



**MESSER**  **SOFT**

# OmniWin 2016

Professional Designing and Nesting

**OmniWin 2016 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. OmniWin 2016 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 and materials and work with easy operations. OmniWin 2016 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 to solve numerous tasks in work preparation, 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 material usage. The NC nesting plan for the machine must ensure a fast, efficient processing with high cutting quality. While doing this, it should utilize the full technological capabilities of the machine, e.g. with the use of True Hole or Contour Cut.

## **SPEEDING UP AND SIMPLIFYING WORK PROCESSES**

OmniWin 2016 combines the highest technical flexibility with fast, efficient processing. At the same time you will reduce your costs by minimizing material usage. The integrated operation with CAD, import and nesting for vertical and beveled parts permits a dramatic simplification of your working processes.

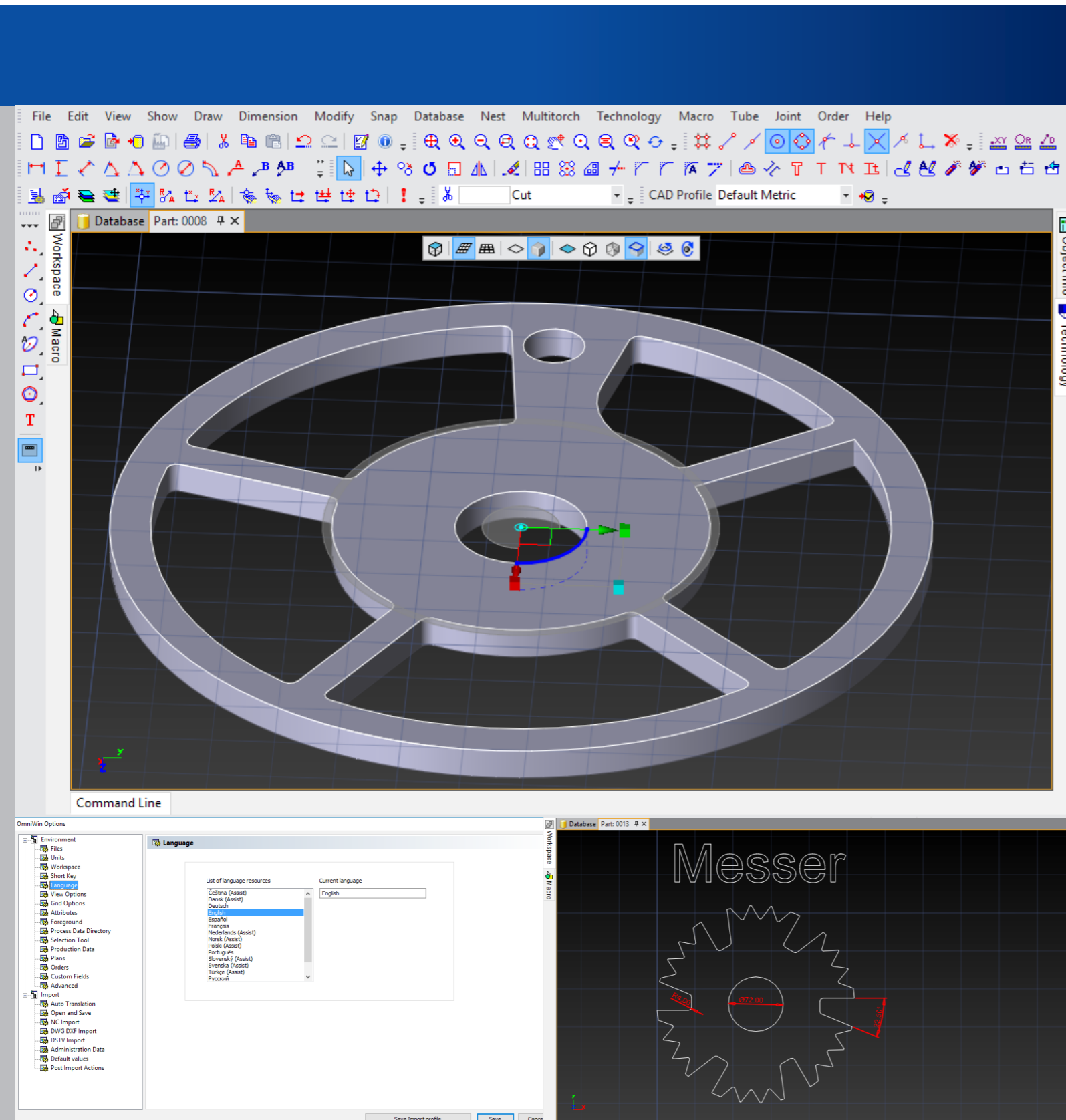
## USER INTERFACE AND DESIGN OF PARTS

### EVERYTHING IN ONE USER INTERFACE

OmniWin 2016 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 2016 supports both the Metric (millimeter) and the Imperial system (inch).

### DESIGN PARTS QUICKLY

With OmniWin 2016 you can create parts simply and quickly in the integrated CAD system. To do this, there are numerous positioning, drawing, modifying, grouping and labelling functions available, which are familiar from other professional CAD programs. Standard parts can be created in seconds using macros with variable parameters. 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.



# PART IMPORT AND CREATION OF NESTING PLANS

## SIMPLE AND RELIABLE PART IMPORT

If a part drawing already exists in the form of a DXF, DWG, DWF, DSTV or IGES file then it is a simple task to bring it into the system with our integrated import function. The parts will be converted to the necessary format and with our automatic layer interpretation be allocated to the desired processes.

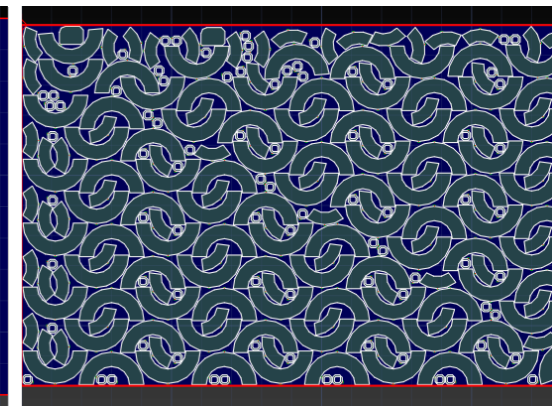
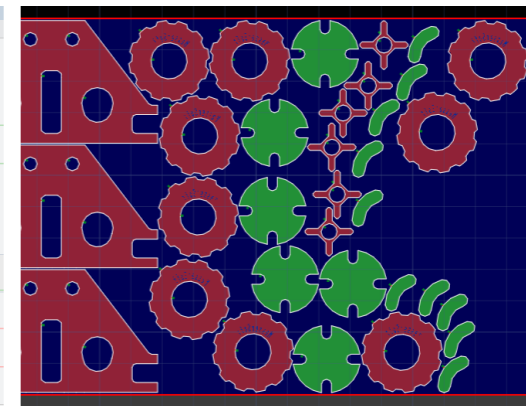
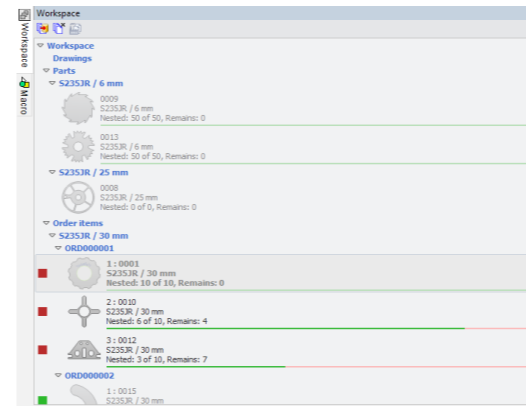
You are supported during import with various automatic error corrections and the possibility to take over component metadata as well.

## CREATION OF NESTING PLANS BECOMES CHILD'S PLAY

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 ergonomically designed optical list using Drag & Drop with automatic collision control. The part-part and part-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 data-base. Manipulation of parts such as copy, rotate, move with collision control is performed with one tool. The sequence of parts and contours can be defined manually or automatically, rule based.

OmniWin 2016 also allows individual modifications to the technology of single nested parts, which can then be applied to other identical parts. Messer Hole Technology can also be applied for the plasma cutting of circular inner contours to optimize the quality of the cut depending upon the unit used.



File	Part name	Quantity	Material	Thickness
C:\1000Drawings\0001....	0001	1	S235JR	10 mm
C:\1000Drawings\0002....	0002	1	S235JR	10 mm
C:\1000Drawings\0003....	0003	1	S235JR	10 mm
C:\1000Drawings\0004....	0004	1	S235JR	10 mm
C:\1000Drawings\0005....	0005	1	S235JR	10 mm
C:\1000Drawings\0006....	0006	1	S235JR	10 mm
C:\1000Drawings\0007....	0007	1	S235JR	10 mm
C:\1000Drawings\0008....	0008	1	S235JR	10 mm
C:\1000Drawings\0009....	0009	1	S235JR	10 mm
C:\1000Drawings\0010....	0010	1	S235JR	10 mm
C:\1000Drawings\0011....	0011	1	S235JR	10 mm
C:\1000Drawings\0012....	0012	1	S235JR	10 mm
C:\1000Drawings\0013....	0013	1	S235JR	10 mm
C:\1000Drawings\0014....	0014	1	S235JR	10 mm
C:\1000Drawings\0015....	0015	1	S235JR	10 mm
C:\1000Drawings\0016....	0016	1	S235JR	10 mm
C:\1000Drawings\0017....	0017	1	S235JR	10 mm
C:\1000Drawings\0018....	0018	1	S235JR	10 mm
C:\1000Drawings\0019....	0019	1	S235JR	10 mm
C:\1000Drawings\0020....	0020	1	S235JR	10 mm
C:\1000Drawings\0021....	0021	1	S235JR	10 mm
C:\1000Drawings\0022....	0022	1	S235JR	10 mm
C:\1000Drawings\0023....	0023	1	S235JR	10 mm
C:\1000Drawings\0024....	0024	1	S235JR	10 mm
C:\1000Drawings\0025....	0025	1	S235JR	10 mm
C:\1000Drawings\0026....	0026	1	S235JR	10 mm
C:\1000Drawings\0027....	0027	1	S235JR	10 mm

# MULTIPLE TORCH NESTING REDUCES PRODUCTION TIME

Nesting for machines with multiple identical torches is an integral component of OmniWin 2016. This supports both machines with and without automatic torch carriage positioning. Changing spacing between torches in the same plan and adding or subtracting active torches dynamically is possible. Automatic nesting also supports multiple torch operation. You get a highly optimized plan quickly with dramatically reduced production times.

**Carriages Adjusting**

Number of torches: 3

Set: 300 mm

Set maximum distance

Set minimum distance

**Torch 1 Activated**

Distance: 993,66 mm

**Torch 2 Activated**

Distance: 300 mm

**Torch 3 Activated**

**Nesting Plan Options**

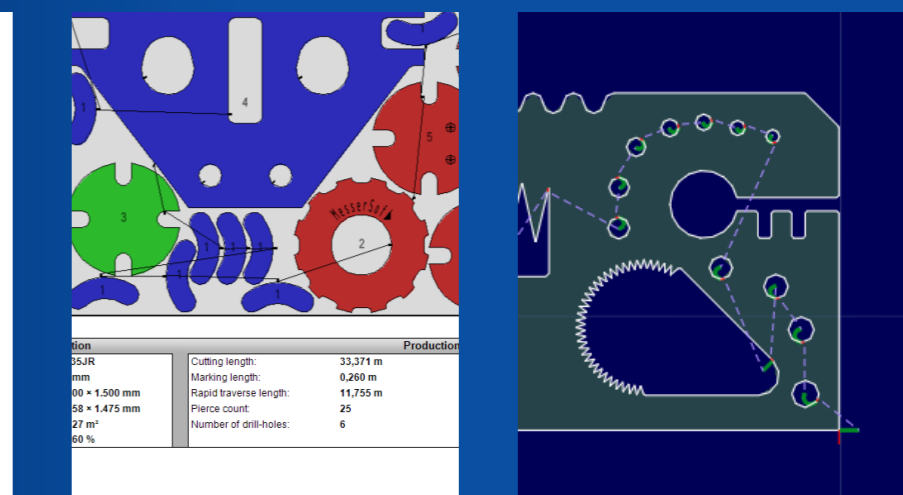
Machine: S235JR

Configuration: Carriage positioning: Automatic, Park position: Right, Global Control side: Left hand

Carriage	Carriage add...	Master	Min distance...	Supported processes
1	1	<input checked="" type="checkbox"/>	300	Cut
2	2	<input type="checkbox"/>	300	Cut
3	3	<input type="checkbox"/>	n/a	Cut

Part	Nest Quantity	Remains	Step Angle	Mirror	Priority	Width	Length
0001	2	20	90	Yes	Normal	643,374 mm	643,374 mm
0010	20	20	90	Yes	Normal	390 mm	390 mm
0012	9	9	90	Yes	Normal	978 mm	1,696 mm
0015	20	20	90	Yes	Normal	293,185 mm	248,256 mm
0016	14	14	90	Yes	Normal	534,101 mm	534,101 mm
0001	0	0	90	Yes	Normal	643,374 mm	643,374 mm
0018	0	0	90	Yes	Normal	643,374 mm	643,374 mm

```
#CS ON [V.A.ABS.X, V.A.ABS.Y, 0, 0, 0, V.E.ROTATION]
M190
G162
G141
G237
G00 X84.23 Y-87.21
M64
T31
M65
#TOOL DATA [31,2]
M112 H2
G41 D31
N1 M07
G261
G01 X84.23 Y-89.21
G03 X85.23 Y-90.21 I1.00 J-0.00
G03 X88.23 Y-87.21 I0.00 J3.00
G03 X87.35 Y-85.09 I-3.00 J0.00
G03 X85.23 Y-84.21 I-2.12 J-2.12
G03 X82.23 Y-87.21 I-0.00 J-3.00
G03 X85.23 Y-90.21 I3.00 J-0.00
G03 X85.72 Y-90.17 I0.00 J3.00
G260
M08
G40
G00 X84.84 Y-98.00
G41 D31
N2 M07
G261
G03 X86.01 Y-98.00 I0.58 J0.58
```



# OMNIWIN 2016 STANDARD

## INTEGRATED CAD-SYSTEM

- For the drawing and importing of parts
- Error correction, nesting of parts and creation of production data in a single application environment without additional steps or interfaces

## SIMPLE AND INTUITIVE INSTALLATION AND OPERATION

- Parallel installation with previous version possible
- Data migration from the previous version possible
- User Interface available in numerous languages
- Metric (millimeter) and Imperial (inch) measurement systems

## PROFESSIONAL NEW DESIGN OF PARTS

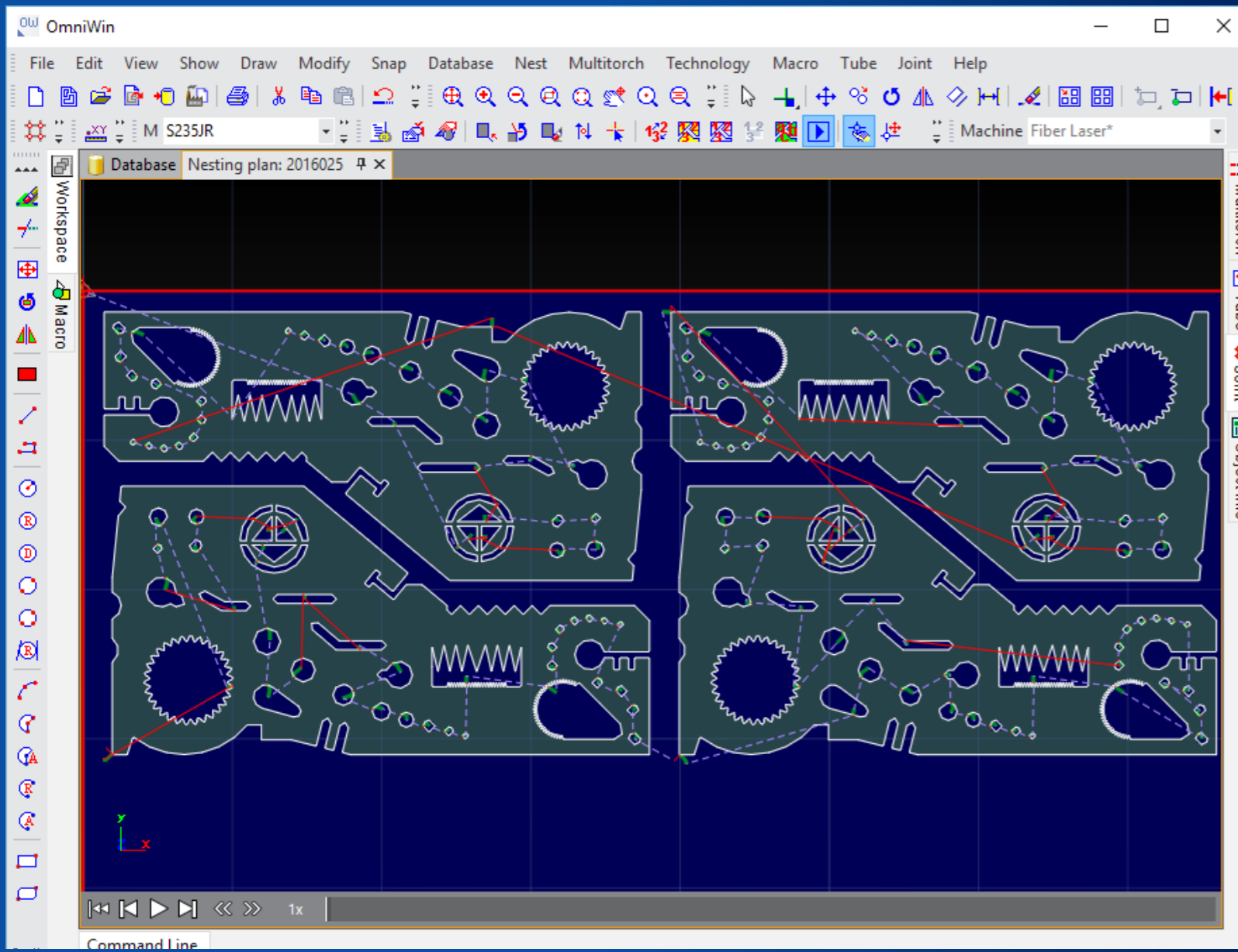
- Extensive collection of parameterized macros for fast definition of standard parts
- Extensive drawing functions for geometric shapes and labeling
- Support of absolute and relative as well as polar and orthogonal coordinates
- Conversion of text objects into closed contours and/or line contours
- Alignment of text objects to arcs
- A wide range of Zoom, Snap, Convert and Group functions e.g. trimming of protruding contours
- Insertion of dimensioning objects
- Definition of bevel information and quality attributes on sub-contours
- 3D view of vertical cut or bevel parts
- Optional setting of start points per contour
- CAD profiles to support individual configurations

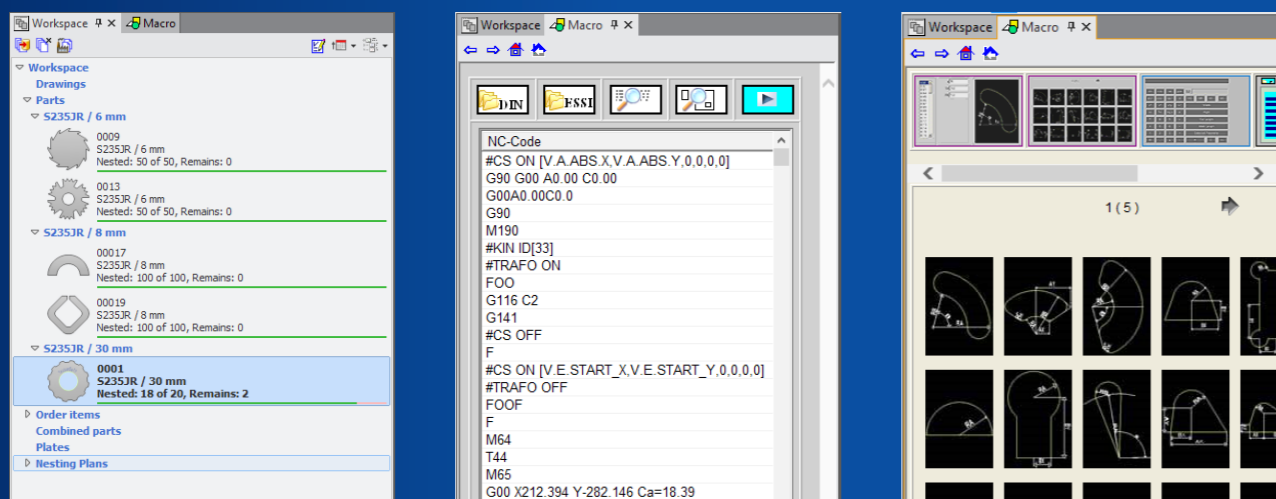
## EASY IMPORT OF PART DRAWINGS

- Single or multiple file import of DXF, DWG, DWF, DSTV, and IGES formats with automatic error correction.
- Automatic/manual translation of layer to process information
- Transfer of part metadata from the drawing
- User configurable file handling such as renaming or deleting of files after a successful import
- Choice between import of a drawing or straight import into part database table
- Single import of DIN, ESSI, and XML Drawings
- Reading in of graphic files (incl. JPG, PNG) e.g. scans with recognition of part contours

## COMPREHENSIVE MACHINE SUPPORT

- Cutting processes: Plasma, Oxyfuel and Laser
- Marking processes like Plasma, Punch Marker, Inkjet, Powder Marker, OmniScript, etc.
- Support for drilling and tapping
- Preconfigured postprocessors for standard machines
- Preconfigured individual machine profiles
- Preconfigured process database for Oxyfuel, Plasma, Laser
- Multitorch operation with manual or automatic carriage positioning and single marking tool





## OMNIWIN 2016 STANDARD

### INNOVATIVE NESTING WITH OPTIMUM USE OF AREA

- Interactive nesting with tools including collision control for fast copy, move, rotate of parts or groups of parts
- Mirroring of parts, nesting in rows or in a matrix
- Automatic creation of lead-ins and -outs based on material and thickness using database stored technology
- Automatic optimization of part, inner contour and process sequence
- Reduction of non-productive time by the optimization of rapid traverse movement as well as lifter time
- User selectable shapes, parameters and positions of lead-ins and lead-outs
- User selectable cutting direction
- Activate/deactivate contours
- Transfer of part technology to identical parts in the same nesting plan
- Transfer of geometrical changes to identical parts on the same nesting plan
- Recalculation of lead-ins and -outs when material thickness is changed in the nesting plan
- Time calculation for standard, vertical cut parts based on geometry and the applicable process data such as cutting time, piercing time, machine specific times such as rapid traverse and activation time
- Simulation of the nesting plan

### EXTENSIVE PRODUCTION DATA AND REPORTS

- User based preview of NC programs and export of NC part plans, CSV, XML, DXF and DWG for nesting plans
- Machine profile based configuration of storage locations for production data
- Preconfigured production reports for parts and plans
- Automatic configured printing of reports
- Integrated report editor for easy manipulation of existing reports or creation of new reports

### WORKSPACES AND PROFESSIONAL PRODUCTION DATABASE

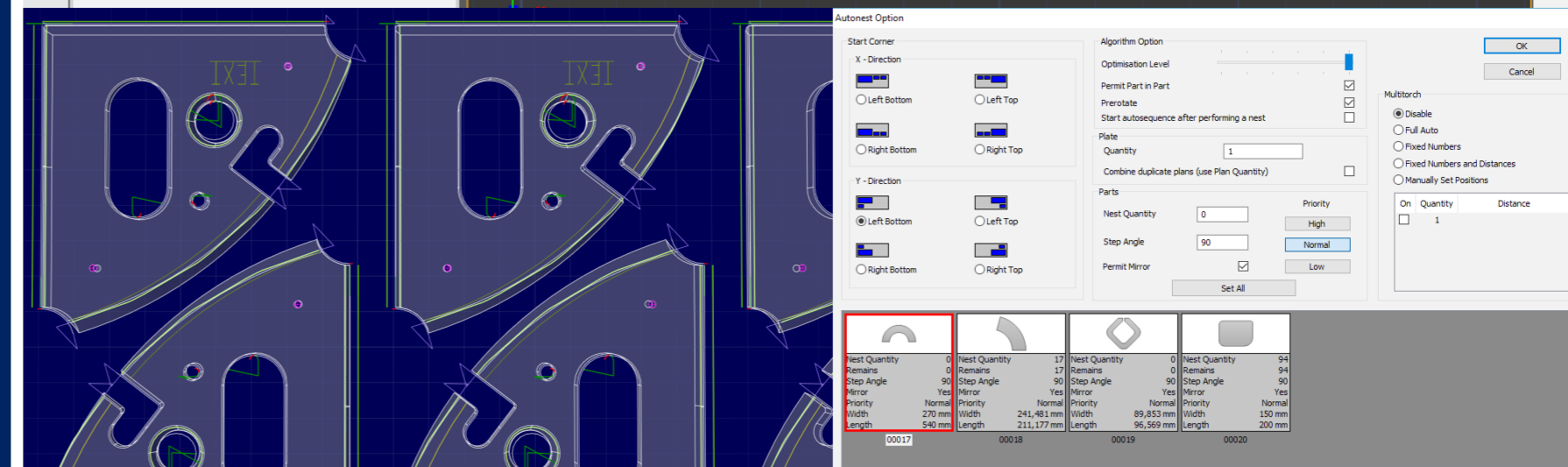
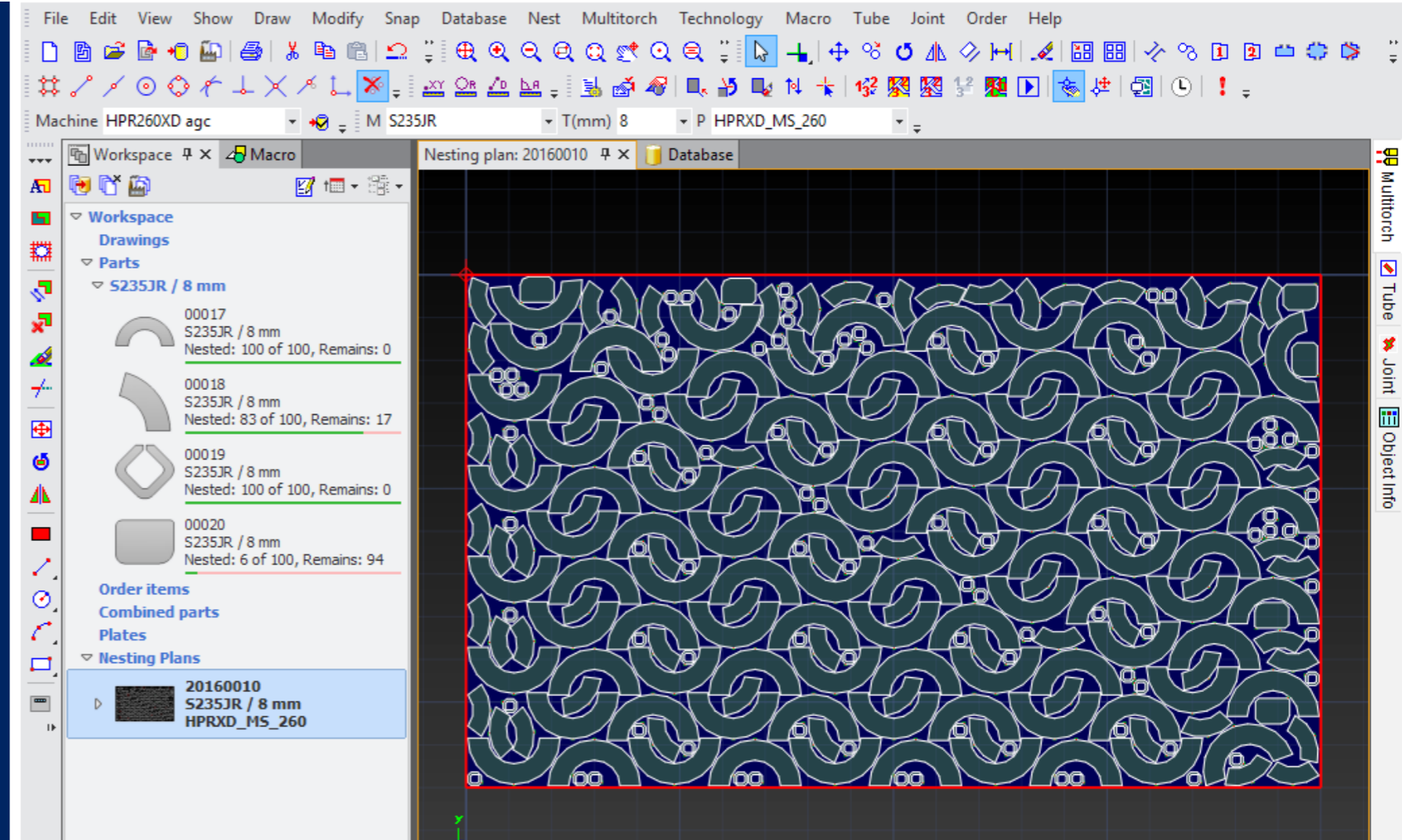
- Dedicated workspace for drawings, parts, orders (Enterprise Edition), plates, combined parts and nesting plans for clearly arranged, fast and efficient use with quantity control
- Part, customer, plate, order (Enterprise Edition) and nesting plan management
- Search criteria based identification of required objects,
- Multi User Support
- Microsoft SQL Server 2012

### PROCESSING OF CNC NESTING PLANS

- Import of existing plans
- ESSI and DIN formats are supported
- Interactive simulation of cutting, marking and rapid traverse
- Transfer of plan contours to part construction

Thumbnail	Name	Material / thickness	Nest progress	Length	Width	Area	Weight
	0013	S235JR / 6 mm	50 of 50	259,507 mm	259,716 mm	0,0368 m <sup>2</sup>	1,73 kg
	00019	S235JR / 8 mm	100 of 100	96,569 mm	89,853 mm	0,0034 m <sup>2</sup>	0,22 kg
	00017	S235JR / 8 mm	100 of 100	540 mm	270 mm	0,079 m <sup>2</sup>	4,96 kg
	0001	S235JR / 30 mm	18 of 20	643,374 mm	643,374 mm	0,2357 m <sup>2</sup>	55,51 kg
	00018	S235JR / 8 mm	83 of 100	211,177 mm	241,481 mm	0,0261 m <sup>2</sup>	1,64 kg
	0002	S235JR / 25 mm	7 of 10	2.550 mm	1.472,245 mm	2,4798 m <sup>2</sup>	486,66 kg
	0012	S235JR / 30 mm	11 of 20	1.696 mm	978 mm	0,9584 m <sup>2</sup>	225,71 kg
	0016	S235JR / 30 mm	6 of 20	534,101 mm	534,101 mm	0,1967 m <sup>2</sup>	46,31 kg

# OMNIWIN 2016 ENHANCED

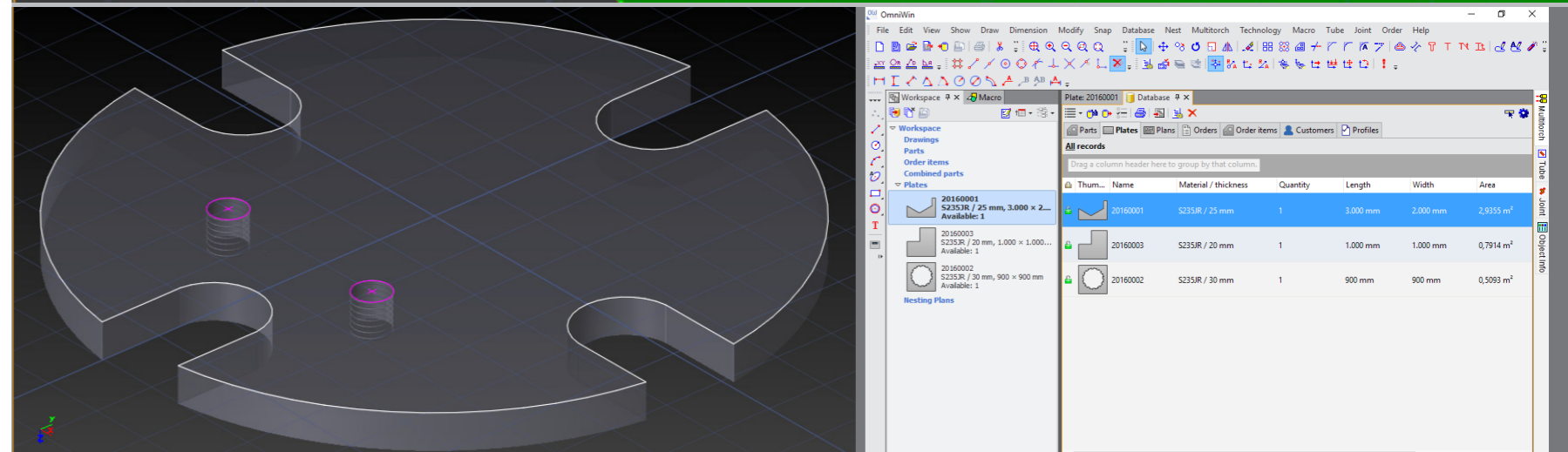
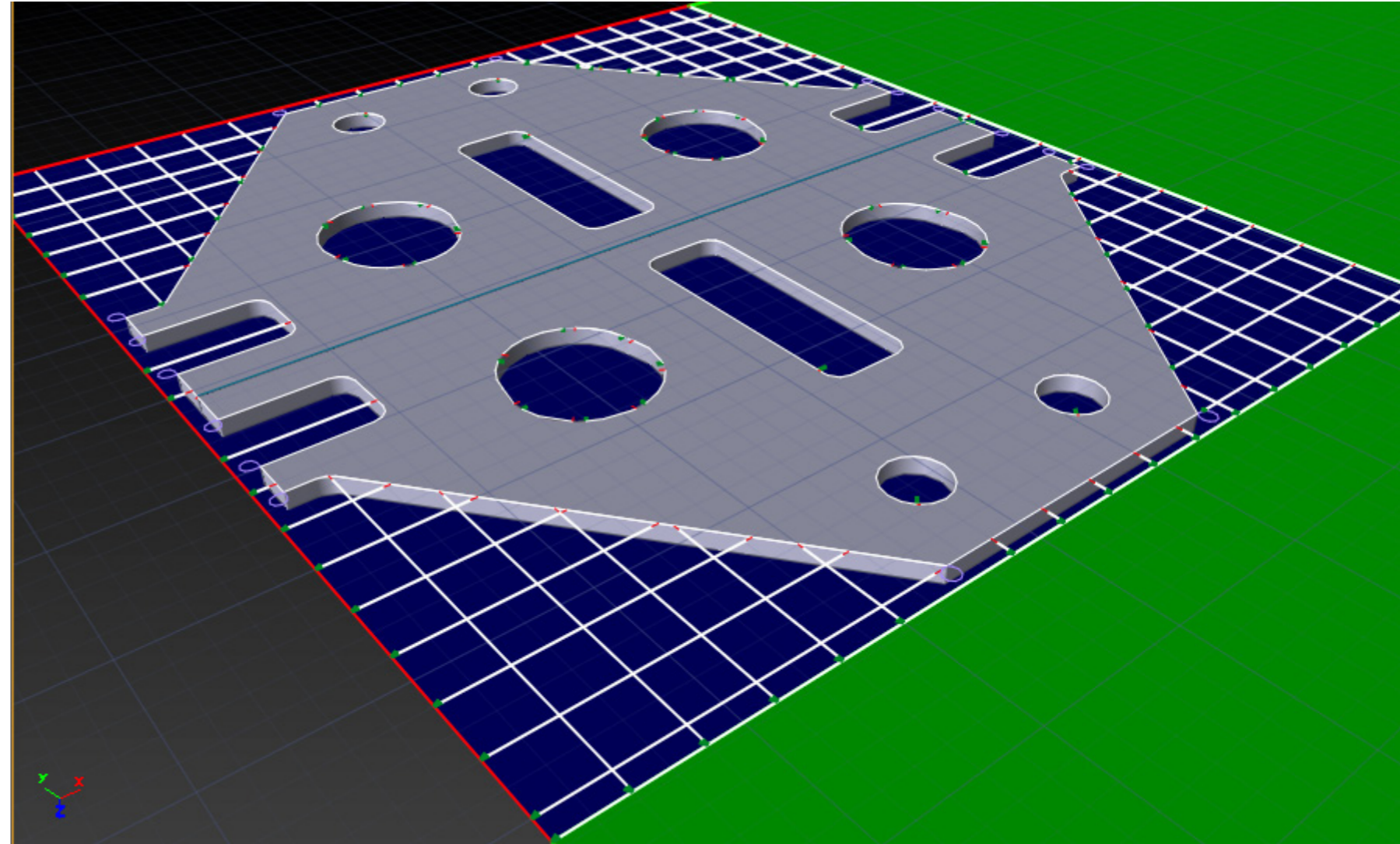


- Autonest, the program for automatic nesting
- Best results and short computing times

# OMNIWIN 2016 PROFESSIONAL

## TECHNOLOGY AT ITS BEST

- Extensive technology functions for bridges, stitches, loops,
- Links, common cuts, pre-piercing,
- Pre-drilling, skeleton splitting
- Plate management including plate and remnant plate definition and remnant plate cutting
- Drill functions for Messer drilling units
- Stone Mold Cutting





# OMNIWIN 2016 ENTERPRISE

The screenshot displays the OmniWin 2016 Enterprise software interface. The main window shows a nesting plan for a plate with various parts. A sidebar on the left lists the parts and their quantities. A detailed view of a part is shown below the nesting plan. A data table at the bottom right provides a summary of the parts and their production statistics.

**Parts List:**

- 1 : 0001 S235JR / 30 mm Nested: 10 of 10, Re...
- 2 : 0010 S235JR / 30 mm Nested: 6 of 10, Rem...
- 3 : 0012 S235JR / 30 mm Nested: 3 of 10, Rem...
- 4 : 0016 S235JR / 30 mm Nested: 3 of 20, Rem...
- ORD000002
  - 1 : 0015 S235JR / 30 mm Nested: 10 of 10, Re...
  - 2 : 0016 S235JR / 30 mm Nested: 7 of 10, Rem...
- ORD000003
  - 1 : 0012 S235JR / 30 mm Nested: 1 of 20, Rem...
  - 2 : 0015 S235JR / 30 mm Nested: 13 of 20, Re...
  - 3 : 0016

**Production statistics:**

Plate information		Production statistics	
Plate material:	S235JR	Production time:	01:27:12
Thickness:	30 mm	Cutting length:	33.371 m
Plate dimension:	2.500 × 1.500 mm	Marking length:	0.260 m
Min required plate dimension:	2.458 × 1.475 mm	Rapid traverse length:	11.755 m
Rectangular plate utilization:	3,627 m <sup>2</sup>	Number of piercings:	25

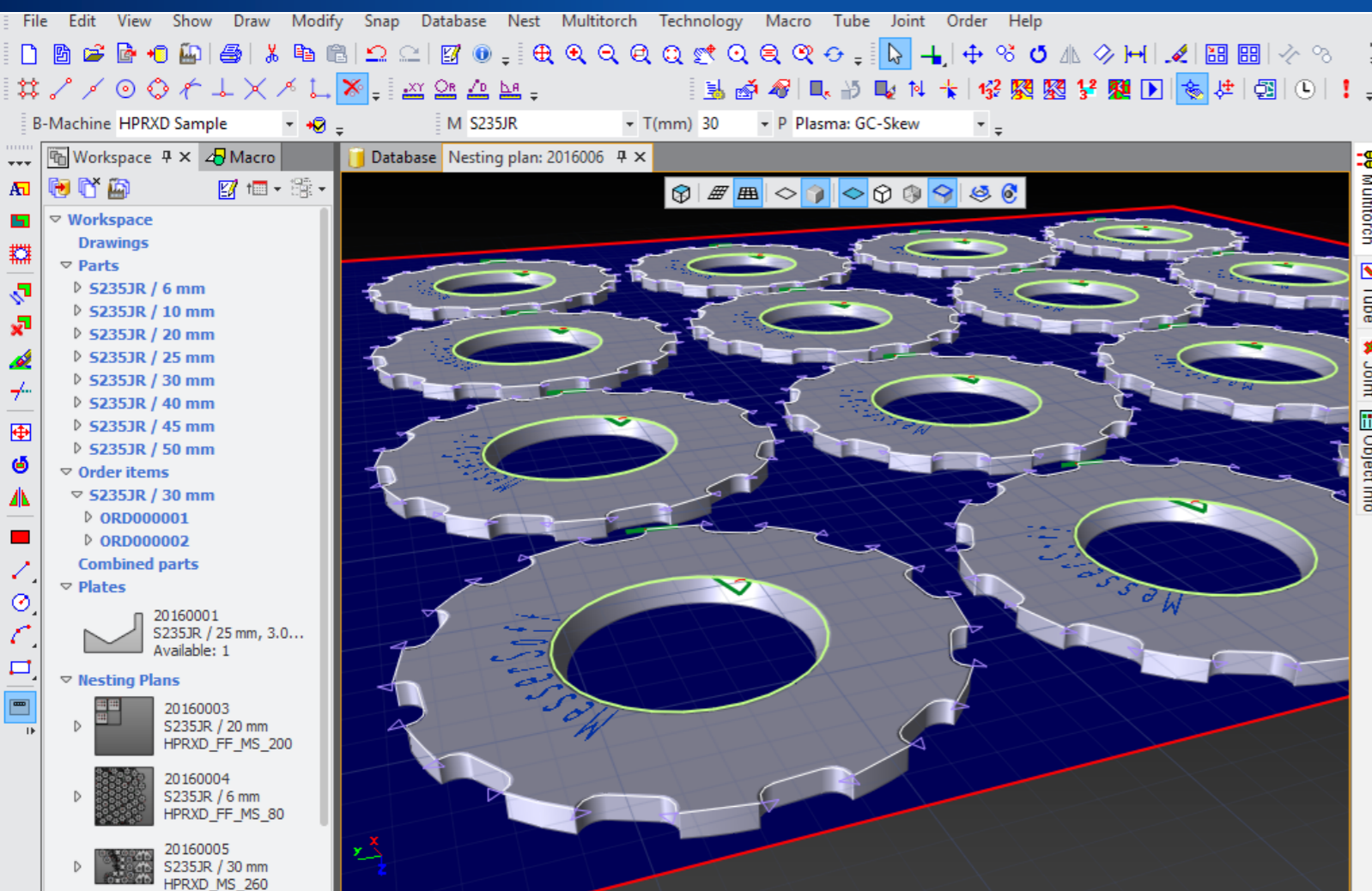
**Data Table:**

Thum...	Order number	Item no. with name	Material / thickness	Nest progress	Length	Width	Area	Weight
	ORD000003	1 : 0012	S235JR / 30 mm	1 of 20	1.696 mm	978 mm	0,9584 m <sup>2</sup>	225,71 kg
	ORD000001	4 : 0016	S235JR / 30 mm	3 of 20	534,101 mm	534,101 mm	0,1967 m <sup>2</sup>	46,31 kg
	ORD000001	3 : 0012	S235JR / 30 mm	3 of 10	1.696 mm	978 mm	0,9584 m <sup>2</sup>	225,71 kg
	ORD000001	2 : 0010	S235JR / 30 mm	6 of 10	390 mm	390 mm	0,0299 m <sup>2</sup>	7,03 kg
	ORD000003	2 : 0015	S235JR / 30 mm	13 of 20	248,236 mm	293,185 mm	0,034 m <sup>2</sup>	8 kg
	ORD000002	2 : 0016	S235JR / 30 mm	7 of 10	534,101 mm	534,101 mm	0,1967 m <sup>2</sup>	46,31 kg
	ORD000001	1 : 0001	S235JR / 30 mm	10 of 10	643,374 mm	643,374 mm	0,2357 m <sup>2</sup>	55,51 kg
	ORD000002	1 : 0015	S235JR / 30 mm	10 of 10	248,236 mm	293,185 mm	0,034 m <sup>2</sup>	8 kg

- Work order processing and management

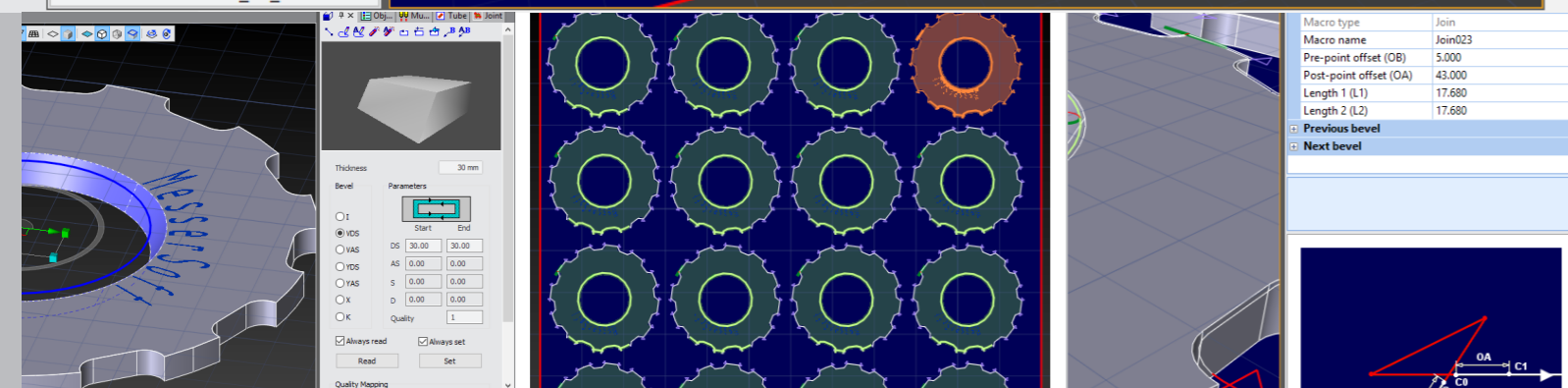
## Option Package Bevel

- Completely integrated nesting of bevel parts in the standard, familiar workspace
- Uses OmniWin standard functionality present in Standard, Enhanced, Professional and Enterprise Editions except for technology and time calculation for standard vertical nesting plans
- Based on proven OmniBevel databases and post-processing



## OPTION PACKAGE BEVEL

**With our Bevel option** you can nest bevel parts directly from the fully integrated OmniWin 2016 user interface. You nest, create reports and production data, manage and store parts, plates and plans in the database. OmniWin 2016 uses the same technological databases and postprocessors that are used by the stand-alone application OmniBevel.



# OPTION PACKAGE UNFOLD

With our option package **Unfold** we offer a broad integrated palette of 3D geometries that are defined by parameter and finally are unfolded for 2D cutting.

Multiple technological functions are available to adjust the output for further manipulation with bending or rolling machines.

## Option Package Unfold

- Fully integrated unfolding and optimization of 3D shapes for 2D cutting and further manipulation by bending and rolling machines
- Large library of common shapes for container and ducting industries
- Sorting of geometric forms by category and subcategory

# Unfold

Contents

Tubes

Transitions

Connections

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Find Macro


Last Used Macro


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Options

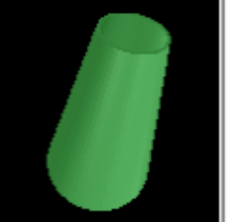
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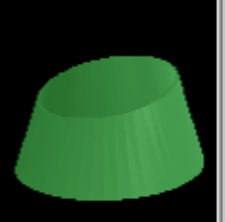
Documentation

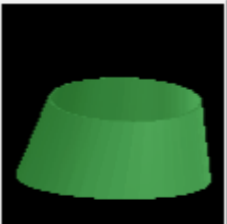
  
Cone

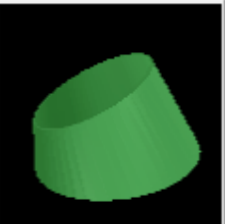
  
straight

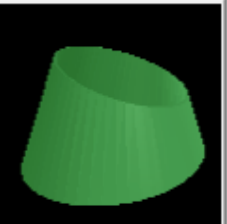
  
one straight vertical


  
eccentric

  
symmetrical

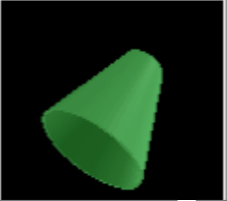
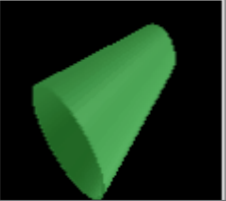
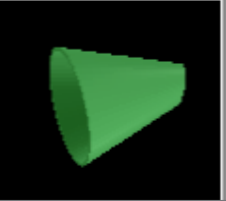
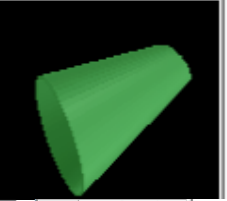

  
asymmetrical

  
rotated

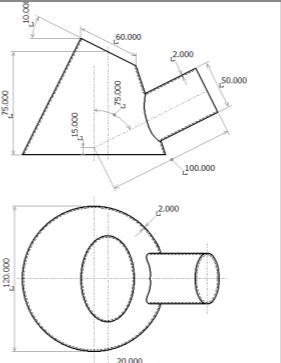
  
crooked

  
Truncated Cone


## Transitions Ellipse-Ellipse

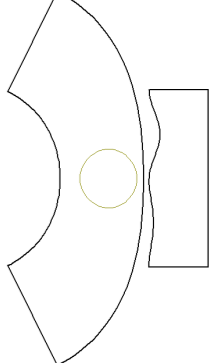
Name of parameter	Value
Diameter of the upper base body	60.000
Indication of the base body circ.	10.000
Material thickness for the branch	2.000
Diameter of the branch	50.000
Height of the base body	75.000
Height to the branch axis	10.000
Angle of the branch axis	75.000
Length of the branch	100.000
Diameter of the lower base body	120.000
Centre offset in the base body	20.000
Material thickness of the base bo.	2.000



Name of parameter	Value
Diameter of the upper base body	60.000
Indication of the base body circ.	10.000
Material thickness for the branch	2.000
Diameter of the branch	50.000
Height of the base body	75.000
Height to the branch axis	15.000
Angle of the branch axis	75.000
Length of the branch	100.000
Diameter of the lower base body	120.000
Centre offset in the base body	20.000
Angle of the branch	10.000
Material thickness of the base bo.	2.000

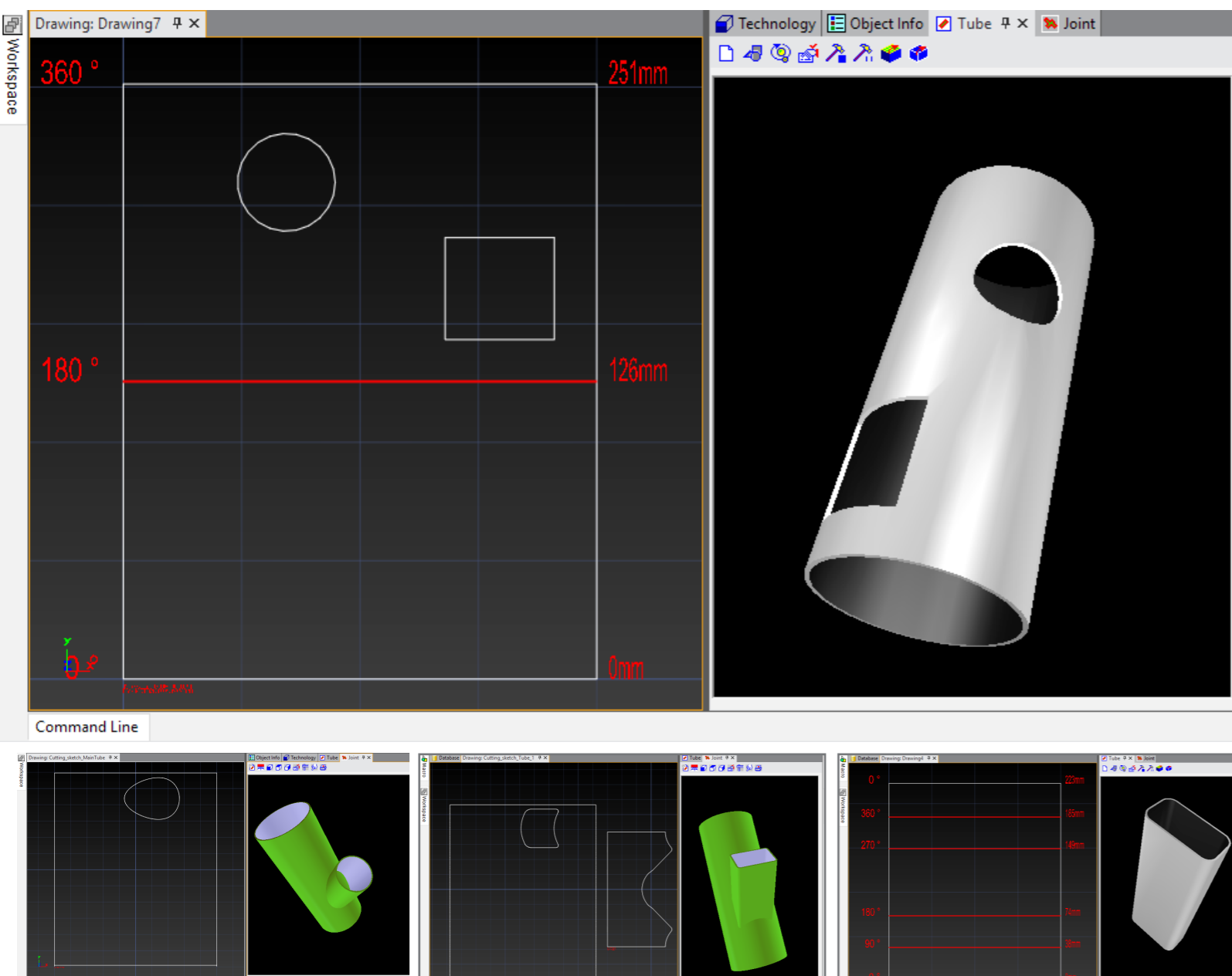


Name of parameter	Value
Diameter of the upper base body	60.000
Indication of the base body circ.	10.000
Material thickness for the branch	2.000
Diameter of the branch	50.000
Height of the base body	75.000
Height to the branch axis	15.000
Angle of the branch axis	75.000
Length of the branch	100.000
Diameter of the lower base body	120.000
Centre offset in the base body	20.000
Material thickness of the base bo.	2.000



## Option Package Tube

- Fully integrated
- 3D-illustration of pipes and 2D settlement in one window
- Parameterized lead-ins
- Display, generating and developing of joints



## OPTION PACKAGE TUBE

**The Tube option** provides a fully integrated solution for pipe cutting with a rotary axis and machines with vertical torches. There are round tubes, rectangular tubes and rounded multi corner tubes for selection.

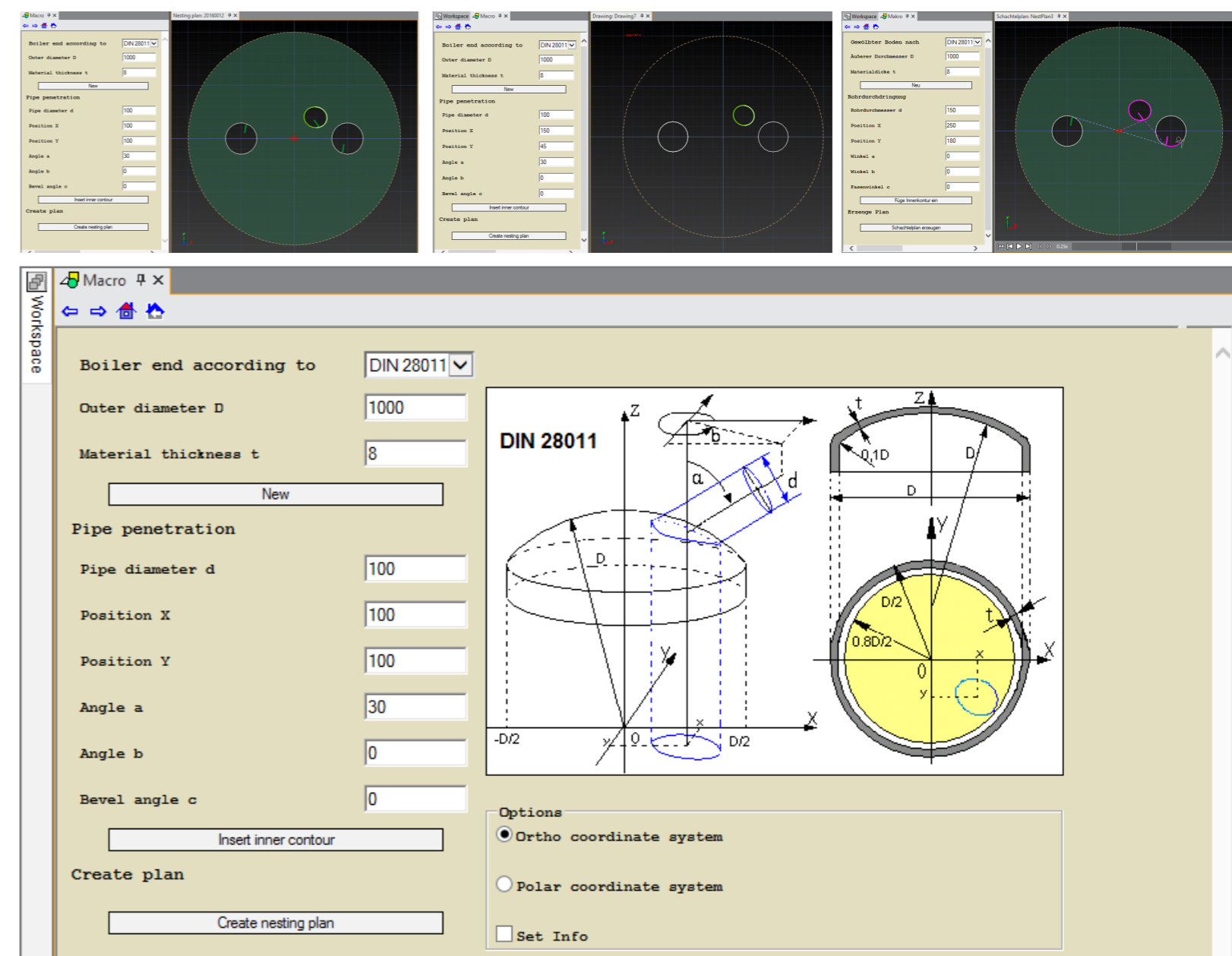
## OPTION PACKAGE BOILEREND

**Option Package BoilerEnd** enables the processing of dished ends. Cylindrical pipe penetrations are automatically calculated on formed dished heads for the proper pipe location and alignment. NC code is output with varying bevel properties so a consistent weld seam can be created for the size and angle of the pipe.

BoilerEnd was developed specifically for the Skew Rotator Infinity and designed for the requirements of the tank and apparatus construction. It uses the properties of the Skew Infinity to expand production facilities, in addition to the existing processing of plates, to dish ends.

### Option Package BoilerEnd

- Supports dished ends in accordance with DIN 28011 and DIN 28013
- Cutting round cylindrical penetrations with or without additional VDS Fase.
- Marking of lines in the X / Y plane projected on the domed base or penetration projections of round cylinders to the ground.
- Available in addition to option package Bevel





# SYSTEM REQUIREMENTS AND FEATURES

## Hardware requirements

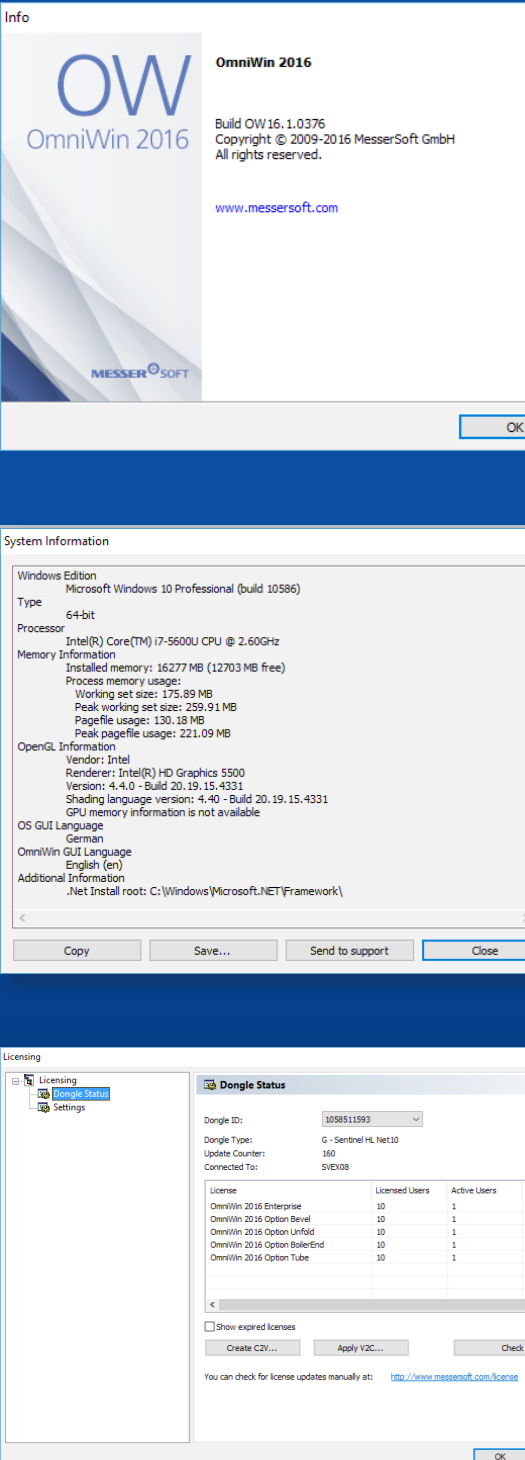
- 1 GB RAM, 4 GB hard disk space, 2 GHz CPU
- Minimum screen resolution 1280 x 960 px, recommended 1680 x 1060 px or more
- Graphics processor with OpenGL 1.1 support or higher, without „shared memory“
- USB port for connecting a local software protection dongle or network access to a license server

## Supported operating systems

- Windows XP SP3 32 bit (client systems only)
- Windows Vista 32 bit or 64 bit
- Windows 7 32 bit or 64 bit
- Windows 8 32 bit or 64 bit
- Windows 10 32 bit or 64 bit

## Software prerequisites

- Microsoft Internet Explorer Version 6 or higher
- Microsoft .NET Framework 4.0 or 4.5
- Microsoft Jet 4.0 SP4 or higher



OmniWin 2016 Features		Standard	Enhanced	Professional	Enterprise
CAD	CAD Part and Plate Creation	X	X	X	X
	3-D Visual Rendering	X	X	X	X
	Standard Shapes Library	X	X	X	X
	Text Conversion for Cut-outs or Marking	X	X	X	X
	Import Drill Holes/ Create Drill Holes			X	X
	CAD Import DXF, DWG, IGES, DSTV	X	X	X	X
	Read and Translate Administration Data	X	X	X	X
	Import Images bmp, jpg, png, tif file formats	X	X	X	X
	Import TRUNEST Dxf as Nesting with Single Part identification	X	X	X	X
	Reverse Import CNC files to DXF	X	X	X	X
CAD and Nesting	CNC Programm Import und Export als DXF	X	X	X	X
	MS SQL Database for Parts, Nestings, Plates, Profiles and Machines	X	X	X	X
	Fast Reports® Creator	X	X	X	X
	Professional Designed Workspace	X	X	X	X
	Short Cut Keys	X	X	X	X
	Dimensioning	X	X	X	X
	Snap Modes	X	X	X	X
	Manipulator Tool for rotation, copy, move and mirror	X	X	X	X
	Process Database	X	X	X	X
	Messer Hole Technology supports True Hole® or Contour Cut	X	X	X	X
Nesting	Production Time Estimation	X	X	X	X
	Costing	X	X	X	X
	Automatic Lead-in/out with Customization	X	X	X	X
	Cut Plan Simulator	X	X	X	X
	Interactiv nesting (Row and Column, Pattern Matrix) with Single or Multi-Torch	X	X	X	X
	Collision Avoidance	X	X	X	X
	Process Optimization	X	X	X	X
	Modify Part, Interior Profile or Marking Sequence	X	X	X	X
	Automatic Nesting		X	X	X
	Drill Support			X	X
Options	Stone Mold Cutting			X	X
	Stitch, Bridge, Common Cut, Corner Loops, Chain Cut, manual Crop Cut			X	X
	Skeleton Cut Up			X	X
	Pre-Piercing and Pre-drilling			X	X
	Remnant Plate Creation with Auto Crop Cut			X	X
	Work Order Processing with Order Database				X
	Option Bevel - Bevel Part Creation	•	•	•	•
	Option Unfold - Unfold 3D Industrial Fittings	•	•	•	•
	OptionTube - Rotary Axis Support	•	•	•	•
	Option BoilerEnd (requires Option Bevel) - Dome Cutting	•	•	•	•



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