



Release





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# New features introduced with release X6

# **General functions and Supervisor Environment**

• "Import / Export > Preferences":

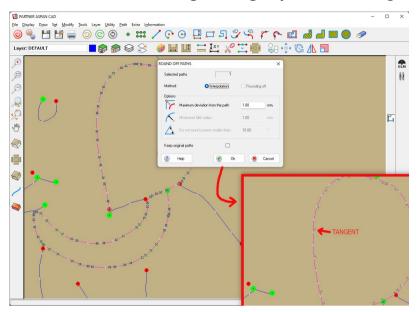
added new option "*Join routings on different layers*". If the option is enabled during **DXF import** it allows joining in a path for adjacent routings that belong to different layers.

mport/Export options	Import method	Exploded I	DXF			
		IMPORT				
Routings diameter			10.00	l	mm	
Holes maximum diar	meter		20.00	8	mm	
POINT entities						
Import as holes		Diameter		10.00		mm
Entities depth						
O Use the entity Z	value			1000000		
Use specified va	alue ->	Routings de	pth	5.00		mm
O bac apconica ve		Holes depth		5.00		mm
Number of significar	nt <mark>di</mark> gits		2			
Panel thickness			5.00		mm	
Measurement unit			1.1.11			
Imported routing	union 🛁	🔽 Join routi	ng on o	different la	ayers	
		oantoraanik n	0103			
		EXPORT		-		
Diameter return		File type to be	e expor	ted	Binary [ ASCII [	

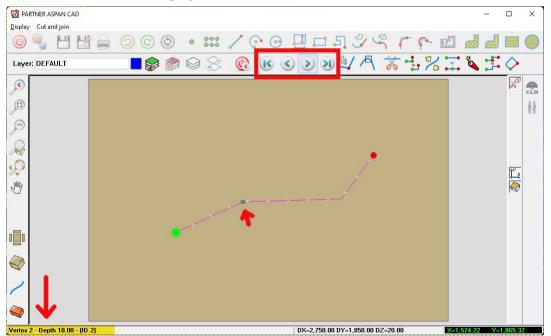
#### **CAD Environment**

• New command "**Path** > **Sand**":

given a path composed of several segments, the *"sand"* command allows the profile to be smoothed while **maintaining the tangency** between the segments that make it up.

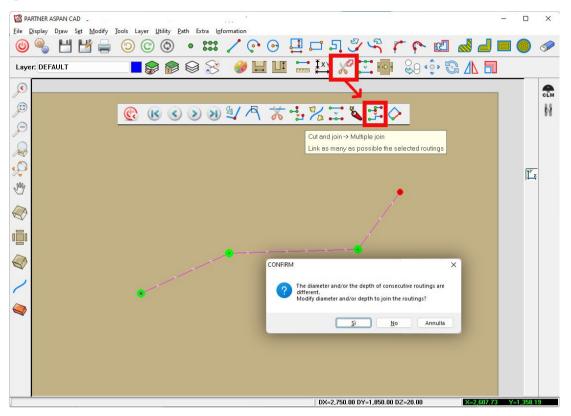


"*Path* > *Cut and join*": by scrolling through the vertices of a path, in the status bar at the bottom left of the program window, the **index** of the selected vertex, the **depth** and the **ID** of the current section are displayed.



"*Path* > *Cut and Join* > *Multiple Join*": when joining several segments to form a single routing • path, the command checks that all entities have congruent characteristics and therefore have the same diameter and equal depth at the joining points.

If one of these requirements is not met, similarly to the 'Auto Join' command, a message warns the user and proposes to automatically correct the parameters of the lines before the merge operation.



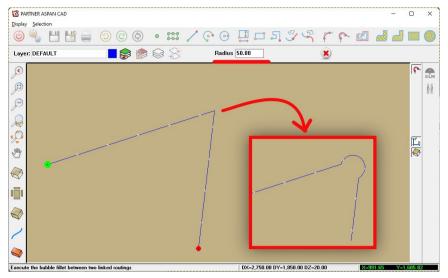
- "Path > Cut and Join > Multiple Join": optimised the lines merge functionality especially • with regard to the calculation of machining direction and depth management.
- "Path > Cut and Join > Multiple Join": the new flag "Join through layers" when active • allows adjacent routings to be joined even if they are on different layers.



**Disabled**: (default) lines belonging to different layers cannot be joined.

**Enabled**: multiple join also merges lines that belong to different layers.

 New command "*Tools* > *Bubble fillet*": creates a bubble connection between two adjacent entities.



• "*Draw* > *Routings* > *Rectangle*": the rectangle creation dialog box now allows the automatic creation of **bubble fillet** on the corners of the rectangle created.

DEFAULT		Draw	Routings -> Rectangle -> 2		
	 •		DRAW A RECTANGLE General data Vertex 1 Vertex 2 Wodh Length Joint data Filet Filet Filet adus	X Y 917.22 1.542.60 2.500.41 404.86 1.683.19 mm. -1.137.74 mm.	×
			Priection Direction Auding thickness Direction Auding thickness Direction Help	C.clockwise V (	Mirror in Mirror in X Mirror in Y Oppose k Cancel

"Modify > Entity": created new quick access for the modify entity command, which can now be executed by pressing the key [ N ].

# **CAM Environment and Tooling**

• "*Machine > Machine Tooling > Edit*": improvements to the tool data dialog.

ain spindle Upper head						50
ock position 1	• • Code	1				÷,
escription FRESA	D11					N
aeometry Mechanics						2
Tool type	Router	~				A
Routing tool type	Cylindrical	~				
Length	119.00				1	Û
Useful length	50.00				l	1 4
Diameter	11.00		5		1	_
Diameter corrector	0.00					
Length corrector	0.00			XX		
Default speed	4,000	mm/min		YX		0
Maximum speed	6,000	mm/min				
Infeed speed	2,000	mm/min				?
Rotation speed	18,000	RPM	Extra Data		🗙 Erase	
Max. rotation speed	18,000	RPM			V Insert	<b>e</b>
	Clockwise		Head	1/1 🌲	Add	

• "*Machine > Machine Tooling > Edit*": new section for tool "Additional Data".

DIFY MACHINE TOOLING			×	
ain spindle Auxiliary 1	▶ Code	1	*	
escription ROUTER	DIA11		TOOL EXTRA DATA	;
Geometry Mechanics			T ool Variables	Cooling
Tool type	Router	~	N. Value	O None
Routing tool type	Cylindrical	~		O Coo. 1
Length	150.00		2	O Coo. 2
Useful length	50.00		4	O Coo. 3
Diameter	11.00		5 6 7 8	Coo. 4
Diameter corrector	0.00		9	Force dusthood position to high
Length corrector	0.00		10	
Default speed	15,000	mm/min		🕜 Ok 🕱 Cancel
Maximum speed	18,000	mm/min		
Infeed speed	6,000	mm/min	2	
Rotation speed	18,000	RPM	Extra Data	
Max. rotation speed	24,000	RPM	👽 Insert	
Rotation direction	Clockwise	~ H	ad 1/1 🖨 🕂 Add 💌	

For each tool, it is possible to specify Additional Data that can be used by enabled processors to perform particular functions. It is also possible to specify **coolant/lubrication options** and **force the dust hood in high position** when that particular tool is used.

Note: These features are only available for enabled processors.

Please contact Atool Software for verification.

"Machine > Machine Tooling > Stock": improved stock management window and added
[ Delete ] button to quickly remove unnecessary tools from the stock.

Code     Description     Type     Jutype     Cengin     Oservice length     diameter     diameter <thdiameter< th="">     diameter     <t< th=""><th>Code</th><th>Categories Description</th><th>Туре</th><th>Subtype</th><th>Length</th><th>Useful length</th><th>Maximum</th><th>Minimum</th><th></th></t<></thdiameter<>	Code	Categories Description	Туре	Subtype	Length	Useful length	Maximum	Minimum	
ROUTER DIA11     Router     Cylindrical     150.00     50.00     11.00     11.00       2     ROUTER DIA12     Router     Cylindrical     150.00     50.00     12.00     12.00       3     ROUTER DIA13     Router     Cylindrical     150.00     50.00     13.00     13.00									
2     ROUTER DIA12     Router     Cylindrical     150.00     50.00     12.00     12.00       3     ROUTER DIA13     Router     Cylindrical     150.00     50.00     13.00     13.00	1								
3 ROUTER DIA13 Router Cylindrical 150.00 50.00 13.00 13.00	2	ROUTER DIA12	Router	-	150.00	50.00	12.00	12.00	
14 SAW 0-360 Blade Disc 90.00 51.00 3.00 3.00	3	ROUTER DIA13	Router		150.00	50.00	13.00	13.00	
	14	SAW 0-360	Blade	Disc	90.00	51.00	3.00	3.00	

- *"Machine > Machine Tooling > Stock"*: tools saved in the stock now also retain the **mechanics data** and **additional data** introduced with this version.
- New **Tool Assignment** and **Optimization managemet**:

the new tool assignment and optimisation management makes it easy to decide when and how the program should perform **automatic tool assignment** and **sequence optimisation** operations.

This working mode integrates and complements the pre-existing ones.

PARTNER ASPAN CAM - C:\ATS\PARTI File Visualizza Macchina Lavorazion		rumenti Layer <u>I</u> nf <mark>rancia</mark>		S. S. E	
Layer: DEFAULT	- 🗩 🕌 🏷 😂	14 6 6			
C			<i>W</i> 0>		
ø					
P					

**More information** about this new functionality can be found in the following document: ats x6 new tool assignment and sequence management.pdf >> • Improved **machining property** and **tool selection** dialogues.

ROUTINGS MACHINING				
Machining 0 1		Multi machining		
Enable machining	Reverse direction	ТО	DOL SELECTION	1
Tool Tool [1 RPM [18,000	Diameter 11.00 Length 50.00	FRESA D11	Tool change posit.   9 - 60 SPIANARE     Diameter/ Useful length   20.00 / 12.00     FRESA 60mm P409.600.12D     Image: Tool change posit.   10 - 3N	
Options Start feed 2.000			Thickness / Radius 3.00 / 60.00 FRESA 3mm N 303.030.8D	
Start feed     2,000       Feed     4,000       Depth     10.00	mm/min mm/min mm.		Tool change posit. 11 - 35 SPIANARE Max / Min diameter 35.00 / 3.20 FRESA P409.350.8D	
			Tool change posit. 12 - 3 U Diameter/ Useful length 3.00 / 12.00 FRESA P313.030.3D BALL NOSE	
Tool compensation     None       Overmaterial     0.00	→ <u>∦</u> mm.		Tool change posit. 12 - T12b Thickness / Radius 3.00 / 50.00	
	) Pass Depth		Tool change posit. 1 - A1-T1 - Auxiliary 1 Thickness / Length 0.50 / 5.00 CUTTER	
Steps 1	Inverted Pass		Help 🔆 🔗 Ok Cancel	
Help		Co	Confirm current operation	]
Confirm current operation				

# **NESTING Optional Module**

- Improvements to "*Onion Skin*" management and start point calculation.
- (automatic labeller) "*Labels > Configure for waste sheets*": waste sheet label management. It is possible to create a customised label to be applied to the waste sheet to be re-stocked.

Label template	Load 💾 Save	Dimensions Width Height	1,000.00 mm/10 1,000.00 mm/10	
Order name Sheet name Layout number Layout index		Offset × <u>0.00</u>	Y 0.00	
Total area Operating area		Fields positioning Basic Data		
Sheet length Sheet width		Туре	Name	-
Sheet thickness		A Text	Order name	_
Result index Waste length		I A Text	Sheet name	
Waste width				-
Waste area		☑ A Text	Layout number	_
		🛛 🗛 Text	Layout index	
		🔽 <u>A</u> Text	Total area	
		🗹 🛕 Text	Operating area	
		☑ 🗛 Text	Sheet length	
		☑ 🗛 Text	Sheet width	-
Customizable graphic entities		× 10.00 •	• Header	~
Line Rectangle Text	🖋 Modify 💥 Erase	Y 540.00		
			0.00	
		50	0.00	
		Height 45	.00	

• Code-128B barcode support:

Configure tex Co	onfigure BarCode Advanced Print		Tipo di carattere	
Configuration	Parametri Codice a Barre prec	🗸 🗹 Code128 type		unti:
Font type	TrueType $\checkmark$	All Select font		12 OK 10 11 Annulla
Font name	Code 128		CombiNumerals	12
Font size	12 $\checkmark$ Font style	Normal	CommercialPiBI	16 18 20
Preview	1100		Esempio	
			III III	
Add configur	ration	Print	Scrittura:	
	F			$\sim$

\* 'Code 128' font is not included with the program but is easily retrievable online.

#### Macro

- Optimisations to *hardware macros;*
- Post-Processor developers can now use tool variables to manage special characteristics, special machining operations, and to uniquely identify a particular type of tool. Data written in "tool variables" are passed to the processor using the variables TOOL\_VARIABLE\_N, where N is a number from 0 to 9.
- Added post-processor variable **[COOLING]** that returns a value between 0 and 4 depending on the option selected for lubrication of the current machining. (INIT\_SHAPE)
- Added post-processor variable **[DUSTHOOD\_FORCED\_UP]** with values 0 and 1 indicating whether the flag "Dust Hood force position high" has been activated. (INIT\_SHAPE)

#### **Other improvements**

• Added support for new CNC machines.



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