTION  
DATA CAPTURE

MACHINE INSIGHT

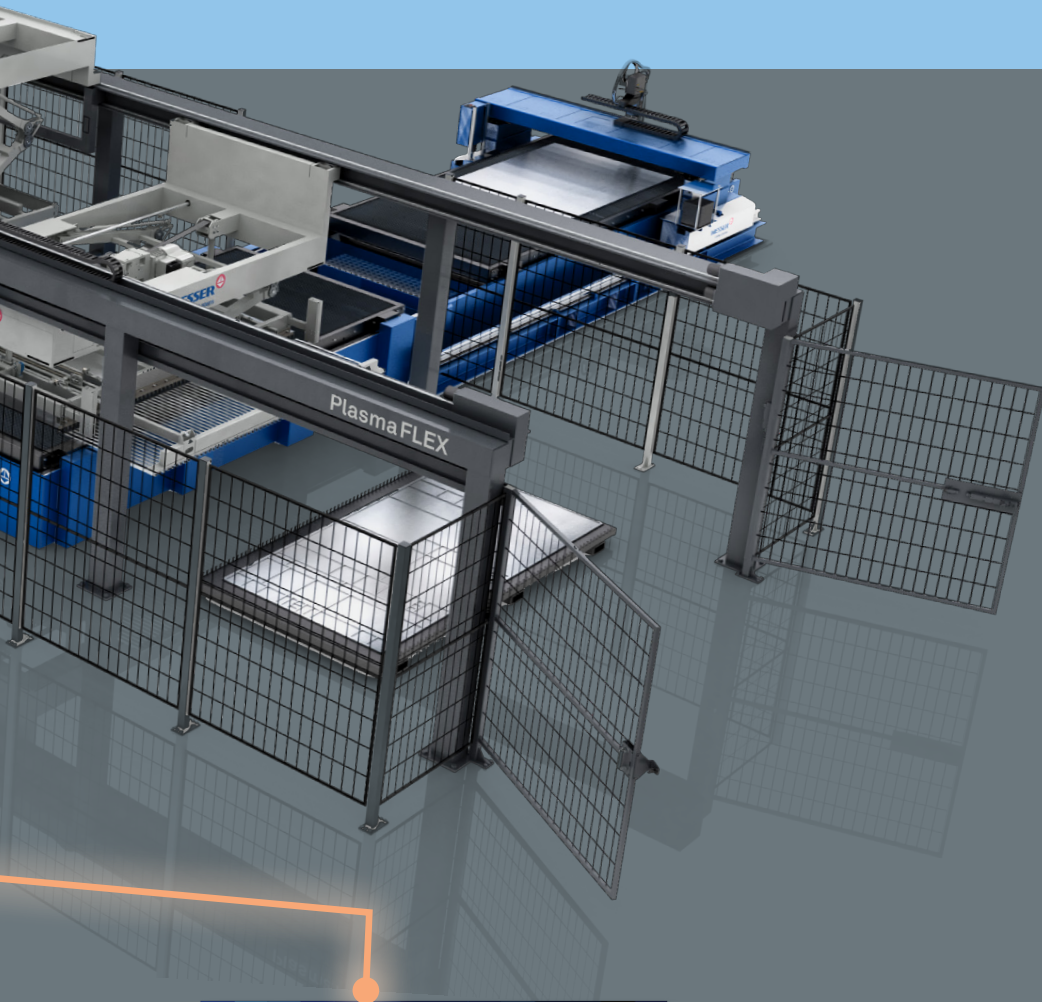


OMNIFAB

## Software Suite for your digital transformation

The OmniFab software suite integrates Messer Cutting Systems' mechanical engineering technology into business processes in a holistic and process oriented manner.

It provides relevant information for work preparation, production planning and plant management by connecting all systems. OmniFab also integrates material handling systems like loading/unloading stations, towers, material transportation devices and more – even on mobile devices.



COMPLETE INTEGRATION

## Modular Portfolio

Our modular software portfolio integrates your cutting machines in the best possible way into your business and production processes supporting key functions throughout the entire workflow.



OMNIWIN

## Ideal for preparing work

The powerful, easy to use designing and nesting software that saves time, material and costs.

OmniWin is the ideal tool for work preparation in oxyfuel, plasma and laser cutting.

It takes over all cutting tasks for order-based production with CNC-controlled cutting machines.





# CREATING SOLUTIONS BEYOND MACHINES

## What we stand for

Messer Cutting Systems is a global supplier of cutting-edge technology for the metalworking industry.

Our portfolio is built on the pillars of PRODUCT, DIGITAL, SERVICES, AUTOMATION and KNOW-HOW. With over 900 employees worldwide in over 50 countries, we maintain a constant dialogue with our customers. Through these partnerships, we achieve customer-oriented innovation and focus on “creating solutions beyond machines”.

We deliver not just modern cutting systems and solutions for plasma, laser, and oxyfuel technology, but appropriate services, training, our own software applications, and the integration of solutions from our technology partners in the field of automation. A network encompassing the machine, providing total solutions.

Our know-how combined with our customer-oriented attitude and actions have made us the worldwide partner of choice, delivering innovative solutions to the plate processing industry for over 120 years.

## Messer Cutting Systems, Inc.

W141 N9427 Fountain Boulevard  
Menomonee Falls, WI 53051

Tel. +1 262-255-5520

Fax +1 262-255-5170

Email [sales.us@messer-cutting.com](mailto:sales.us@messer-cutting.com)

[messer-cutting.com](http://messer-cutting.com)

Messer Cutting Systems reserves the right to make changes in equipment or specifications at any time without notice. Windows is a registered trademark of Microsoft Corporation. © 2024 Messer Cutting Systems.