

# Noutăți Metalix CNC Kad 9.5



**S.C. SM TECH SRL**

Mașini CNC și scule pentru industria prelucrării tablelor

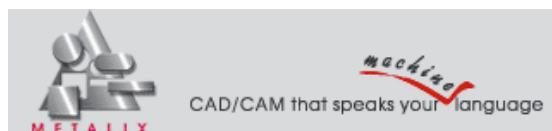
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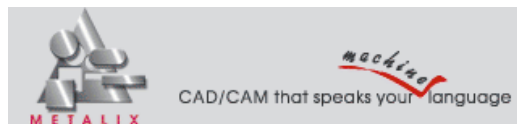
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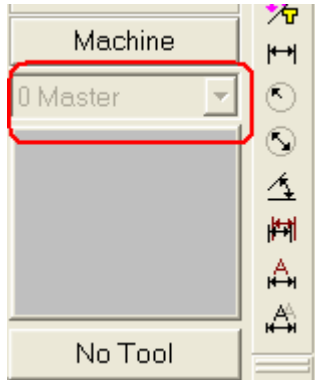
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## 1 New General Features

### 1.1 CAM Layers Enhancement

When the part contains only one CAM layer, **CAM Layers** dropdown list is disabled on the **State Bar**.



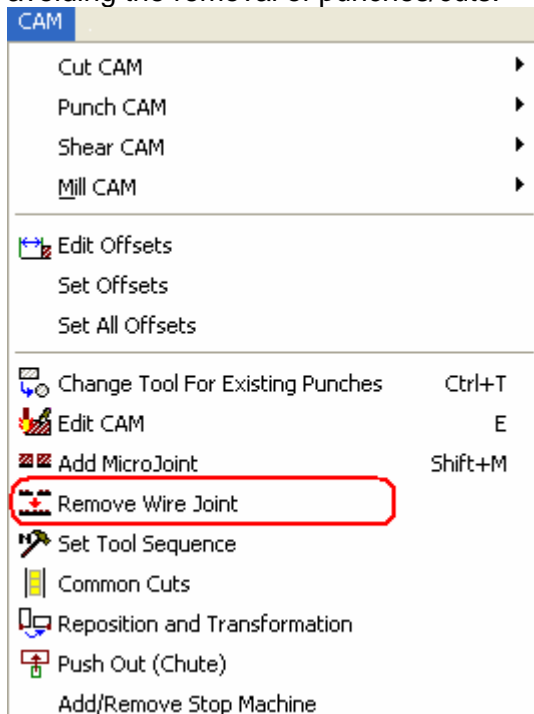
### 1.2 Manual Nesting

Closing either of the **Ask Part** or the **Instance Data** commands is equivalent to exiting the command.

In former **cnckad** versions closing either of these commands would still leave you in them.

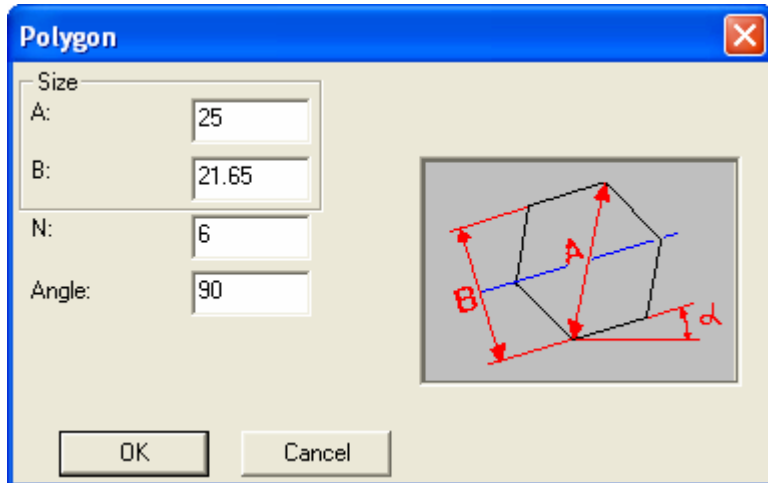
### 1.3 Remove Wire Joint Command

This new command in the **CAM Menu** allows you for removing the **Wire Joint** command, avoiding the removal of punches/cuts.

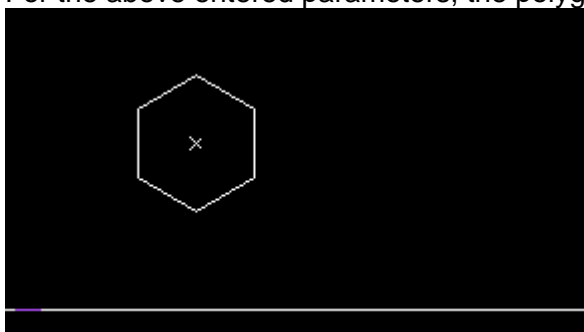


### 1.4 Rotation Angle in Polygon Shape

The **Polygon Shape** option in the **Draw Menu** allows you to enter the desired **Rotation Angle** of the polygon and place it on the drawing already rotated.



For the above entered parameters, the polygon we place on the geometry will look this way:

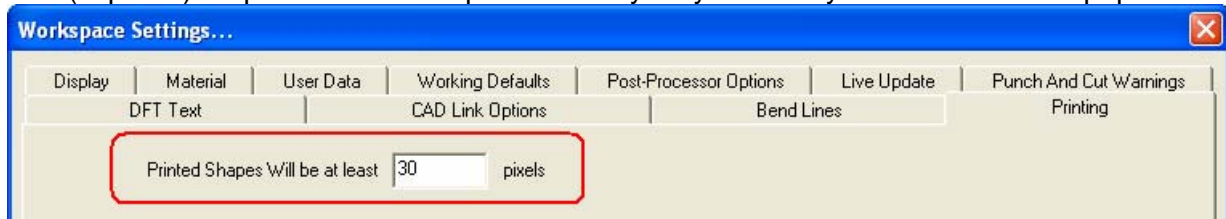


## 1.5 Shape List Support in Report File

Now it is possible to implement the **Shape List** from **Draw Menu** into the **Report File**.

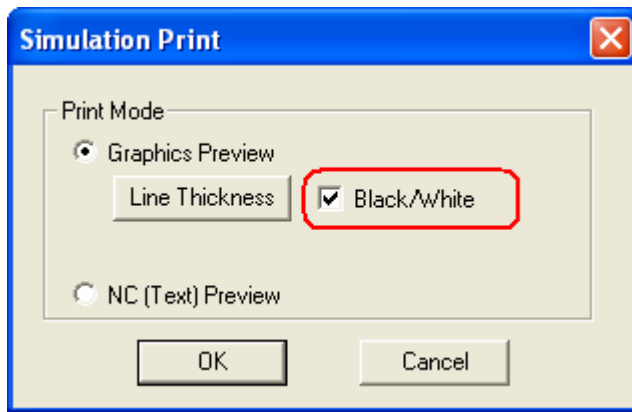
## 1.6 Changes in Printing

From now on, on **Printing Tab** of **Workspace Settings** you will be able to set the minimal size (in pixels) for printed small shapes. This way they will always be visible on the paper.



## 1.7 Support For Black/White Printing From Simulation

Now it is possible to print the drawing in black and white in Simulation module.



### 1.8 Saving Files on Exiting cncKad

When you exit **cncKad** and a Part/Nest needs to be saved, **cncKad** will display it before prompting the user to save it.

### 1.9 Push Out Icon Has Been Added

There is a new **Push Out** Icon in **CAM Menu**, providing you with easy access to the Push Out dialog:



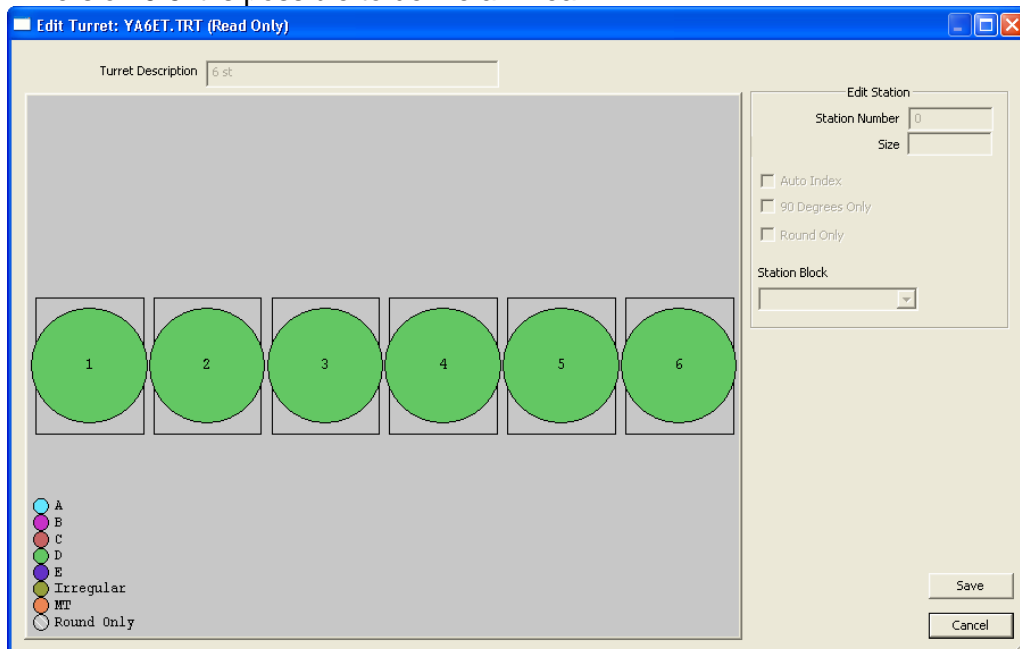
### 1.10 DXF Export Support for TRUMABEND

Now it is possible to export drawings as a DXF format to TRUMABEND Trumpf Machines.

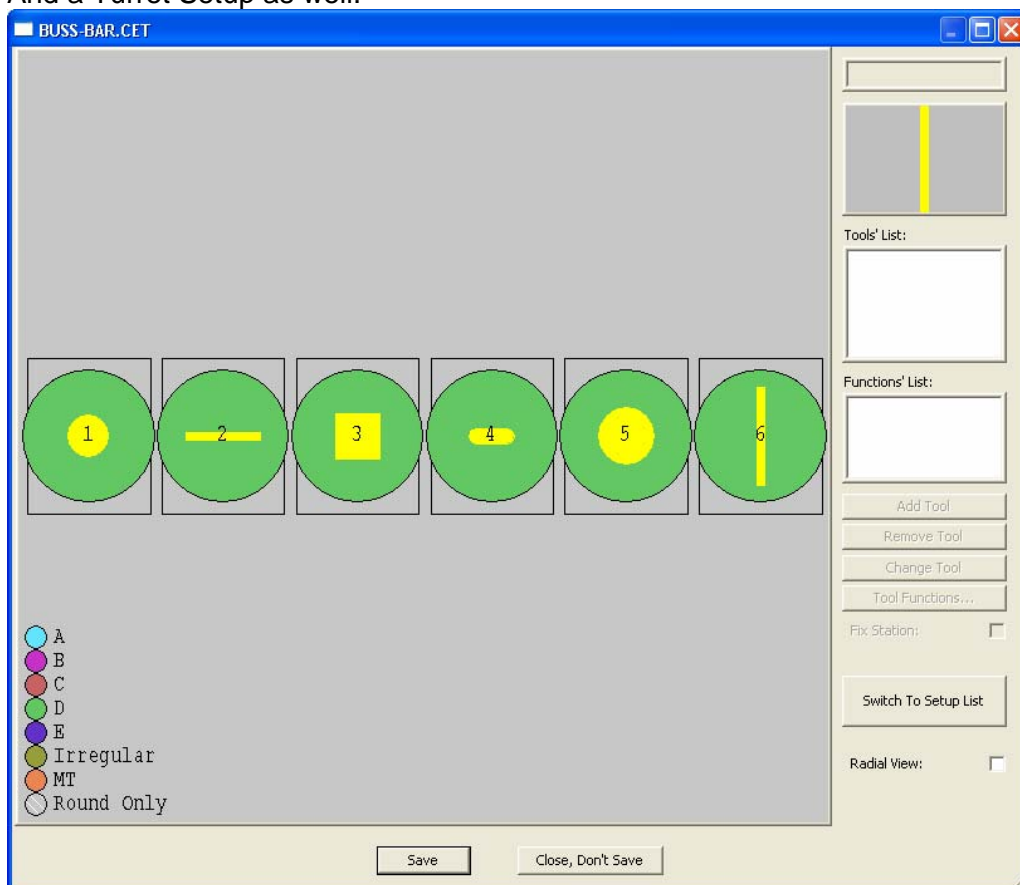
## 2 New Punch Features

### 2.1 Linear Turret Support

In version 9.5 it is possible to define a Linear:



And a Turret Setup as well:

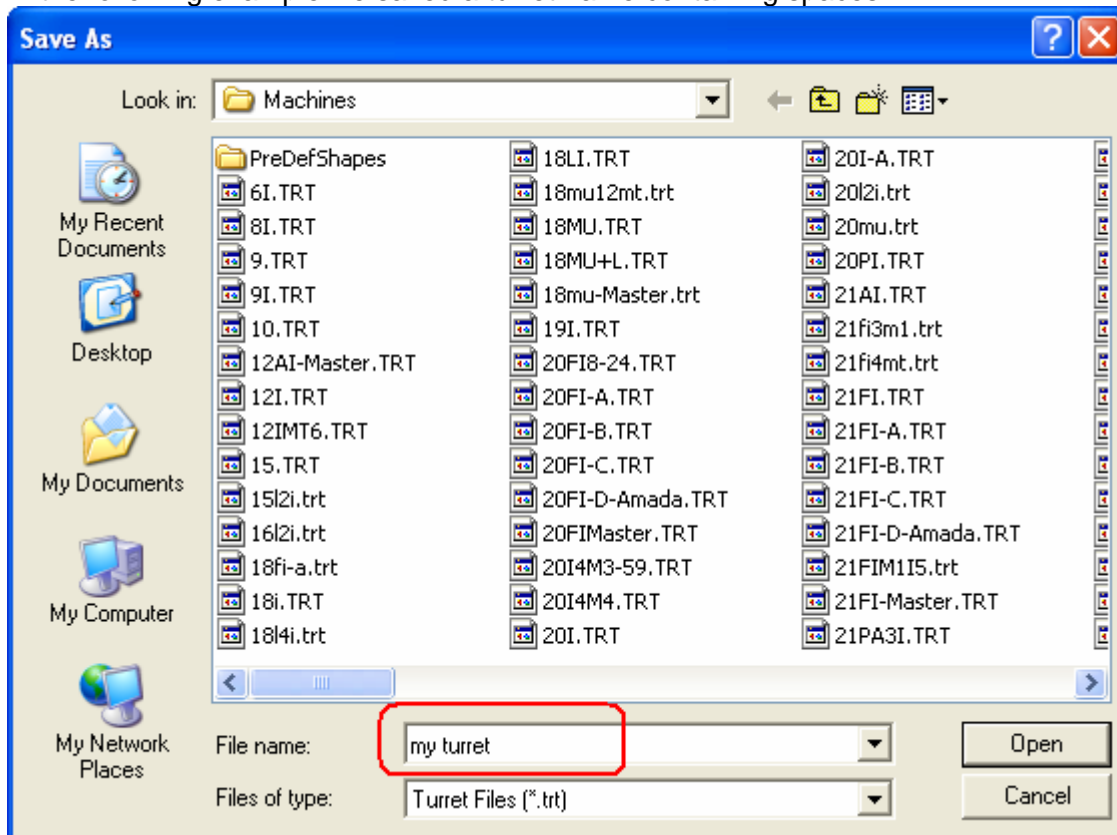


Linear Turrets are useful for machines such as Buss-Bar, Coil, and even some standard machines such as the Amada OCTO.

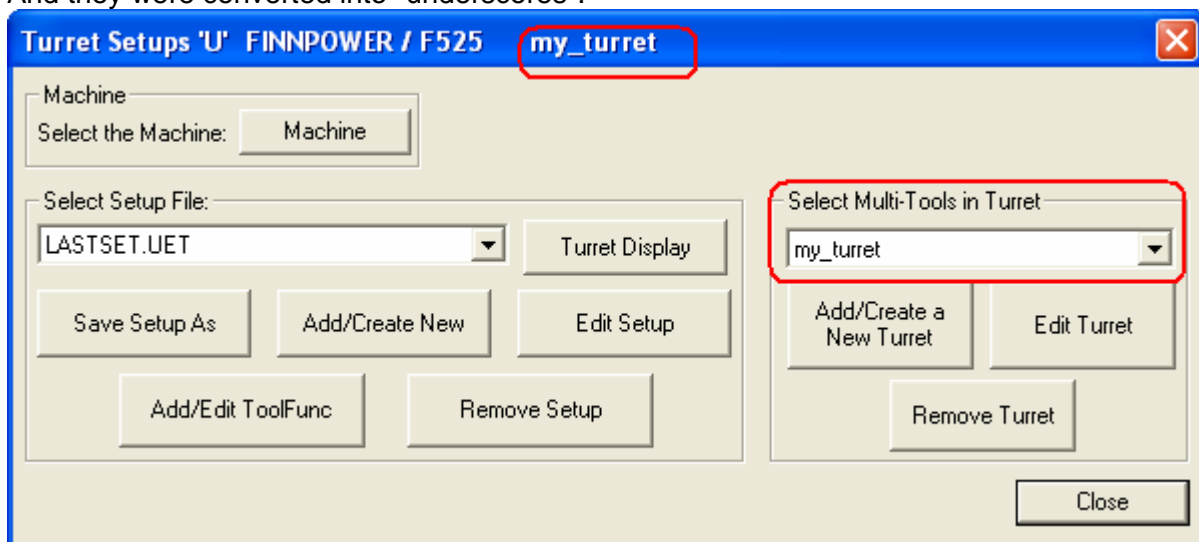
## 2.2 Spaces In Turret Naming

If you create a new turret and give it a name that contains spaces, the spaces will be converted to '\_', e.g: "my turret" => "my\_turret".

In the following example we saved a turret name containing spaces:



And they were converted into "underscores":

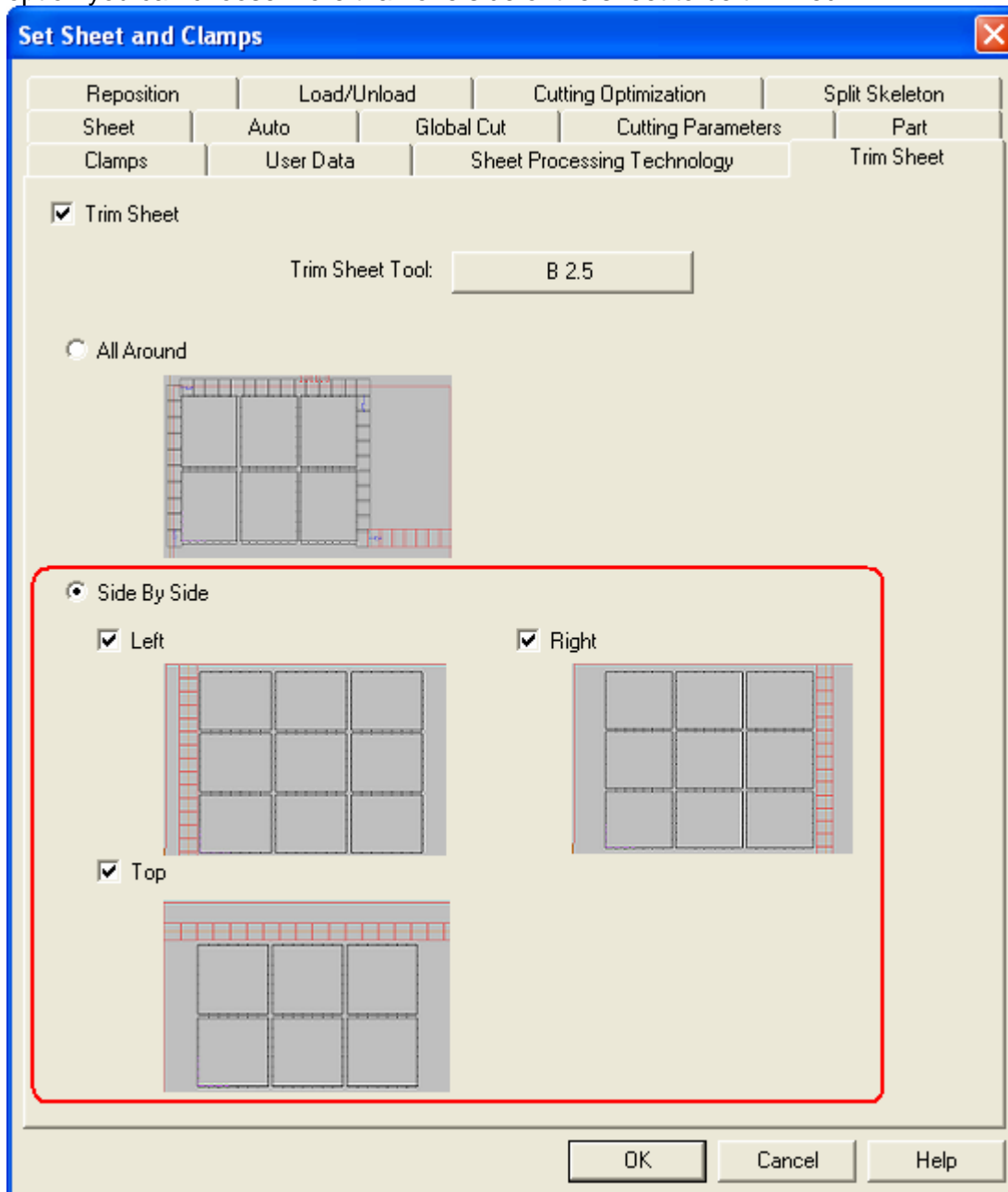


## 2.3 Automatic Process AutoDestroy Sheet

A new automatic process supports destroying the sheet completely, leaving only a strip at the clamps.

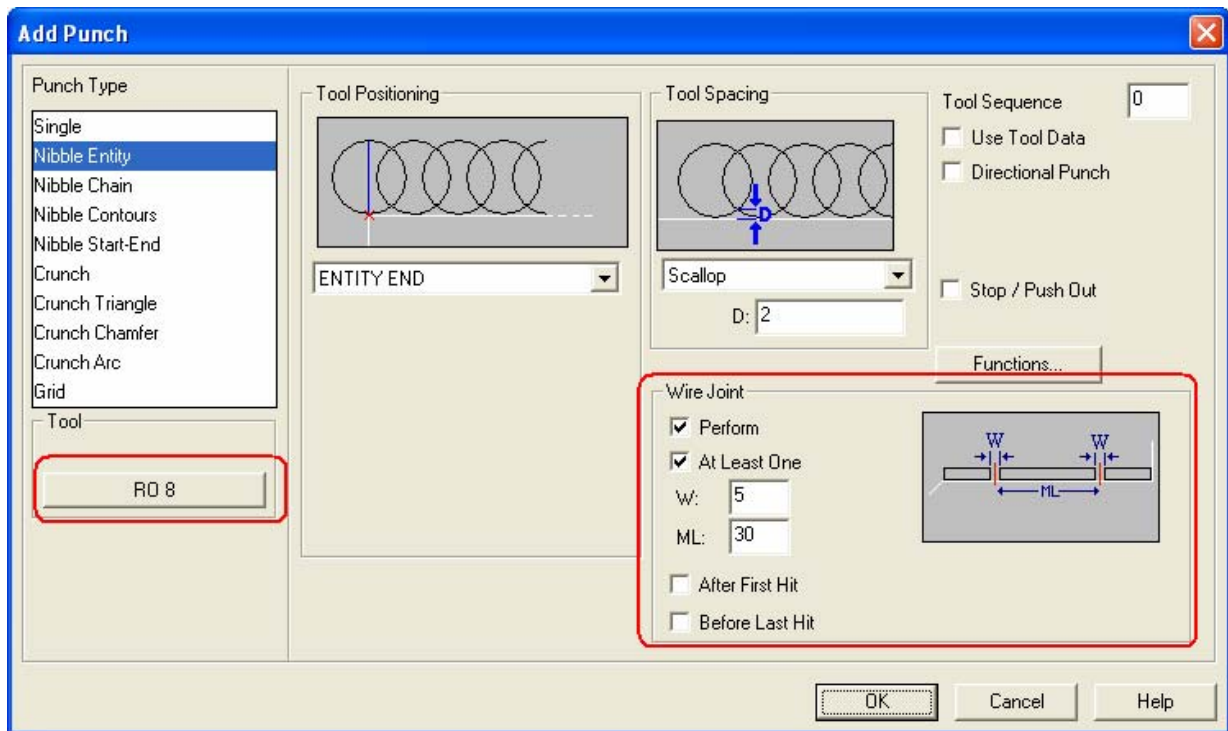
## 2.4 Trim Sheet Changes

Now it is possible not only to trim a sheet with a laser tool, but by choosing the **Side by Side** option you can choose more than one side of the sheet to be trimmed.

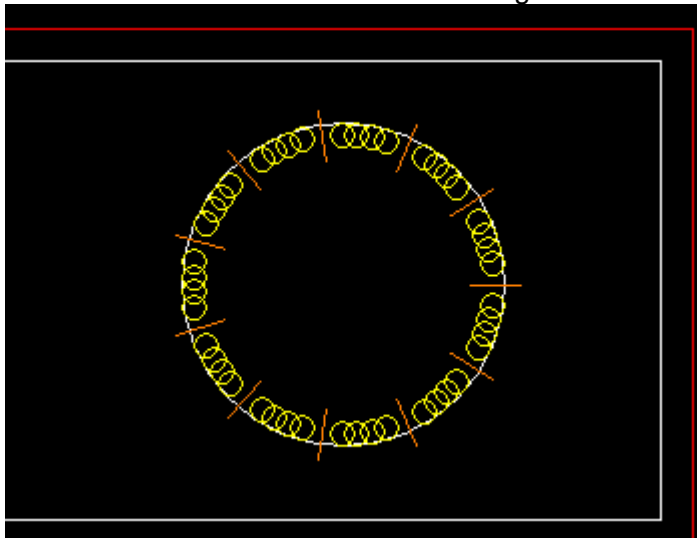


## 2.5 Wire Joints Support For Arcs and Circles

In **Add Punch** dialog you can now add **Wire Joints** for arcs and circles.

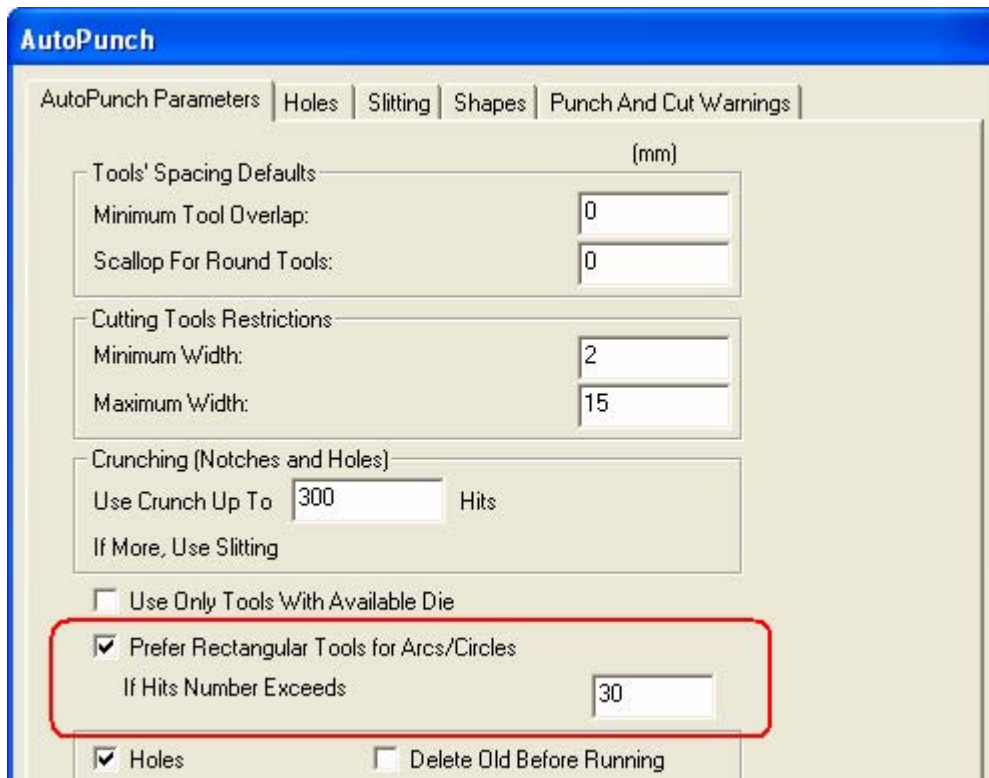


And this will be the result on the drawing:



## 2.6 AutoPunch Support For Arcs and Circles

Arcs and Circles can now be automatically processed by rectangular tools, using the **Prefer rectangular Tools for Arcs/Circles** option from **AutoPunch Parameters** tab of **AutoPunch** dialog:



## 2.7 Use Oval Tools for Slitting

This new option of **Slitting** tab of **AutoPunch** dialog enables the user slitting the sheet with oval tools.

## 2.8 New Tool Options

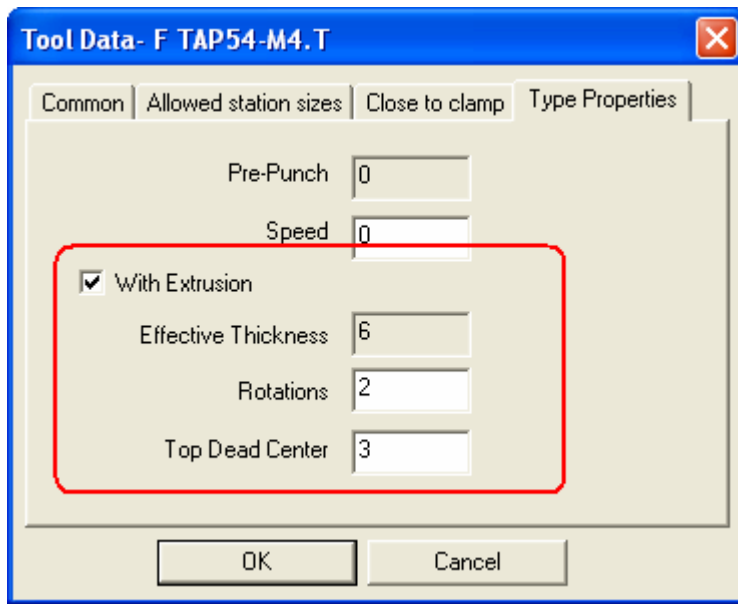
There are new features for handling tools:

### 2.8.1 Curving Tool Support For Trumpf

**cncKad** provides **Curving Tool** support for Trumpf Machines.

### 2.8.2 Changes in Tapping Tool Properties

In the **Type Properties** tab of **Tool Data** dialog of **Tapping Tool** a new section was added, containing additional information for tapping tools:



### 2.8.3 Warnings For Special Tools

**Over Tonnage** and **Destroying the Part** Warnings are no longer valid for Wheel, Tapping and Forming Tools.

### 2.8.4 MultiTool Rotation

A new Key in the MDL file allows controlling the amount of MultiTool rotations near Sheet Edge.

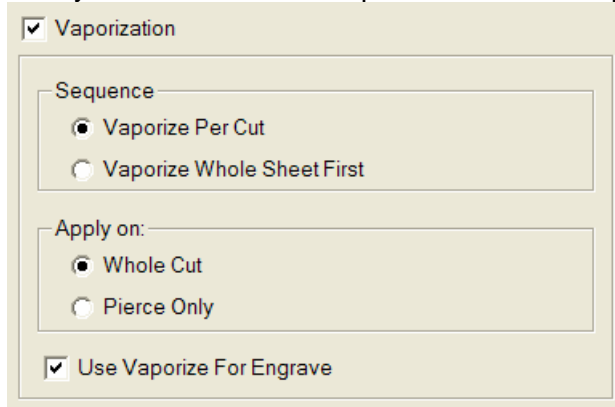
### 3 New Laser Features

#### 3.1 Vaporize Foiled Sheet

In the **Cutting Parameters** tab in **Set Sheet and Clamps** dialog you will find **Vaporization** features, allowing you to work more efficiently.

Here you can choose whether to vaporize the entire sheet, a single cut or a pierce, before processing the sheet with cutting.

In the past you could only set these options by adding vaporizing functions before the cut. Now you can define in one place both their sequence and the vaporizing area:



Vaporization

Sequence

Vaporize Per Cut

Vaporize Whole Sheet First

Apply on:

Whole Cut

Pierce Only

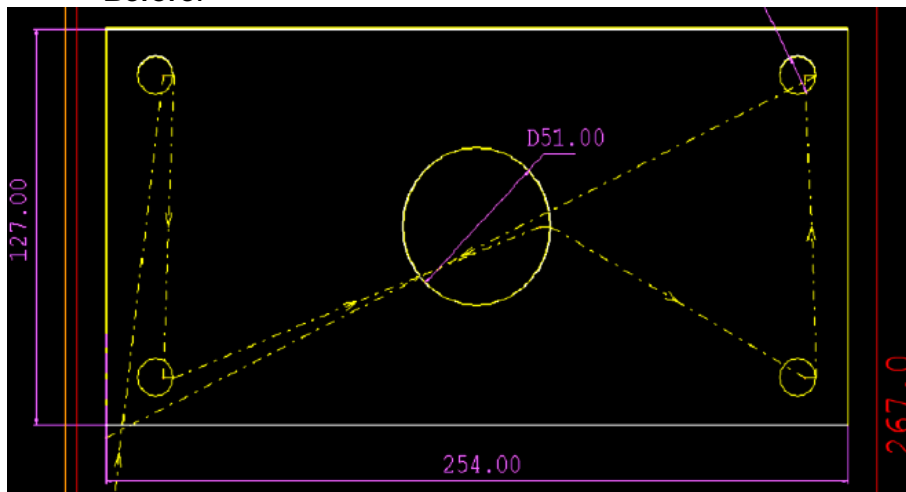
Use Vaporize For Engrave

#### 3.2 Path Finder (Adjust Tool-Path)

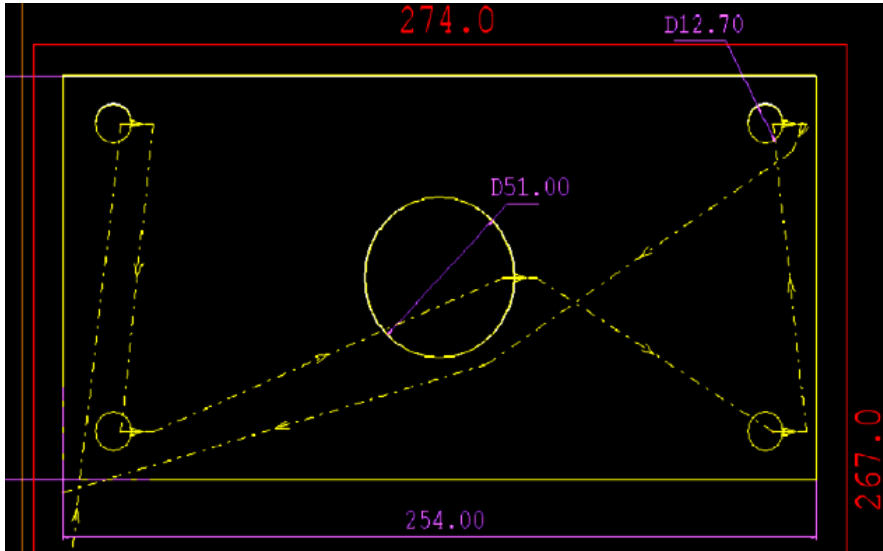
This automatic option calculates a path from one hole to another, avoiding passing over already cut holes.

In the following examples you can see the utilization of this function:

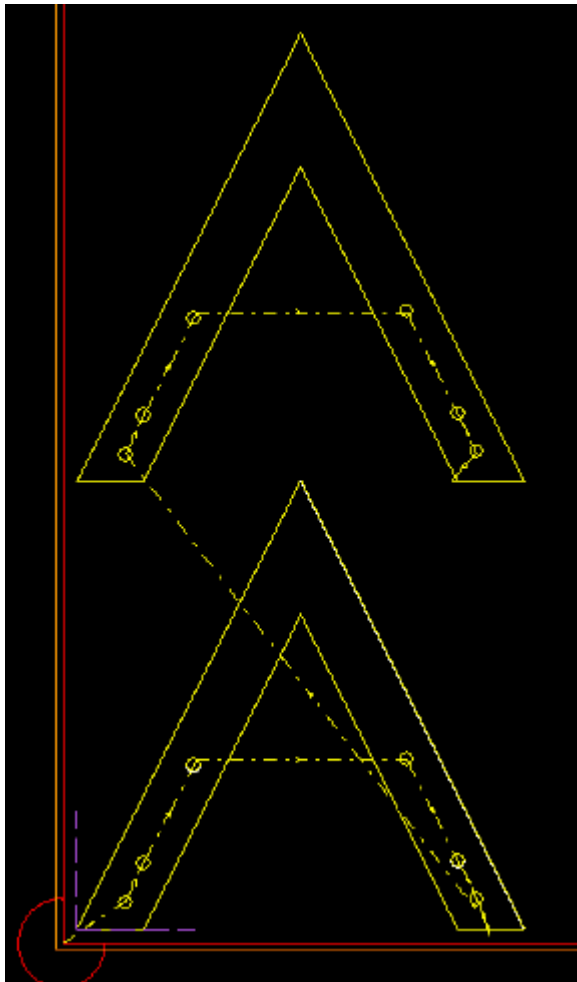
- **Before:**



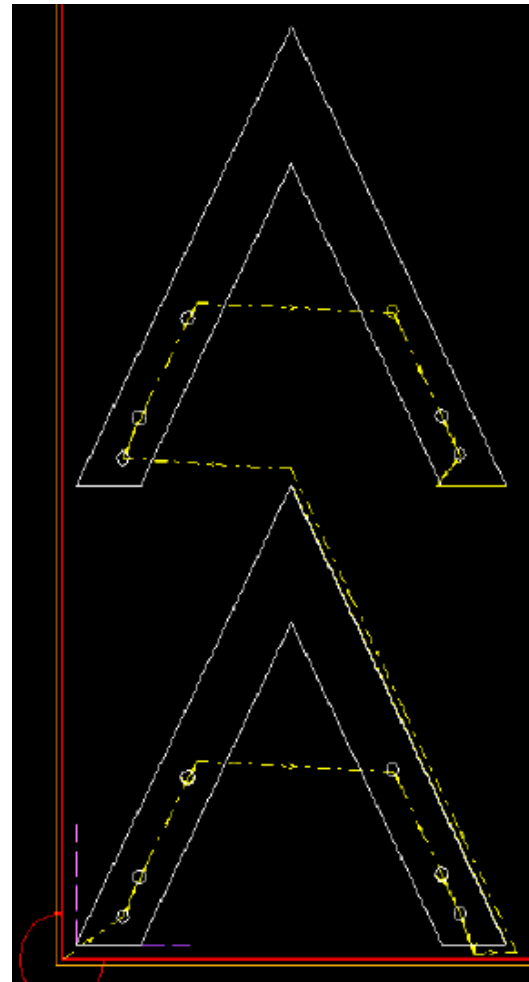
- After:



Before:



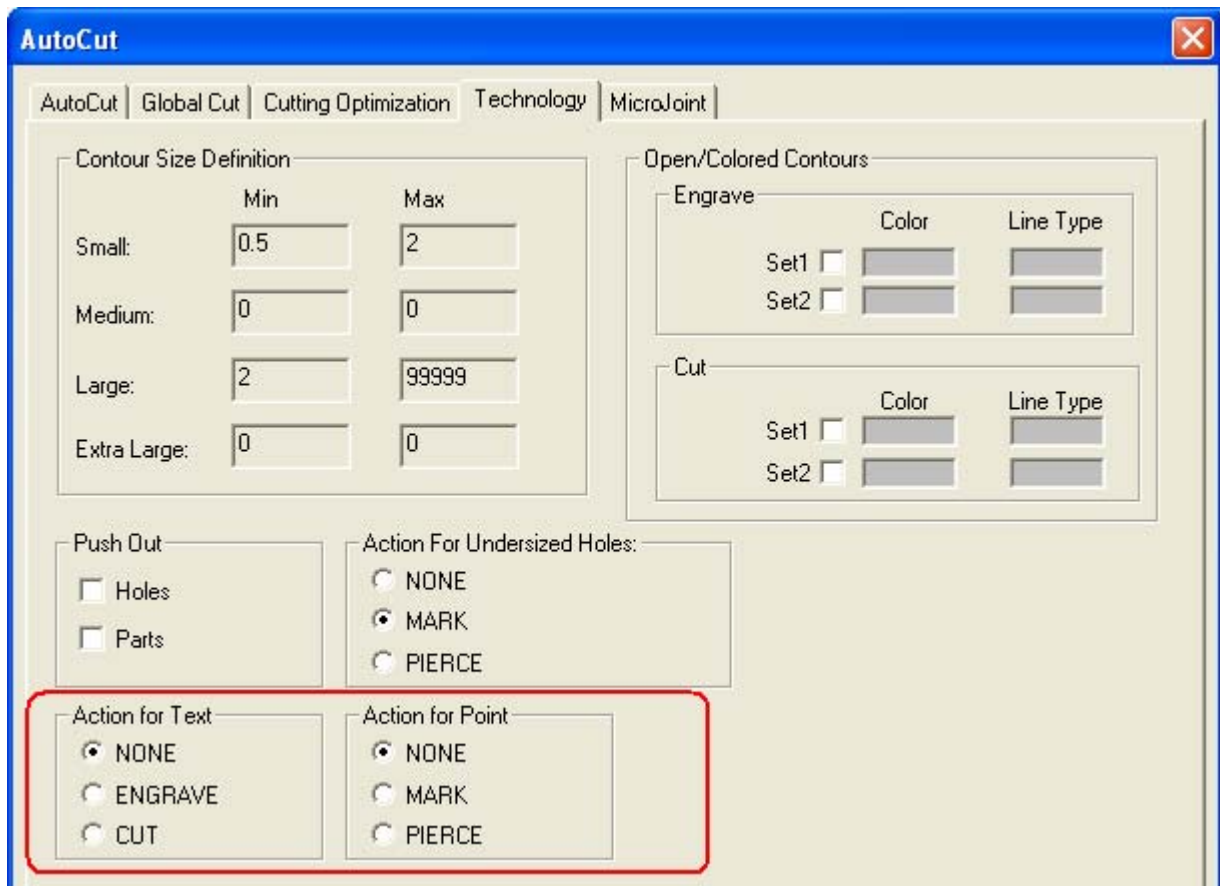
After:



### 3.3 Handling Texts and Points in AutoCut

Now there is an option for the automatic handling of texts and points in the **Technology** tab of **AutoCut** dialog.

Whatever choice you make, when **cncKad** recognizes unprocessed text or unmarked point it will take action according to these definitions:



### 3.4 No "Auto Tool Order" in Part Unloader

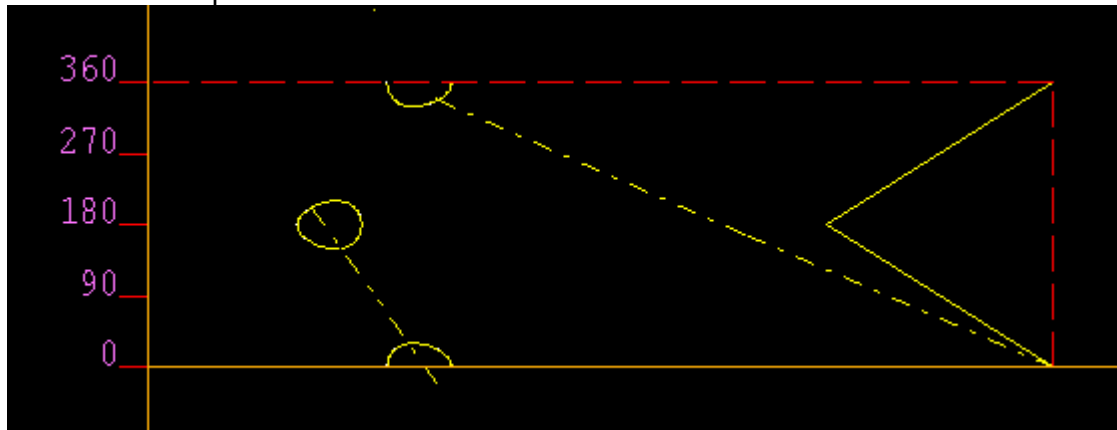
The **Auto Tool Order** option in Part Unloader doesn't apply for cutting.

## 4 New in Tube Cutting

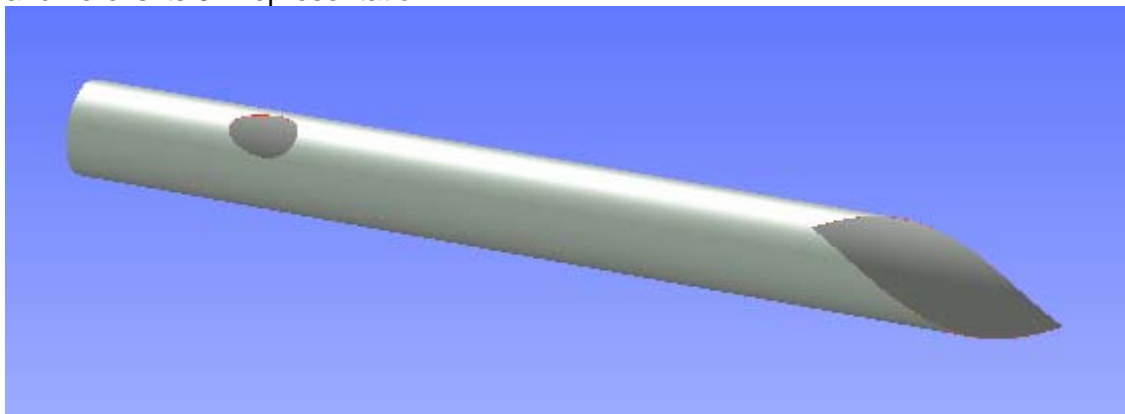
### 4.1 New Tube 3D Viewer

The 3D Viewer can now display edge cuts that were added manually, and not through **Create Intersection** dialog.

This is an example of such a manual modification:



and here is its 3D representation:



### 4.2 Enhancement For Tubes Intersection

An intersection with a rectangular profile can now be done with a corner radius of 0.

### 4.3 New Model Key For Tubes

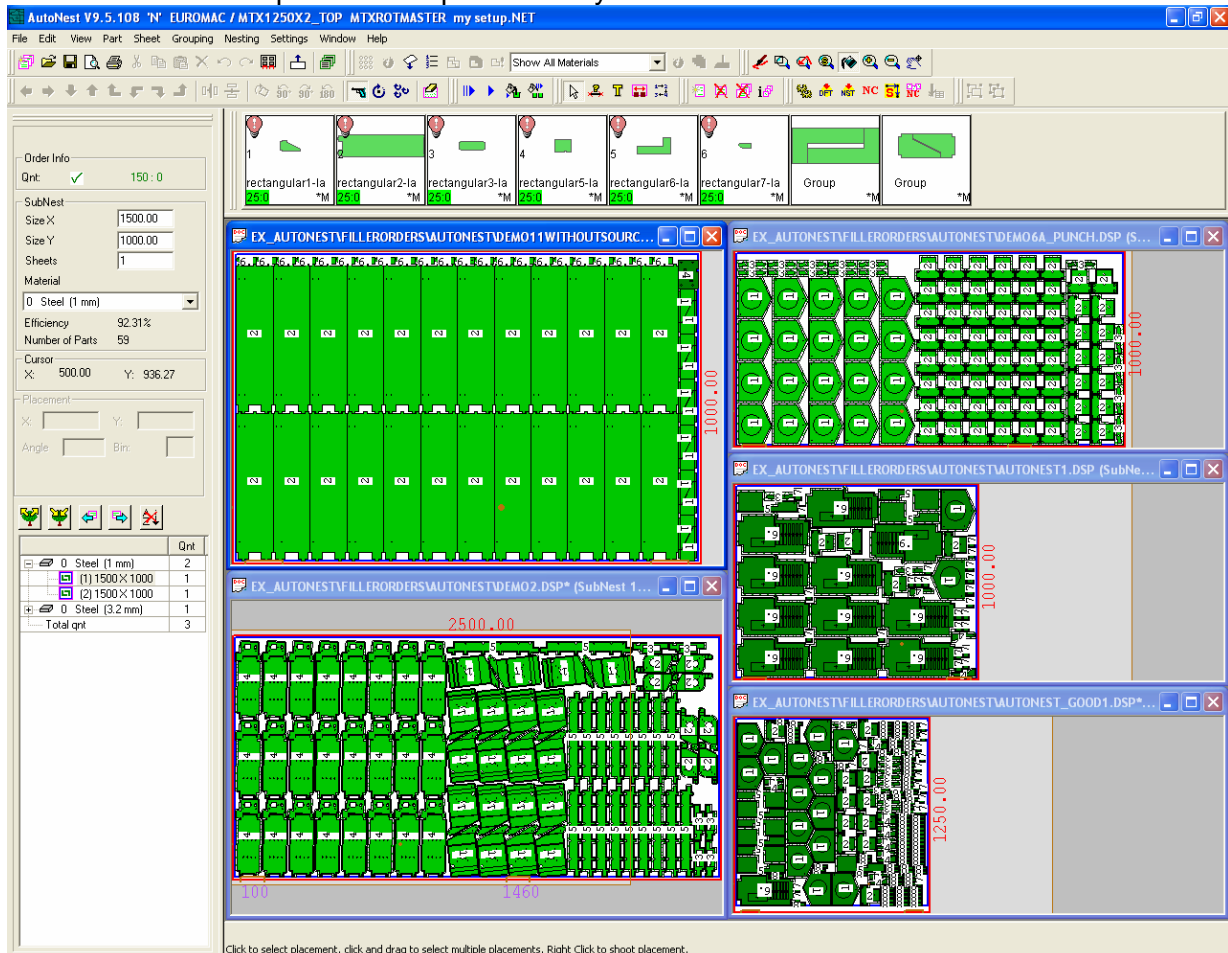
The "**LimitAngleForPlaneCutting**" key, inserted into .MDL file, sets the limits of the laser movement for planar cuts, so that the beam doesn't stray away from the tube.

## 5 New in AutoNest

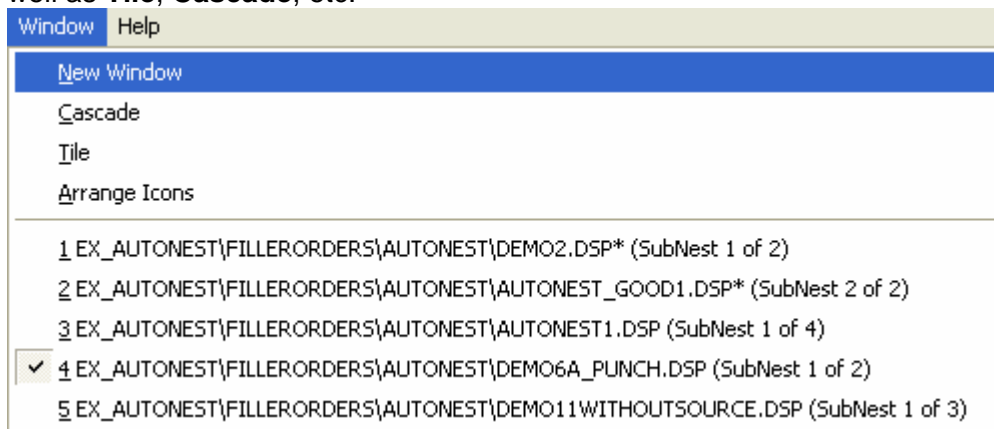
### 5.1 AutoNest is Now an MDI Application

➔ **MDI** is an acronym for Multiple Document Interface.

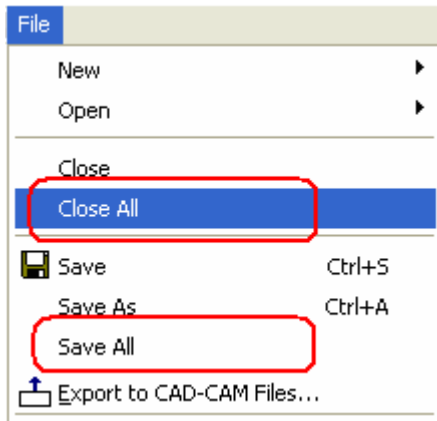
This means that it is possible to open as many files as needed in main **AutoNest** window:



In addition to that, you can switch between the open parts from the new **Window Menu**, as well as **Tile**, **Cascade**, etc:

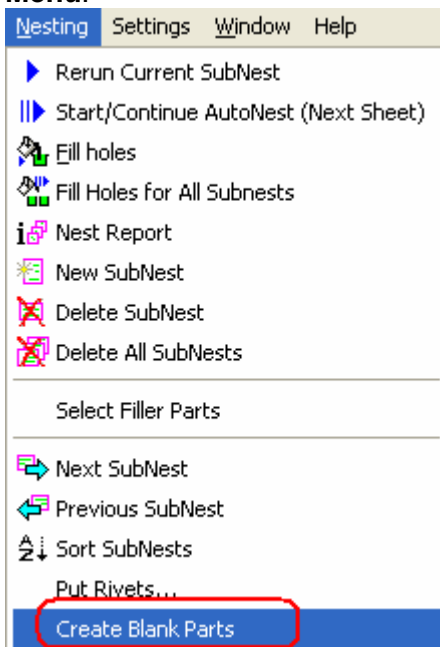


There are also new features in the **File Menu**, allowing you to **Save/Close** not just one window, but all of the windows at the same time:

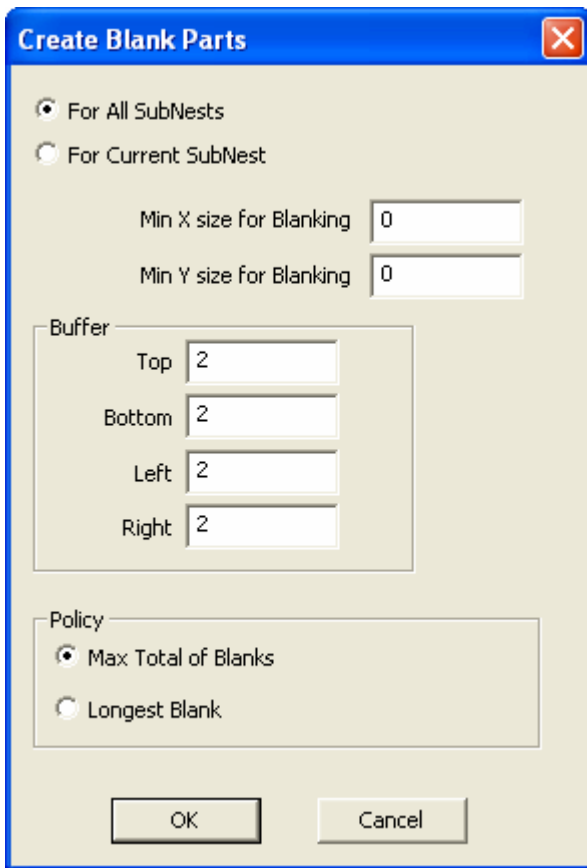


## 5.2 Blanking in AutoNest

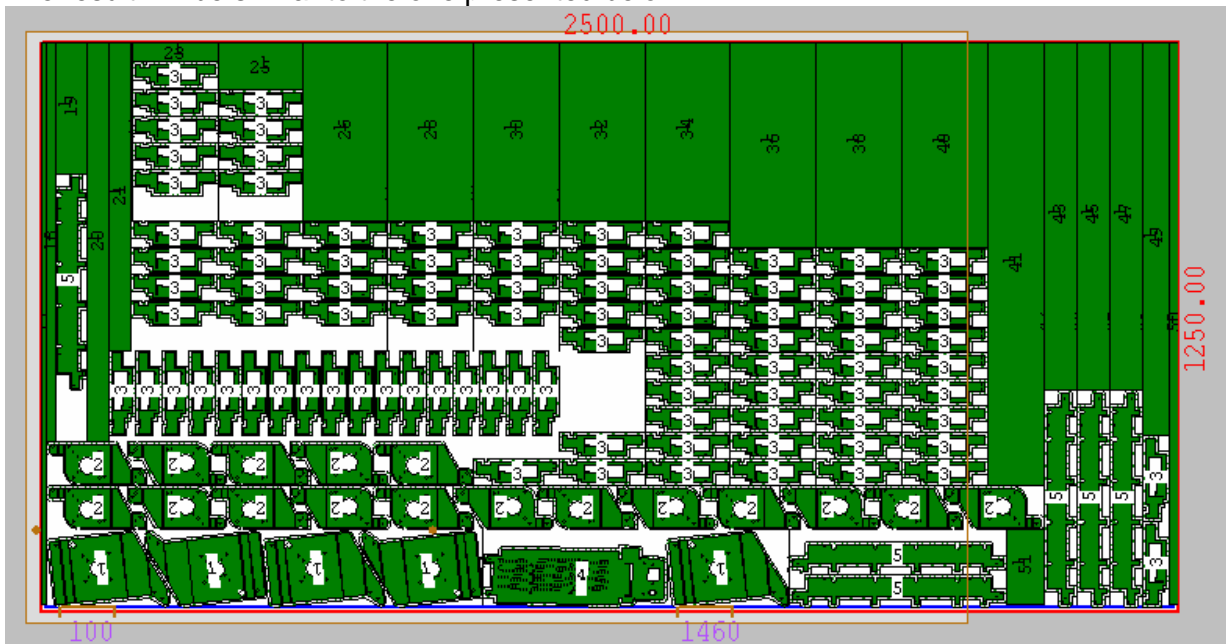
**Blanking** is the option of filling empty spaces in the nests. It is accessible from **Nesting Menu**:



In the **Create Blank Parts** dialog you can enter various parameters for future space-fillers:

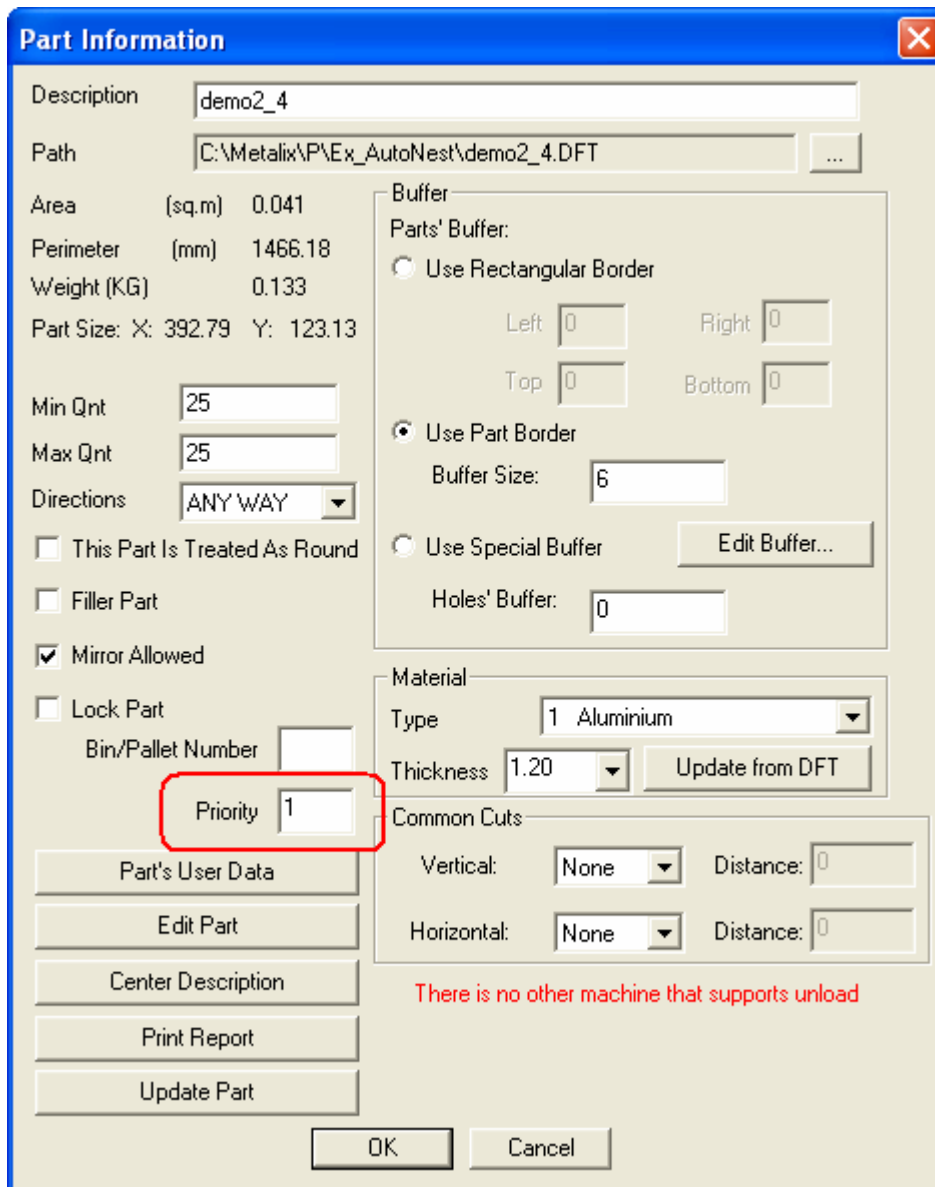


The result will be similar to the one presented below:



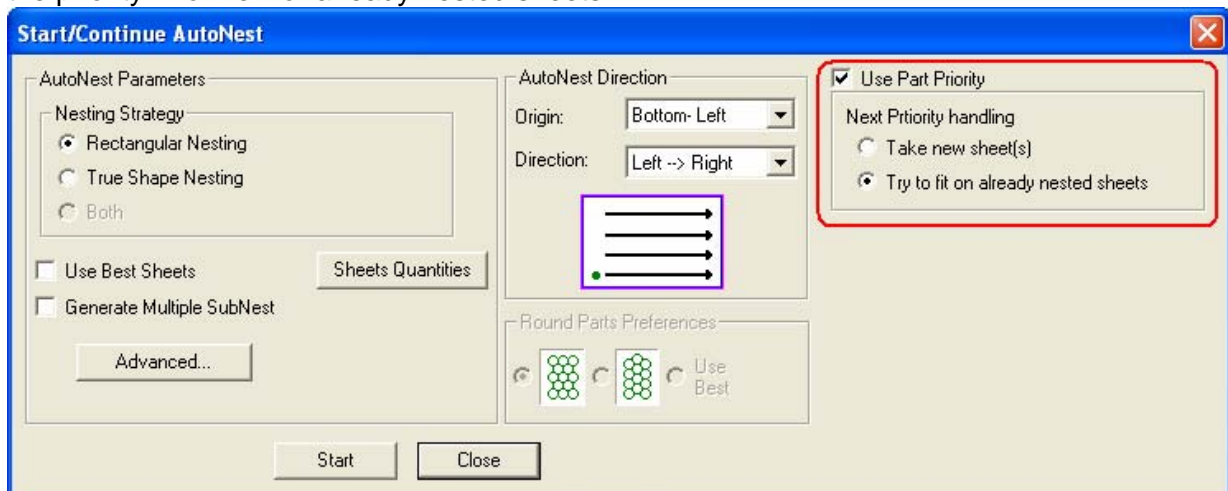
### 5.3 Parts Priority in AutoNest

In the **Part Information** dialog chosen from **Part Menu** you are able to assign a **Priority** to a part, giving an appropriate number:



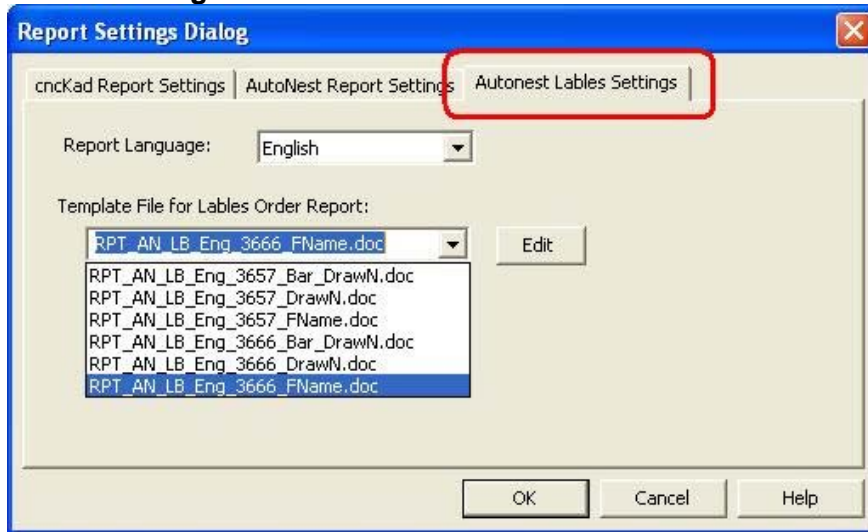
While running **Start/Continue AutoNest** option you will be able to choose whether to **Use Part Priority** or not.

If you choose to utilize this during subnest creation, you will be able to decide how to handle the priority – for new or already nested sheets:

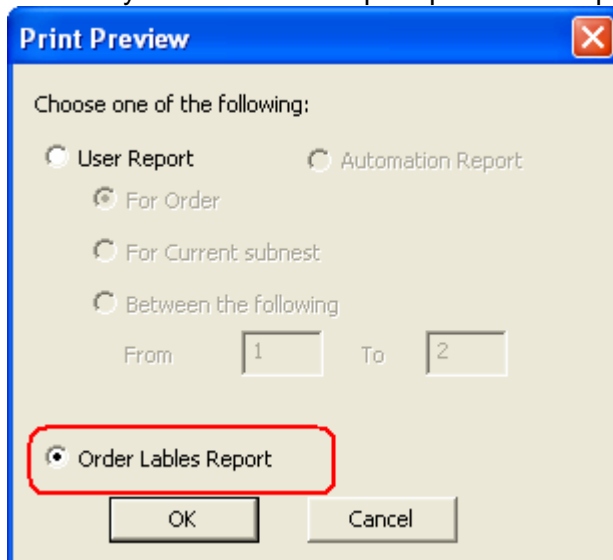


## 5.4 Labels Report

Now it is possible to create **Labels Report** from **Settings => Report Settings => AutoNest Labels Settings**:



Later on you will be able to print preview and print a **Labels Report**:



That's how the printout will look like:

## What's New in V9.5

SUS-10-112	SUS-10-112	SUS-10-113	SUS-10-113
SUS-10-121	SUS-10-126	SUS-10-115	SUS-10-115
SUS-10-115	SUS-10-115	SUS-10-115	SUS-10-115
SUS-10-115	SUS-10-115	SUS-10-115	SUS-10-115
SUS-10-115	SUS-10-115	SUS-10-115	SUS-10-115

You can also create labels with bar code:

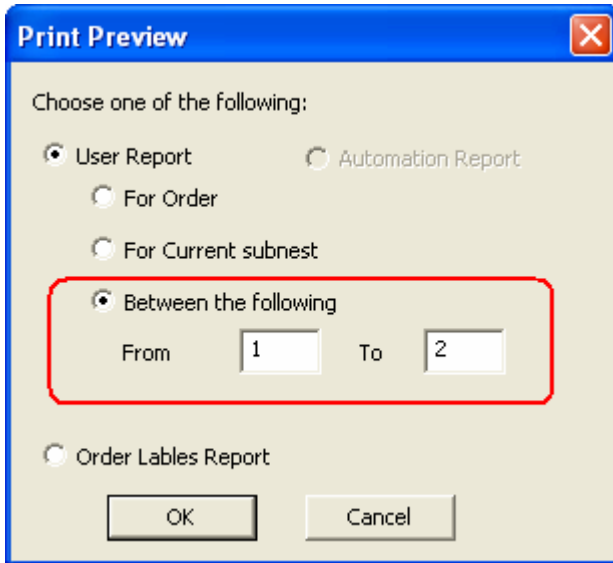
315796578 	315796578 	658923575 	658923575 
113458871 	546879952 	258963147 	258963147 
258963147 	258963147 	258963147 	258963147 
258963147 	258963147 	258963147 	258963147 
258963147 	258963147 	258963147 	258963147 

### 5.5 New Tokens in AutoNest

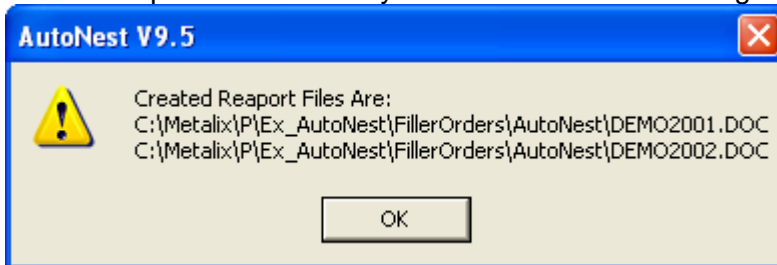
A few new tokens such as P\_WEIGHT\_GROSS and P\_WEIGHT\_GROSS\_SN have been added to AutoNest.

### 5.6 Reports' Print Preview for Several Subnests

It is possible now to view **Reports' Print Preview** for several subnests at a time. In previous versions this option was available only for printing:

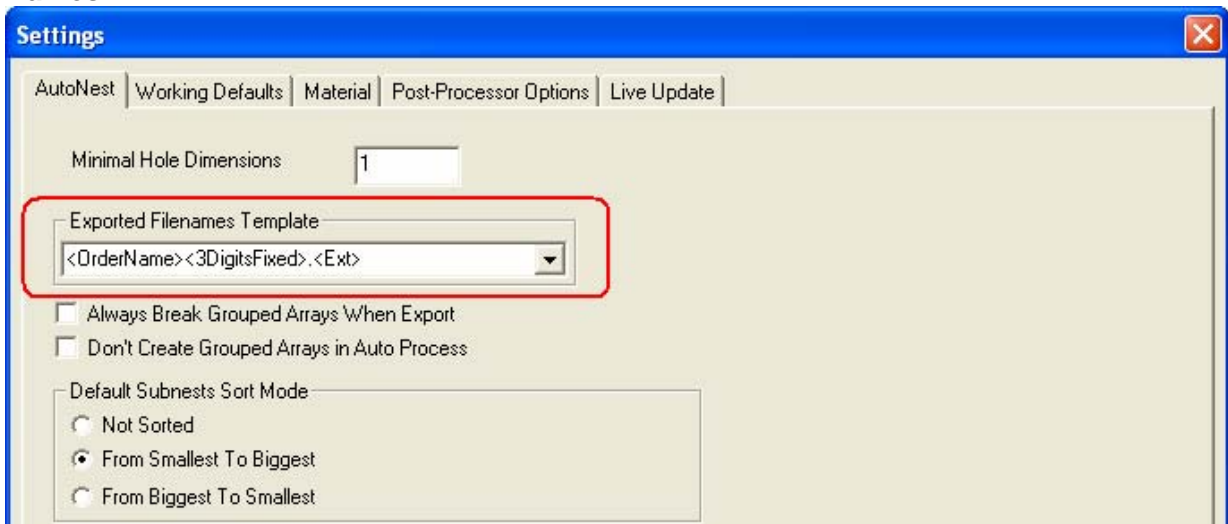


After the reports are created you will receive the following message:

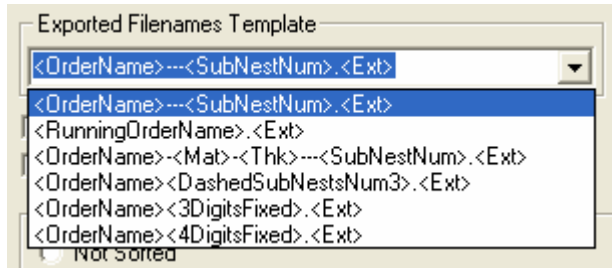


## 5.7 New Default Exported Filenames Template

In **Working Settings** on the **AutoNest** tab you will find new templates of **Exported File Names**:

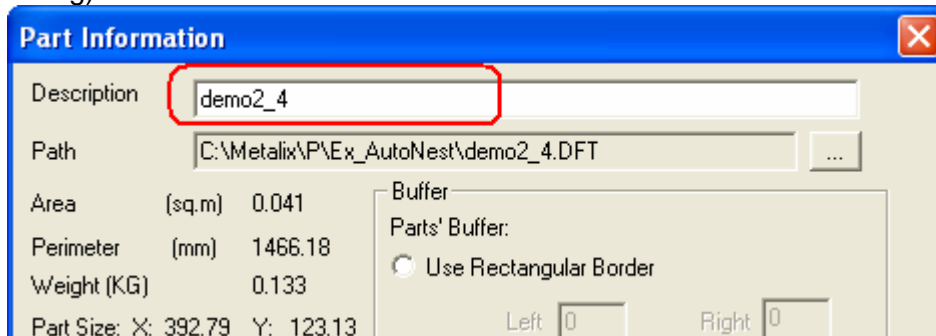


When you export parts from **AutoNest** to **cncKad**, choosing one of the following templates from dropdown list will determine the exported files naming in **cncKad**:



### 5.8 Changes in DFT Files Creation

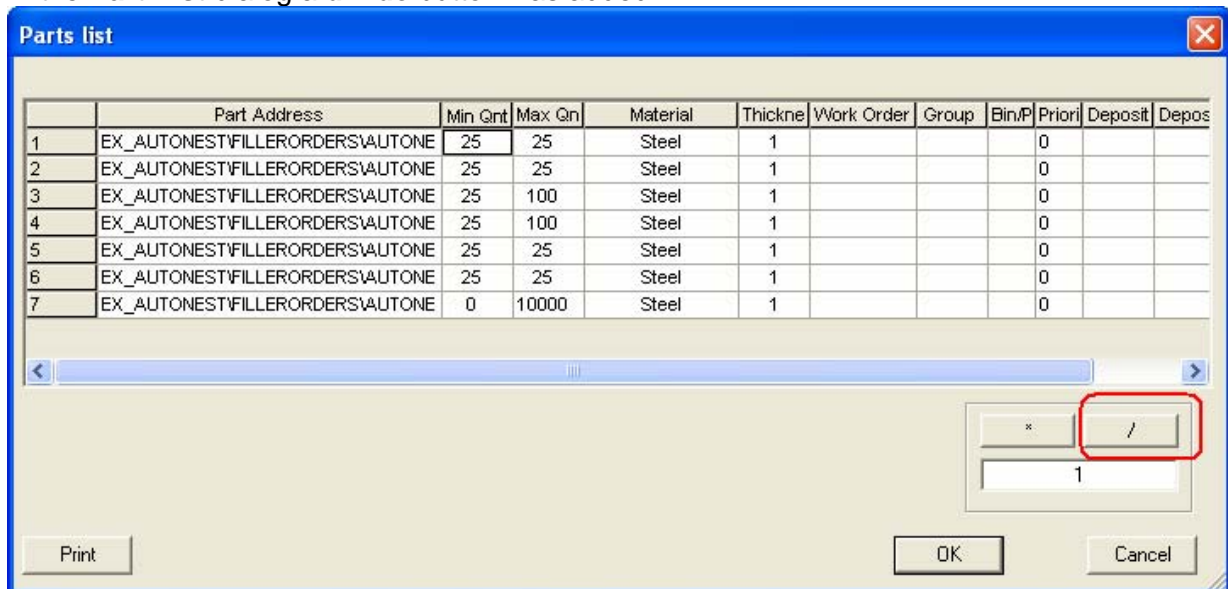
Each part imported to **AutoNest** has its own description (in available in **Part Information** dialog):



If in your nest there are two or more parts with the same description, in **Part Information** dialog you can change their description before creating DFT files for them.

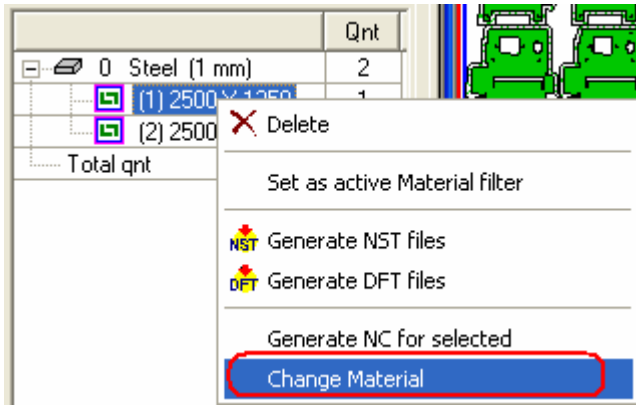
### 5.9 Divide Button Added to Parts List dialog

In the **Part List** dialog a **divide** button was added:

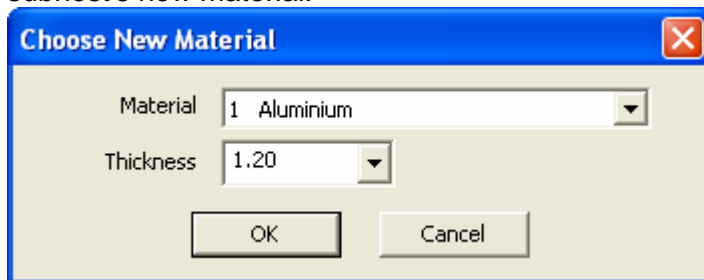


### 5.10 Change Subnest's Material

Now it is possible to change materials for chose subnests. Select the subnest for which you want to change material, and click the right mouse button. In the dialog which will appear you will be able to choose **Change Material** option:



Clicking it will result in opening the following dialog, from which you will be able to pick your subnest's new material:



### 5.11 Efficiency Calculation Considers AutoCutSheet

Efficiency calculation takes into the consideration the used space of the sheet space cut with **AutoCut Sheet** option:

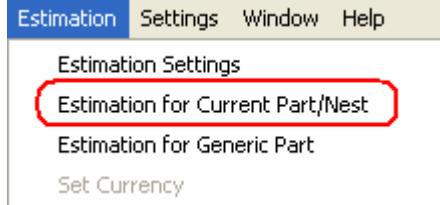
### 5.12 Rotation Placements

When you move a part while placing it on the nest you can rotate it using "+" and "-" buttons. This allows you for more efficient space usage and is more accurate placing tool.

## 6 Estimation Module

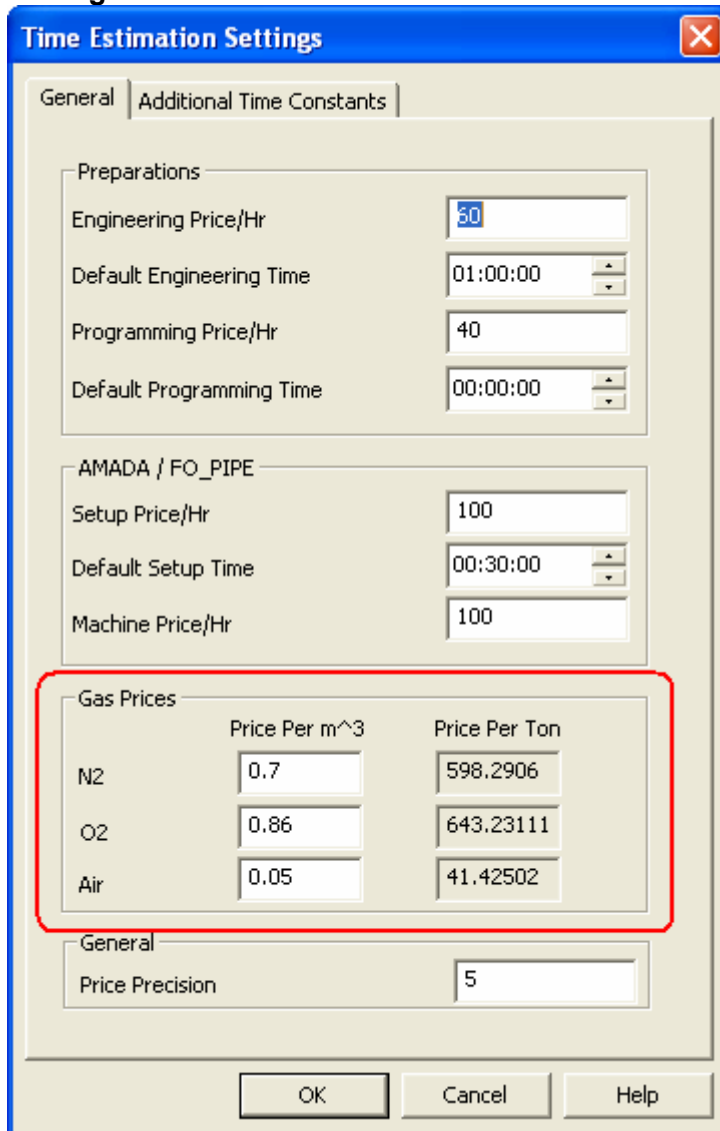
### 6.1 Cost Estimation Support for Nest

There is a new item of **Estimation Menu** provides costing and timing estimation not only for **Current Part**, but for **Current Nest** as well.



### 6.2 Gas Pricing in Time Estimation Settings

For cutting machines there is a new item of **Gas Prices** on General Tab in **Time Estimation Settings**:



### 6.3 Changes in Estimation Dialog

There are a lot of changes implemented to Estimation Dialog. Its outlook changed completely

– instead one huge window you will see tabs sorted according to their content:

### 6.3.1 Estimation Summary Table

The estimation data appears both in a summary table that describes the main information for each part, and additional summary information related to the entire nest such as: total efficiency of material usage within the nest and the material cost for each part in the nest, derived from the calculated efficiency.

The screenshot shows the 'Current Part Estimation' window with the following details:

- Machine:** 'X' AMADA / FO\_PIPE NONE
- Material Type:** 0 Steel
- Part:** C:\Metalix\PI\Ex\_AutoNest\DemoPunch6.DFT
- Thickness:** 1.00
- Efficiency % (Total Area of Outer Contours/Sheet Area):** 60
- Feed Potentiometer (%):** 100

Part Num	Part Name	Weight Gross	Material Cost	Cutting Time Per Part	Cutting Cost Per Part	Gas Cost	Cost W/without Material	Cost Per Part	Quantity	Total Cutting Time	Total Cutting Cost	Total Weight	Total Material Cost	Total Gas Cost	Total Cost No Material	Total Cost
1	DemoPunch6	0.78	0.546	00:03:14	5.40171	0	5.40171	5.94771	20	01:04:49	108.03422	15.6	10.92	0	108.03422	118.95422

**Sheet Properties:** Effective Sheet Area x 2000 y 1000

**Marginal Cost (without fix cost):**

Cutting Machine Time	01:04:49	100.00 Per Hour	108.0342
Used Material	15.6 kg	0.70 Per Kg	10.92
Used Gas			0
<b>Total Without Material</b>	<b>108.0342</b>	<b>Total</b>	<b>118.9542</b>

**Job Fix Cost:**

Job Setup Time	00:30:00	100.00 Per Hour	50
Additional Process Time	00:00:00	100.00 Per Hour	0
<b>Total</b>			<b>50</b>

**Total Job Cost:**

	Cost	% Overhead
Without Material	158.0342	46
Including Material	168.9542	42

Buttons: Preview Estimation Report, Print Estimation Report, OK, Cancel, Help

### 6.3.2 Single Part Costing

Single part costing mode provides the ability to estimate the part in a “stand alone” mode (i.e. not as a part of the nest). This option is available also for a single DFT geometries.

## What's New in V9.5

**Current Part Estimation**

Estimation Summary Table | **Single Part Costing** | Part Processing | Part Extra Work | Machine

Machine: 'P' AMADA / PEGA357 58I | Material Type: 0 Steel  
 Part: C:\Metalix\|P\Ex\_AutoNest\DemoPunch6.DFT | Thickness: 1.00 | Recalculate

Feed Potentiometer (%) 100

**Fix Cost**

	Cost
Engineering Time: 00:00:00 (60.00 Per Hour)	0
Programming Time: 00:00:00 (40.00 Per Hour)	0
Machine Setup Time: 00:00:00 (60.00 Per Hour)	0

**Marginal Cost (without fix cost)**

	Cost
Weight Gross: 0.4708 kg (0.70 Per Kg)	0.32958
Total Cutting Machine: 00:01:38 (60.00 Per Hour)	1.64156
Used Gas	0

**Part Properties**

Bounding Box: X 357 mm, Y 195.5 mm

Area of Outer Contour (AOC): 0.0604 m<sup>2</sup>  
 Area Net: 0.0452 m<sup>2</sup>  
 Weight Net: 0.3525 kg

**Material Calculation Parameters**

Material Waste Rate % 0 | Efficiency % 100

Area Calculation Method:  
 Bounding Box  
 Outer Contour

Area Gross (Area + Waste): 0.0604 m<sup>2</sup>

**Results**

	1	10	100	1000	20
Quantity	1	10	100	1000	20
Cost Per Part	1.97114	1.97114	1.97114	1.97114	1.97114
Without material	1.64156	1.64156	1.64156	1.64156	1.64156

OK | Cancel | Help

### 6.3.3 Part Processing

Here you can see the processing time details for each part in the geometry.

**Current Part Estimation**

Estimation Summary Table | Single Part Costing | **Part Processing** | Part Extra Work | Machine

Machine: 'N' EUROMAC / MTX1250X2\_TOP MTXROTMASTER | Material Type: 0 Steel  
 Part: C:\Metalix\|P\Ex\_AutoNest\DemoPunch6.DFT | Thickness: 1.00 | Recalculate

Feed Potentiometer (%) 100

**Processing Amounts**

Vaporization Length	0	mm
Engraving Length	0	mm
Pierce Quantity	0	
Cutting Length	0	mm
Punches	164	
Travel Length	8342.87	mm
Tool QTY	8	

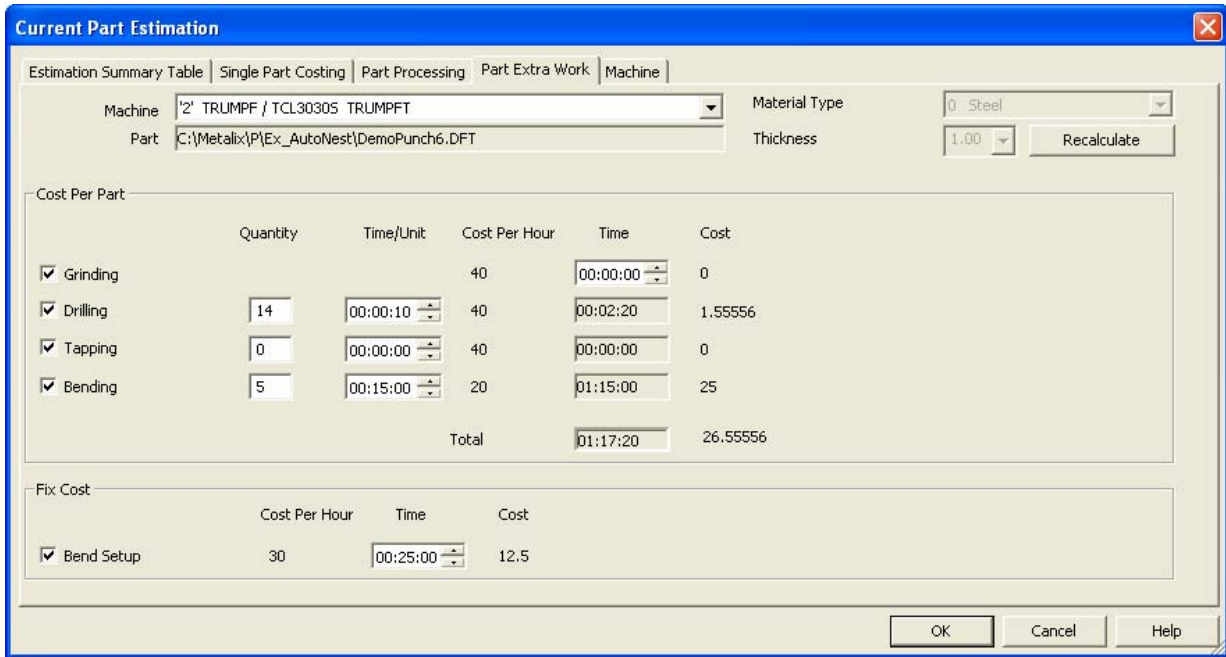
**Processing Time**

Vaporization Time	00:00:00
Engraving Time	00:00:00
Piercing Time	00:00:00
Cutting Time	00:00:00
Punching Time	00:00:23
Z Time	00:00:00
XY Travel Time	00:00:23
<b>Total Cutting Machine Processing Time</b>	<b>00:00:46</b>

OK | Cancel | Help

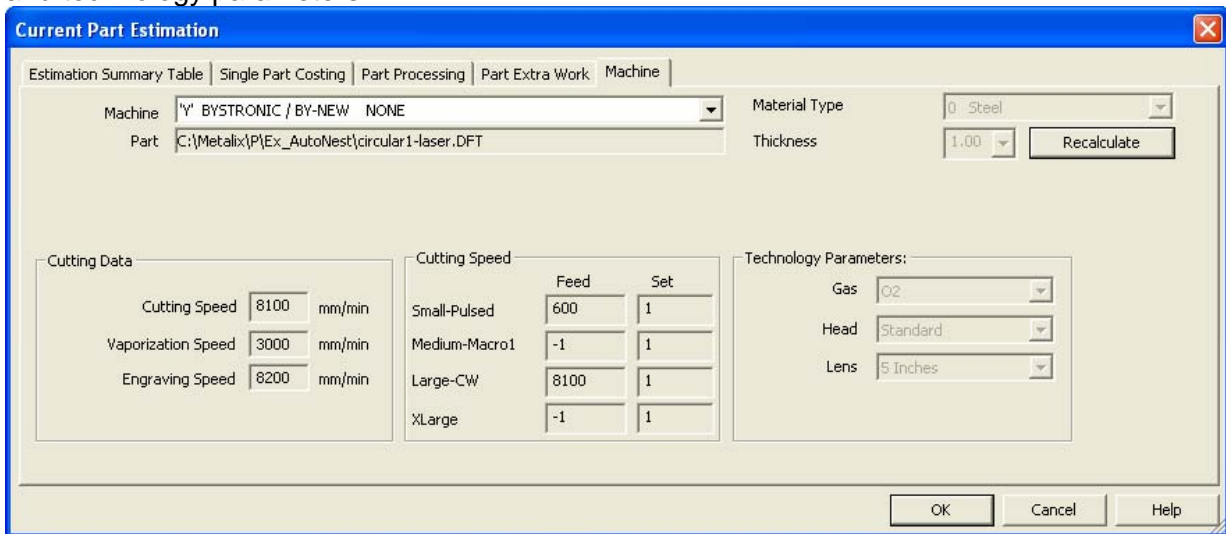
### 6.3.4 Part Extra Work

This tab allows the user to setup the extra processing types and estimate their time and cost.



### 6.3.5 Machine

This tab provides you with the information on the machine you work with – its working data and technology parameters.



## 7 New in CAD Link

### 7.1 New functions in SolidWorks and SolidEdge

In SolidWorks and SolidEdge there are two to new functions to traverse assemblies or single parts silently: ***SW\_StartTraverseWithOptions*** and ***SE\_StartTraverseWithOptions***. They are accessible through the PartReader automation interface. They allow the programmer to export entire assemblies from the Solid program to ***cncKad*** without requiring intervention from the user.

### 7.2 SolidEdge Assembly Enhancement

There is a new function in SolidEdge Assembly, allowing you to open Settings Dialog directly, instead of entering Material Properties dialog first.