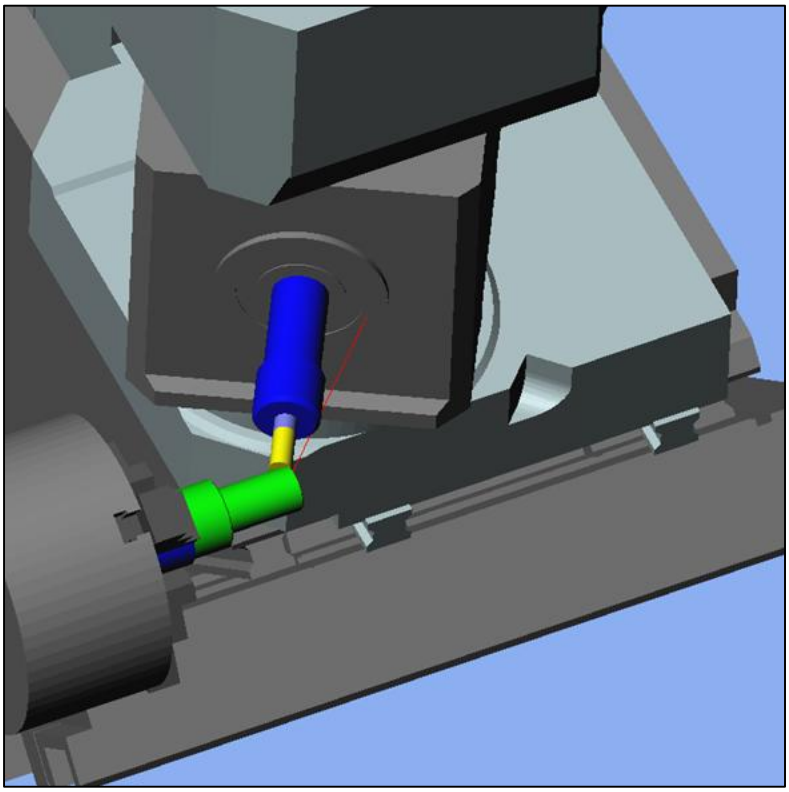

WinTool Interface for Esprit

Version 2.13 for ESPRIT 2010 SP3 and Esprit 2011

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Summary

Job

The WT-Esprit-Interface enables the user to select and transfer assemblies from the *WinTool* database to the Esprit CAM environment. Full graphic representation for each assembly is supported. The cutting conditions for the different work materials are transferred from the *WinTool* technology library to the Esprit KB. A complete list of every used tool assembly per NC-Program will be stored in the *WinTool* database for further use as setup sheet, documentation and queries.

Requirements

This Interface requires *WinTool* Professional 2009 or later and ESPRIT 2010 or 2011.

Supported Tool Types

The Interface supports most rotating and still standing ESPRIT tool types (see details in Annex). The geometry values are transferred from *WinTool* to the ESPRIT tool parameters. For rotating tools, the contour of holders and extensions is automatically calculated, transferred, and used for 3D simulation. (See manual of shape module for additional information.) The interface also transfers one STL file per assembly (rotating or lathe tool) for simulation purpose.

Licensing

You need a signed license agreement from DATOS Computer AG as well as a License code matching with the number of your ESPRIT copy protection key.

Copyright

This documentation as well as the Software itself is under copyright of

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Site: www.*WinTool*.com

Installation

Installing the Software

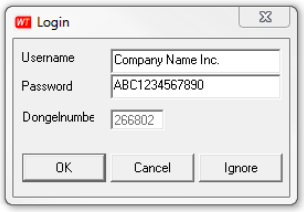
- Uninstall previous version of WT-Esprit-Interface before installing the new interface. Configuration files and “user tool models” will not be deleted.
- Before installing the WT-Esprit-Interface, please install *WinTool Professional*.
- Be sure to be local administrator to install software on a PC. To operate the Interface the Windows user needs write permission for the "exchange folder".
- Run setup.exe to install the WT-Esprit-Interface software into a new folder (WT-Esprit-Interface installation folder):
  `C:\Program Files\DATOS\WT-Esprit-Interface`

  Note: When installing a newer version of ESPRIT in future, you will have to uninstall WT-Esprit Interface before, to omit invalid entries in the registry.
- Activate ESPRIT within *WinTool* by setting the flag in Settings\CAM Settings
- You can use the Shape-Generator to verify the contour of a tool assembly (DXF-graphic) prior to using the WT-ESPRIT-Interface. To do so, start up the Shape-Generator in the export feature of the *WinTool* Tool Assembly window.
- Note:
  Whenever you change system variables you have to restart ESPRIT to make them effective.
- The Interface software is now installed with default parameters. Run ESPRIT to check, if the new buttons "Get and Put" are available.

- Note:
  In some cases it can happen that the WT-Esprit-Interface doesn't get properly registered with ESPRIT. If this is the case you won't see the "Get and Put" toolbar and won't be able to add it via the Tools -> AddIns Menu.
  In this case you have to register the file "WTEsprit.dll" inside the installation folder manually with
  `regsvr32 WTEsprit.dll`
- Please follow the "Licensing" instructions below to activate the interface.

Licensing

Trying the Software



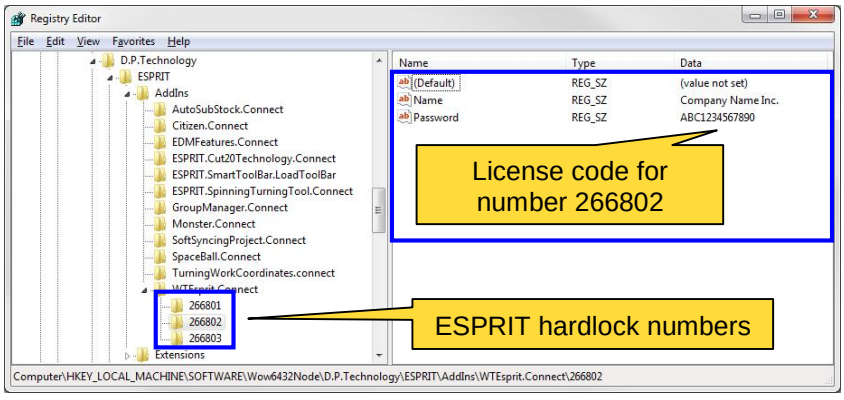
- For the ESPRIT demo version, you do not need a WT-Esprit-Interface license.
- If you do not yet have a valid WT-Esprit Interface license, you can press "Ignore" to try the interface functionality if the Login window appears.

Activating the License

- You need *WinTool Professional* to use the WT-Esprit-Interface.
- For ESPRIT CAM, you need a license for the WT-Esprit Interface. When using the "Get" or "Put" function, you will be asked to enter Username and License Password. (see Screenshot)
  Ask for your password by mail to info@datos.ch.
  Please declare your "Username" and your ESPRIT "dongle No".
- Note: If you are updating a previous installation of the WT-Esprit-Interface, the Username and Password will be transferred automatically to the new installation.
- Note: You can not store the password if you are not logged in as administrator including the right to change values in the registry.

Using Esprit Network Dongles

- Esprit Network Dongles contain separate license numbers for each Esprit Instance you are eligible to use, starting from XXXX**01** to the number of licenses you purchased.
- As you will get a different license number every time you start up Esprit, you have to acquire and enter the Interface password for each of those license numbers.
- The password information for the Interface is stored in the registry in the path
  `HKEY_LOCAL_MACHINE\Software\D.P.Technology\ESPRIT\AddIns\WTEsprit.Connect`
  with a subfolder named like each of your Esprit license numbers.
- Note: on 64-bit systems the registry key is stored in
  `HKEY_LOCAL_MACHINE\Software\Wow6432Node\D.P.Technology\ESPRIT\AddIns\WTEsprit.Connect`
- Once you entered the password information for one of the Esprit Dongle numbers you can edit the information in the registry directly to quickly add all of the passwords for the different dongle numbers by simply adding a new registry subfolder and according contents.



- Once you are done editing the registry, you can export the whole contents of "WTEsprit.Connect" to import it on another system that uses the same Network Dongle.

Configuration

User and Password

Default installation

If using a default installation, no user or password must be configured.

User and password for external modules

To enable external *WinTool* modules accessing the *WinTool* database they need a user/password combination similar to a human user. All external modules use the default values (`user = Admin`, `password = <empty>`) except it is differently configured in the specific configuration file.

The users/passwords being allowed to access the database are stored in the file "system.mdw". The default location for this file is the *WinTool* installation path (`C:\Program files\DATOS\WinTool\system.mdw`). The system.mdw being installed at this location during *WinTool* setup contains the default user/password as described above.

Individual System.mdw files

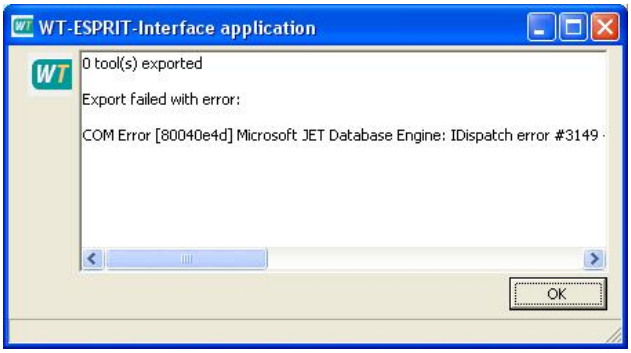
If you are using a global *WinTool* database you will want different "database user" with their "password". The user accounts are stored in a global system.mdw file. The system.mdw to be used by the *WinTool* application is indicated as parameter of the startup command.

Unless different configuration the external modules will still use the local system.mdw with the default account.

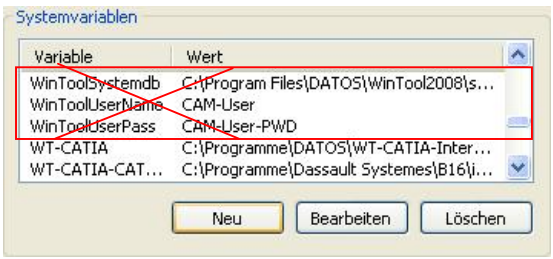
Individual User and Password - WT-Esprit-Interface.cfg

Access for WT-Espsrit-Interface module is configured in the file `WT-Esprit-Interface.cfg`, located in the WT-Esprit Installation folder.

- In case of any password problem, the following message is displayed:



- Please check the system variables and delete all entries left there from further versions or trials.



Interface Application Path

- To enable Esprit to **start up** the WT-Esprit-Interface, the path to the interface software folder is stored in a system variable. The default is set during the installation. With extended system control of Windows you can change this path. (See details in section: Set Windows System Variables)
  `WTEspritInstallPath = C:\Program Files\DATOS\WT-Esprit-Interface`

Tool List Exchange Path

- The list of Tools used in an Esprit program is transferred to the *WinTool* library by the **WT-MakeList** module. This path is stored in a system variable where the default is set during the installation. To change this path, change the value of the windows system variable:
  `WTMakeListPath = C:\Program Files\DATOS\WT-Esprit-Interface\exchange\`

  Note: Use a different WTMakeListPath for each user.

Solid Models Path (WT-Esprit-Interface.cfg)

- The DXF Files, STL **Solids** and ETL custom tool files are stored in a common folder to be used within Esprit for simulation. This path is stored in a system variable where the default is set during the installation. To change this path, change the parameter in file WT-Esprit-Interface.cfg:
  `WTEspritUserModelsPath = X:\Global\WT-Esprit-Interface\UserModels`

  By running the module, the path will also be stored as Windows System Variable:
  `WTEspritSolidsPath = C:\Program-Files\DATOS\WT-Esprit-Interface\UserModels`

  Note: Use a common SolidsPath for all users.
- Be sure the selected folder is included in the periodical backup procedure.

Getting Started

Sample Database

- With the *WinTool* software installation a sample database (WTData.mdb) is installed. An extended database is provided with the WT-Esprit-Interface, which contains ready to use tool assemblies with SK40 holders for testing.

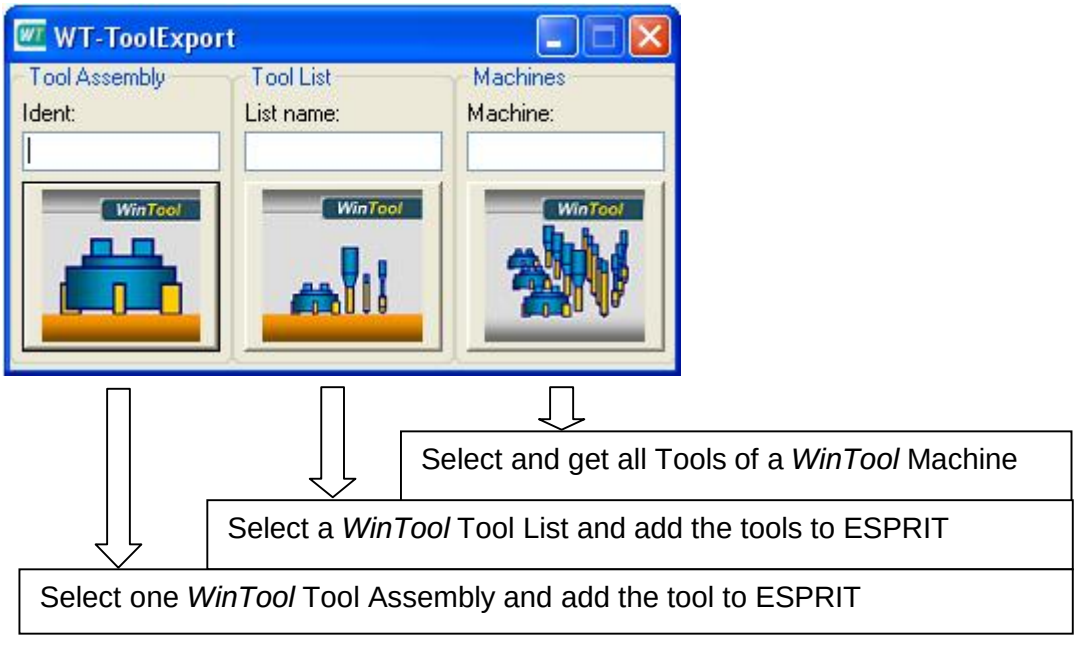
  Note: Only tools in the tool list " 100 1050 - 20 C_Tools" have cutting conditions assigned.

- The WT-Esprit-Interface always works with the database that is hooked up with the local *WinTool* installation. Re-link your *WinTool* installation to the sample database with the function "New Path..." in “Administration” on the main *WinTool* screen.

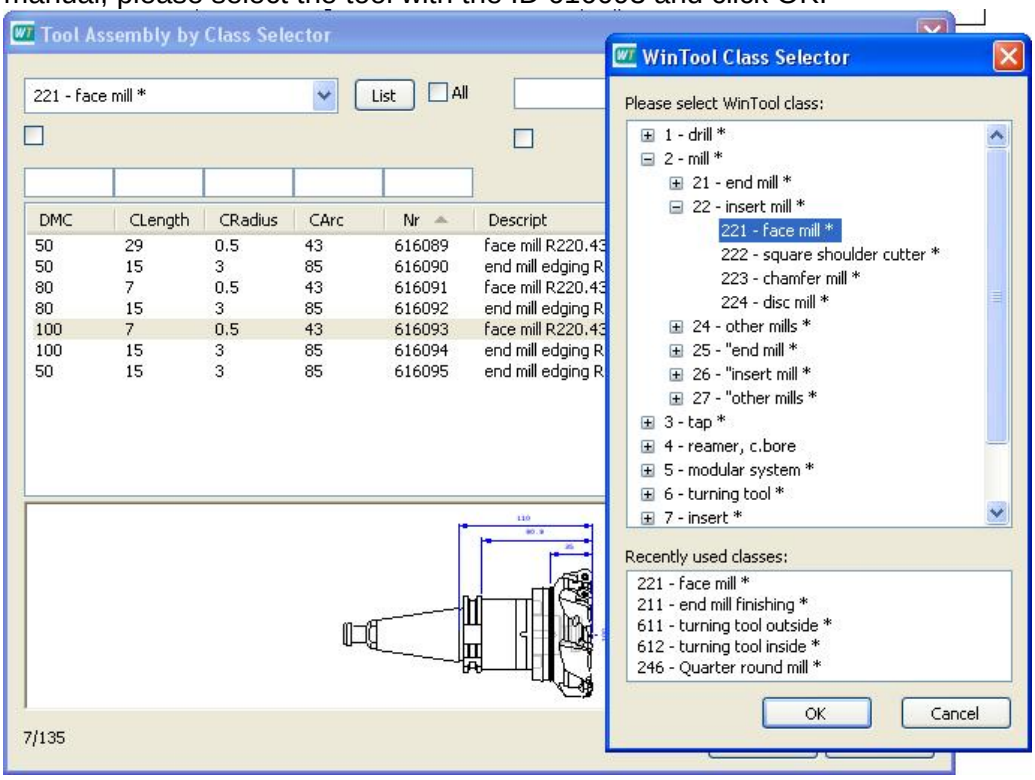
  Note: If you installed *WinTool* with an SQL Database, please use the “*WinTool* Database Manager” to switch the active database. You find the DB Manager in a subfolder of your *WinTool* installation path.

Importing Milling Tool Assemblies

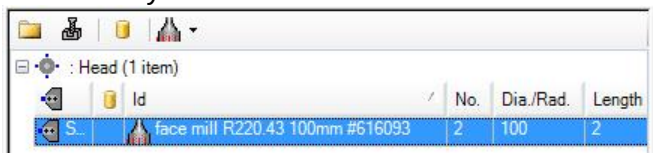
- In ESPRIT CAM open the sample "Side-Frame" located in the WT-Esprit-Interface sample folder.
- Use the "Get" button to open the Tool Selection Menu (WT-ToolExport) and choose the "Tool Assembly" button to select a single tool assembly



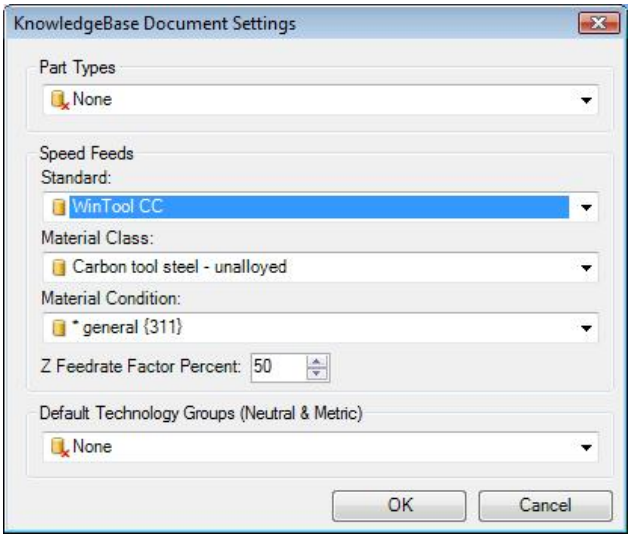
- Use the button "List" to select the tool Class “face mill”. For this first run through in this manual, please select the tool with the ID 616093 and click OK.



- Immediately the tool data will be transferred and is available in ESPRIT:

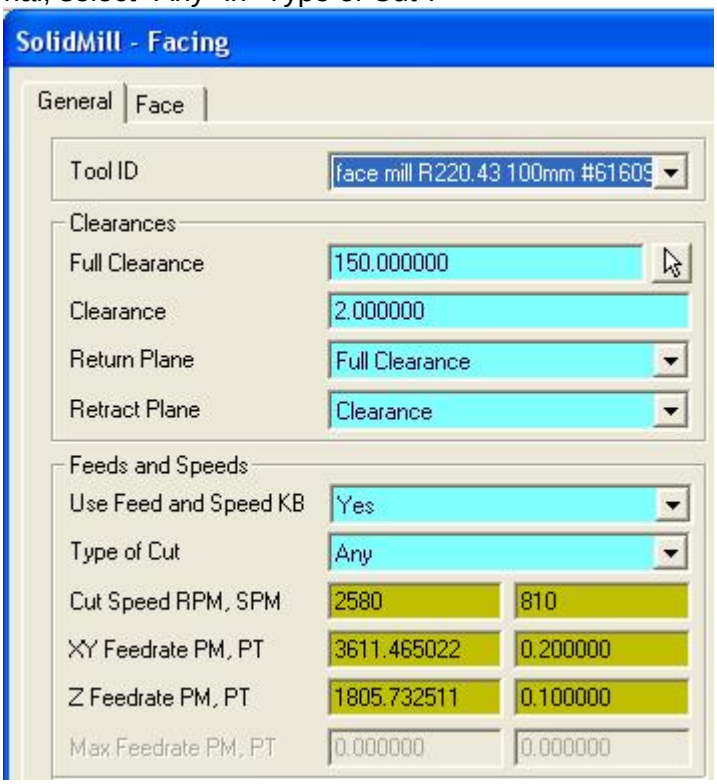


- Select in "ESPRIT KnowledgeBase Document Settings" the "*WinTool* Cutting Conditions" as standard.

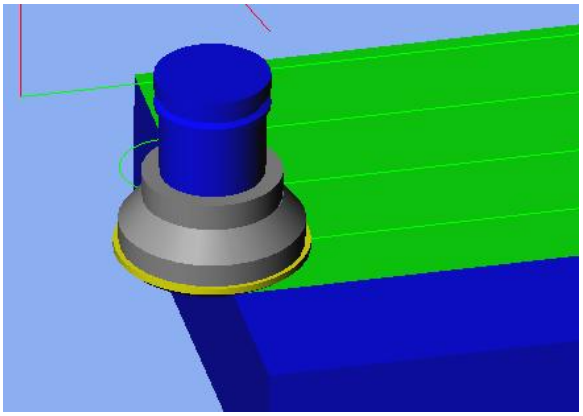


Note: Work materials and cutting conditions are transferred from *WinTool* to the ESPRIT KB with the tool assembly (...if they have been previously stored in *WinTool*).

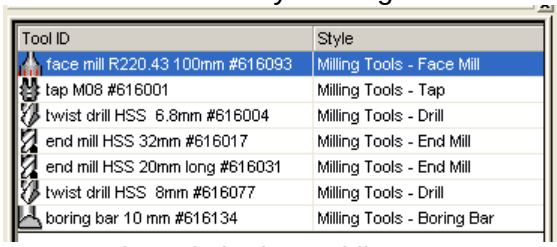
- Create a Facing Operation for the open sample work piece and select the face mill we just transferred from *WinTool*. To get the transferred cutting condition for the selected material, select "Any" in "Type of Cut".



- Run the simulation to see the WinTool tool representation.



- Use the "Get" function again to transfer the Tool List " 100 1050 - 20 C_Tools" from *WinTool* to ESPRIT and you will get a set of total seven tools in ESPRIT.



Tool ID	Style
face mill R220.43 100mm #616093	Milling Tools - Face Mill
tap M08 #616001	Milling Tools - Tap
twist drill HSS 6.8mm #616004	Milling Tools - Drill
end mill HSS 32mm #616017	Milling Tools - End Mill
end mill HSS 20mm long #616031	Milling Tools - End Mill
twist drill HSS 8mm #616077	Milling Tools - Drill
boring bar 10 mm #616134	Milling Tools - Boring Bar

Note: Only tools in the tool list "100 150 06 M" have cutting conditions assigned.

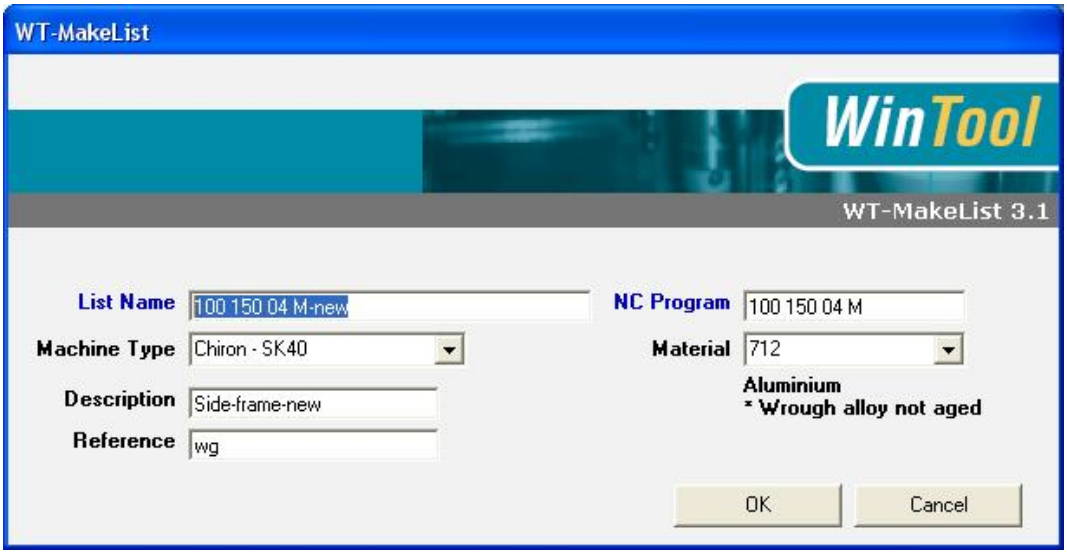
- Continue to use the transferred tools to create a NC-Program.

Save the Tool List to *WinTool*

When the NC-Program is created, the list of tools used in the program must be saved in *WinTool* to make it available for planning and tool crib.

- Use the "Put" button to save the tool list as exchange file. The WT-MakeList software automatically reads this exchange file and creates in *WinTool* a new tool list or updates an already existing tool list in the *WinTool* database.

- Give the List a new name and fill in the other fields as you wish. The information will be stored to the *WinTool* database.

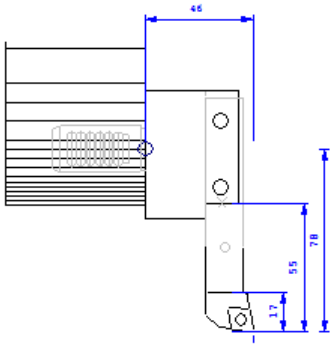


- Note: You can configure default values for these data fields. For more information see WTEsprit.cfg in the Annex of this manual.

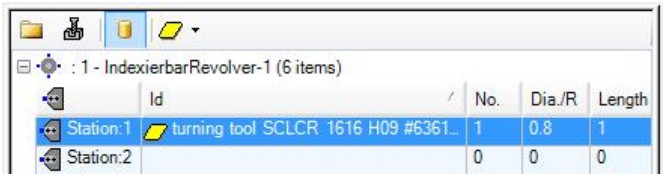
- Note: The sequence of the assemblies in the tool list is the same as in the ESPRIT tab "Tools". You can change to "order of usage" in configuration file.

Importing Turning Tool Assemblies

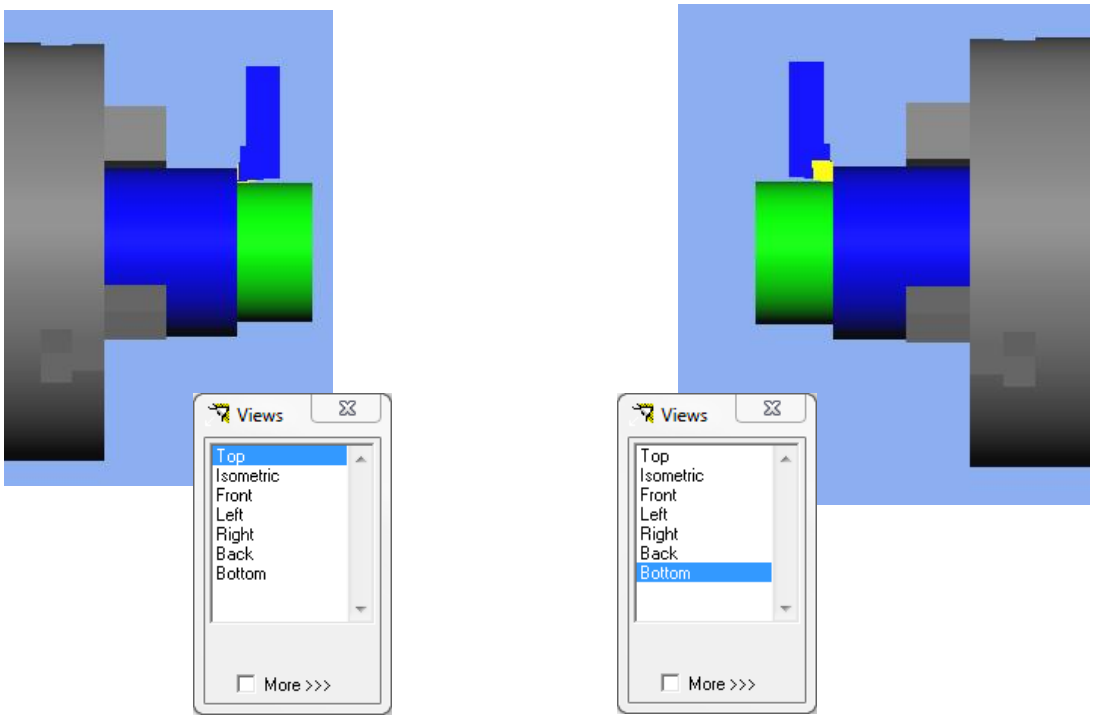
- In ESPRIT CAM open the sample "Club-Shot" in the WT-Esprit-Interface sample folder.
- Click on the "Get" button to open the Tool Selection menu and use the "Tool Assembly" button to find and pick the turning tool 636106.



- Place the tool at Station 1



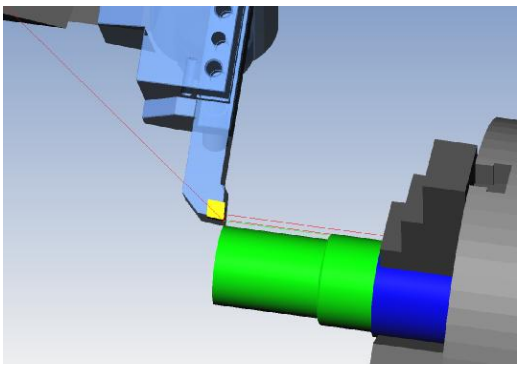
- Create a manual turning operation with this tool and run the simulation.



- Note: Use "Bottom" view to show the tool similar to the view in *WinTool*.

- Note: The tool position (Tool Shift X and Z) is set according to the configuration of machine setup (see Configuring the ESPRIT Machine Setup).

- Note: Use a STL file if a full representation of the holder is required. The file must be stored to the "UserModels" folder and its name must be the same as the ToolID. Lots of turning tools and some special drills from the WinTool sample Database (e.g. Tools #636101 - #636120) are supplied with the installation.



Set Up Your Tool Database

Before you start to set up a database with your tool data, please read the following chapter carefully to fully understand the principals of the interface mechanism and to ensure, you will record your data correctly.

User Classification

- For each *WinTool* User-Classification you need to assign the corresponding Esprit tool type. In the main *WinTool* menu select "Setting", "Classes" and select a class. Assign in the data field "note" the corresponding Esprit tool type, for example `/ES01`

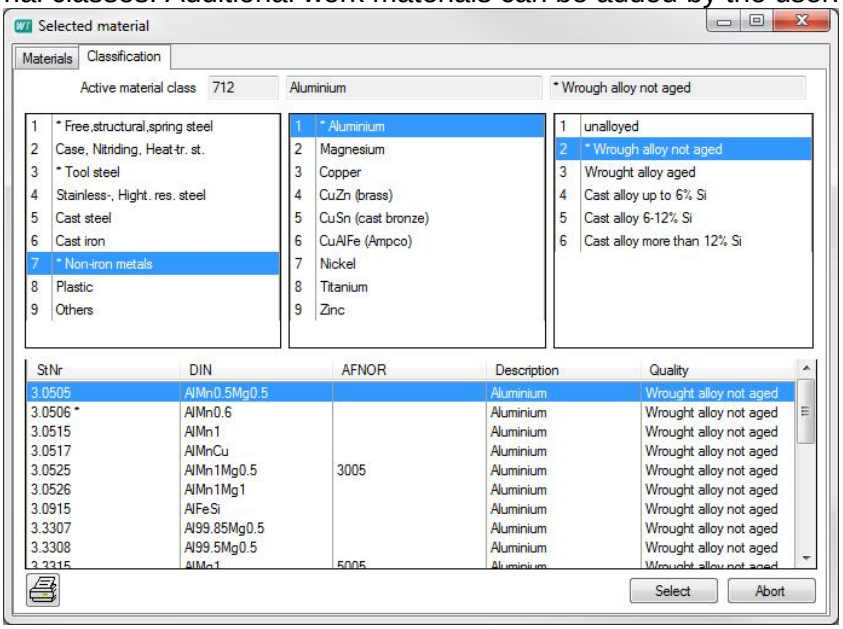
  To find the ESPRIT tool types see in the Annex or see examples in the supplied sample database.

Machine Configuration

- Before you create your own tool assemblies, you have to record and configure the "machine types" in *WinTool*. Prepare a *WinTool* machine type for each machine adapter (CAT40, VDI-25 etc.) you have (and not for each physical machine tool you own).

Work Materials

- *WinTool* offers a database with over 1000 work materials structured in 100 different material classes. Additional work materials can be added by the user.



- The *WinTool* Work material classes are being transferred to the Esprit KB during data exchange with the WT-Esprit-Interface.

  Note: Find the work materials you are using and take a note of the “material classification”. While working with the interface later on, the note will easily let you select your work materials during tool import to ESPRIT.

Technology Library

- For each tool assembly multiple cutting values for different work materials and machining situations can be stored in a table. If cutting data is stored for a work material and you are using that material in your Esprit project, the corresponding values will be transferred by the *WinTool* interface automatically to the Esprit KB.
- If multiple cutting values are stored for one work material, all the data will be transferred.

DMC	StNr	ap	ae	Dia	z	Vc	fz	S	F	Type	Coolant Type	P	T	Comments
122	1.0570 *	1.25	0	8	1	17	1.25	676	845	Standard	2 On	0	0	
311	1.1545 *	1.25	0	8	1	11	1.25	438	548	Standard	2 On	0	0	
712	3.0506 *	1.25	0	8	1	54	1.25	2149	2686	Standard	2 On	0	0	

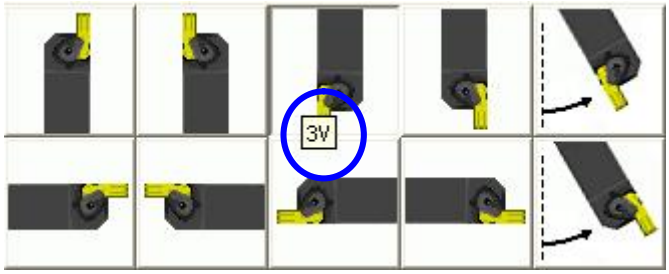
Standard Assembly (Tool Data Entry)

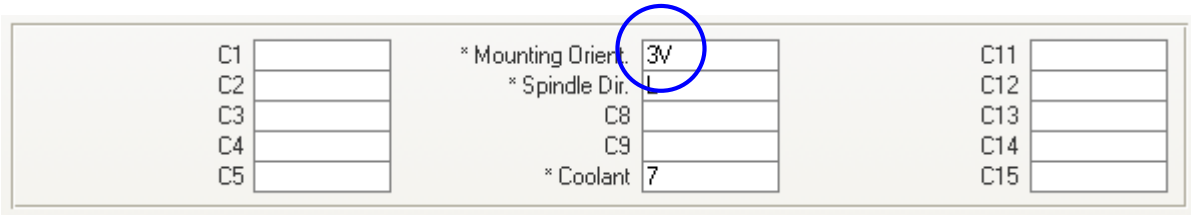
WinTool considers “Standard Assemblies” those tools which are fully supported by the WT-ESPRIT-Interface and can be automatically generated with the Shape Module. Please refer to the manual of the Shape Module to review its capabilities in creating a contour for rotational-symmetric 3D models.

- Be sure to enter the tool geometry as described in the *WinTool* help section in chapter 4.1.9 "Where to measure the geometry". Only if you enter the component data according these instructions, the assembly can be transferred to ESPRIT correctly.
- Only tool assemblies will be transferred to ESPRIT that have
  (1) a classification (“class”) assigned
  (2) contain a "namegiving component" (set flag in appropriate component).
  (3) are linked to a *WinTool* “machine type”.

Mounting orientation

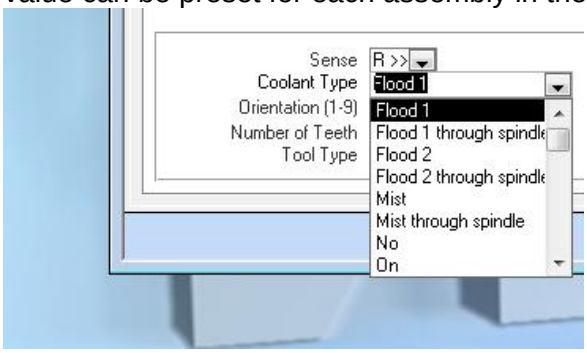
Within ESPRIT the mounting orientation is selected in the general tab of each tool. For each assembly the default mounting orientation can be preset in the *WinTool* custom field C6.



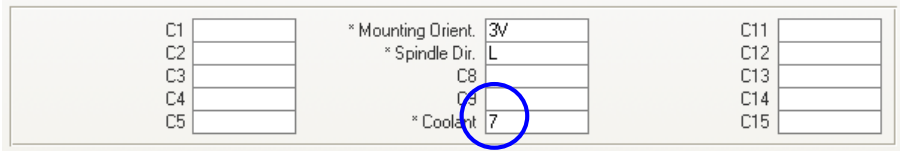


Coolant Type

Within *WinTool* the Coolant Type is selected in the general tab of each tool. The default value can be preset for each assembly in the "Geometry" tab:



The former method by using the custom field C10 is still supported:



0=Off
1=On
2=Mist
3=Flood
4=Flood2
5=Through-On
6=Through-Mist
7=Through-Flood
8=Through-Flood2

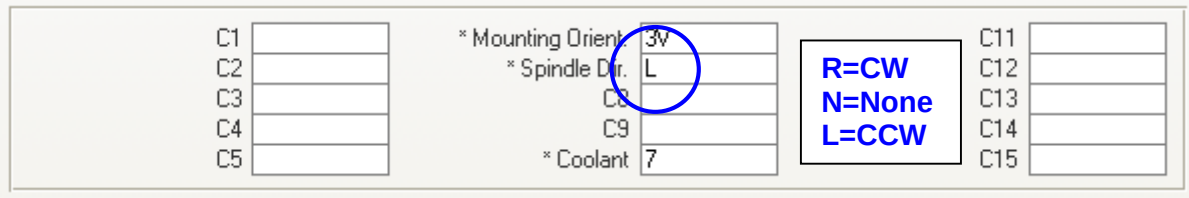
Spindle direction

Rotation Tools

The *WinTool* field "Sense" in the assembly record is used as default. This is usually suitable for rotation tools.

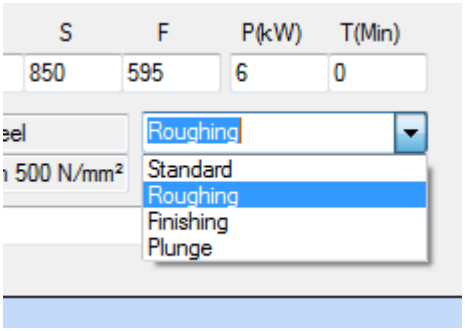
Lathe tools

For lathe tools the default spindle direction is set in the *WinTool* field C7. Use "R", "N" or, L



Type of cut

Within *WinTool* the type of cut can be selected in the Technology Module for each cut data entry. The default value for old cut data entries which were created prior to *WinTool* 2010 will be "Standard".



Settings in Tool Lists for Turning Tools

Turret

The "Put" function transfers the Turret ID where the Assemblies is placed to the Tool List. When reloading a tool list with the "Get" function, the turret ID stored within the tool list is transferred to the project.

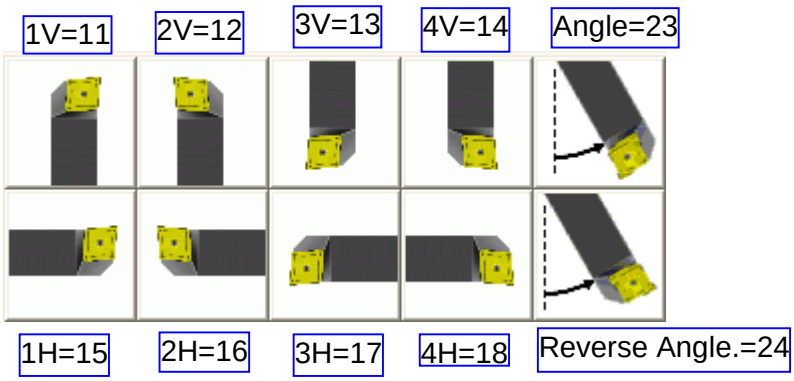
Station ID

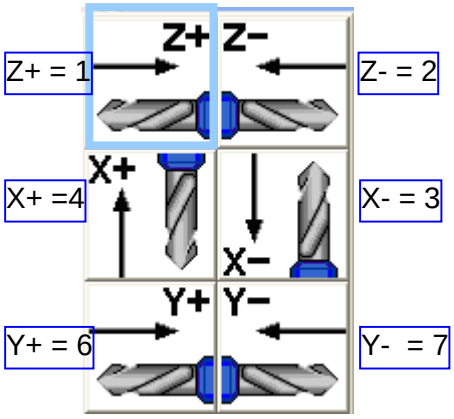
The "Put" function transfers the Station ID where the Assemblies is placed to the Tool List. When reloading a tool list with the "Get" function, the Station ID stored within the tool list is transferred to the project.

Mounting orientation

The "Put" function transfers the Mounting Orientation of the Assemblies to the Tool List. When reloading a tool list with the "Get" function, the Mounting Orientation stored within the tool list is transferred to the project.

The following values are used within the Tool List to store the orientation:





Esprit Custom Setting

The Values (numerical) stored in *WinTool* data fields C1 up to C10 are transferred to the custom setting fields of the ESPRIT Assembly.

Custom Specific Assemblies (general)

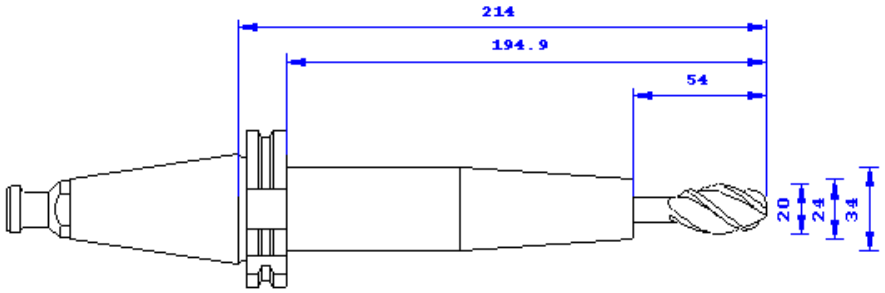
Custom specific assemblies can be stored in the configured UserModels folder. They have to have the same name as the tool assembly's ID number in *WinTool*. The Interface will process custom specific files in the following order and will then ignore the others for that assembly:

- ETL files
- STL files
- DXF files

If none of the above is found the Interface the assembly will be represented according to it's geometry data.

Custom Specific Assembly with Contour-DXF

A non-standard or a “custom specific tool” is an assembly that can not be created fully automatically because of limitations of the Shape Module.



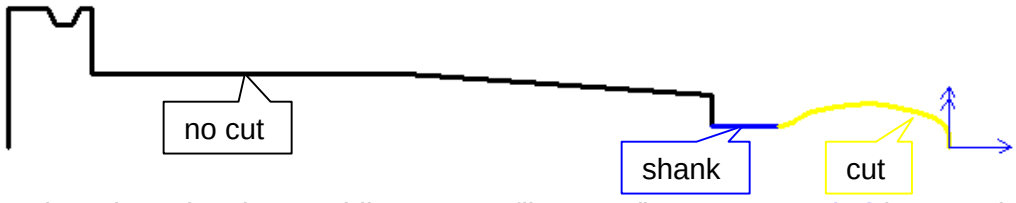
For custom specific assemblies you can create the DXF file manually.

Note: The WT-ESPRIT-Interface stores contour-DXF files in the folder `WTEspritSolidsPath`. Even if a tool is not supported fully by the Shape Module, the Shape will create in most cases a contour-DXF, although not with all additional details of the custom specific tool ... but with a lot of useful elements in place already: holder, extensions, reductions, shank, total length, correct layers, etc. The DXF file can be easily modified and completed as a “custom specific contour-DXF” manually.

Record a custom specific tool assembly in WinTool as follows:

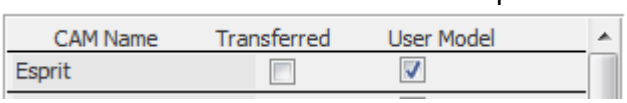
- Create a custom specific assembly with the advanced functions “search matching” and “adjustment length/width” in WinTool.

- Use Tool Assembly Export to generate a contour-DXF and modify the tool geometry as described above ... or create the contour-DXF manually assigning correct layers.



Use the WinTool tool assemblies ID # as filename (i.e. "`615015.dxf`"). Store the file at the configured `WTEspritSolidsPath`.

- Assign the new custom contour-DXF to the *WinTool* tool assembly: Check the box “User Model” in the tab “CAM” in the row "Esprit".



If the row "Esprit" is missing, please activate ESPRIT in Settings \ CAM Settings on the main *WinTool* screen.

- Note: The contour must not have any gaps. Endpoints will be linked to the rotation axes and multiple simulation profiles will result. Only one of them will be recognized by the simulation.

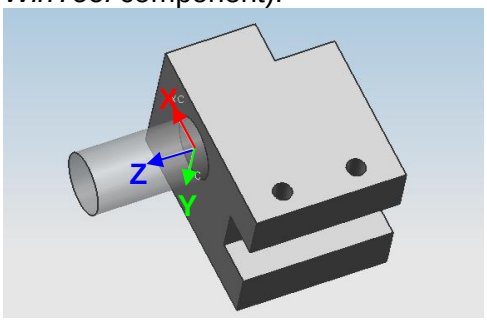
Custom Specific Assemblies with STL

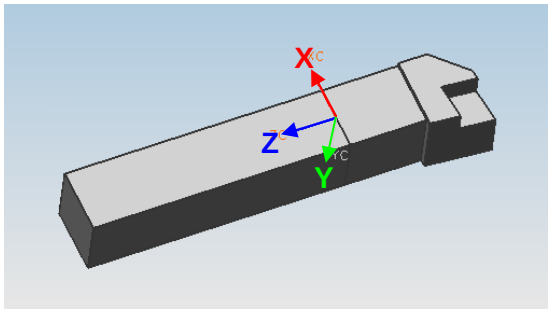
A custom specific STL can be used if the standard 3D representation in ESPRIT is not sufficient. Note: Only limited functionality supported for Versions before Esprit 2010.

Preparing the STL

- Create the assembly in *WinTool*.

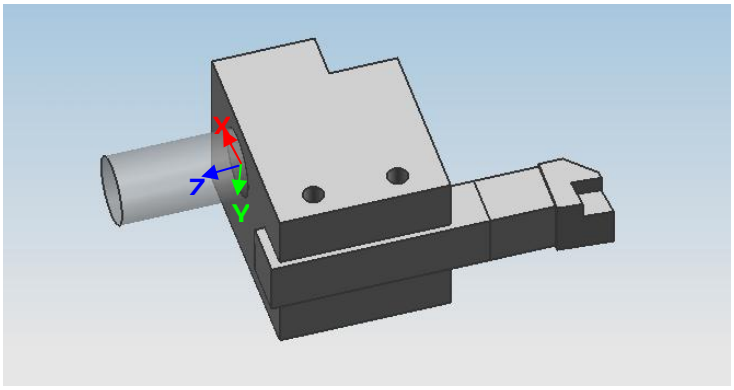
- Create 3D Models for the components (use Item No. as file name and link the file to the *WinTool* component).





- Combine the component's models to a 3D Assembly. Do not include the insert in the STL because is will be created directly out of the *WinTool* tool component data.

- Store the model as STL in the configured "UserModelspath". Use the "Indent No" of the assembly as file name.



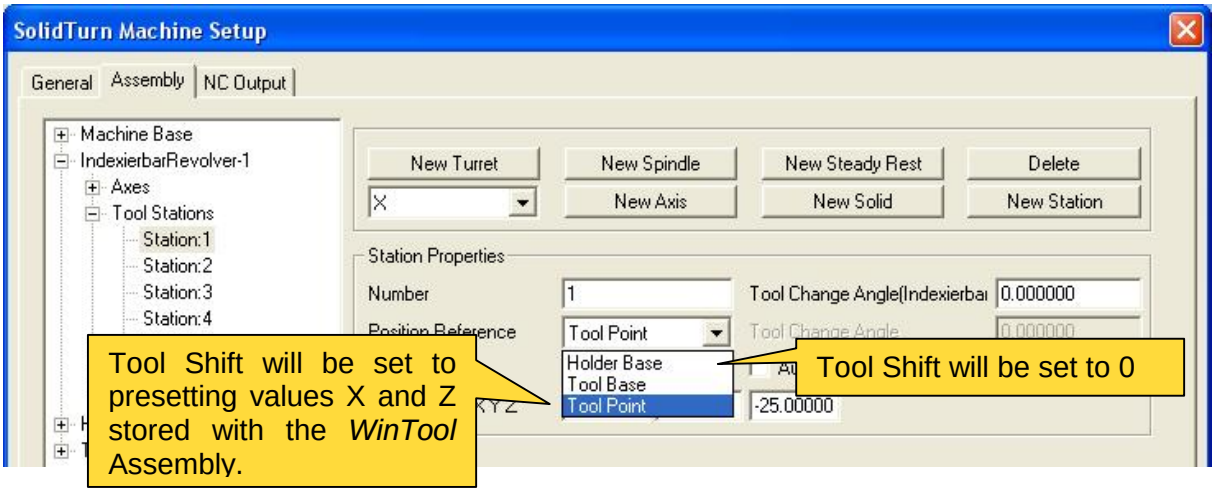
- Note: You can export the WinTool 2D tool assembly as DXF drawing as a starting point to quickly create an STL in ESPRIT. Or ask your tool supplier for STL files or create them with any 3D CAD software.

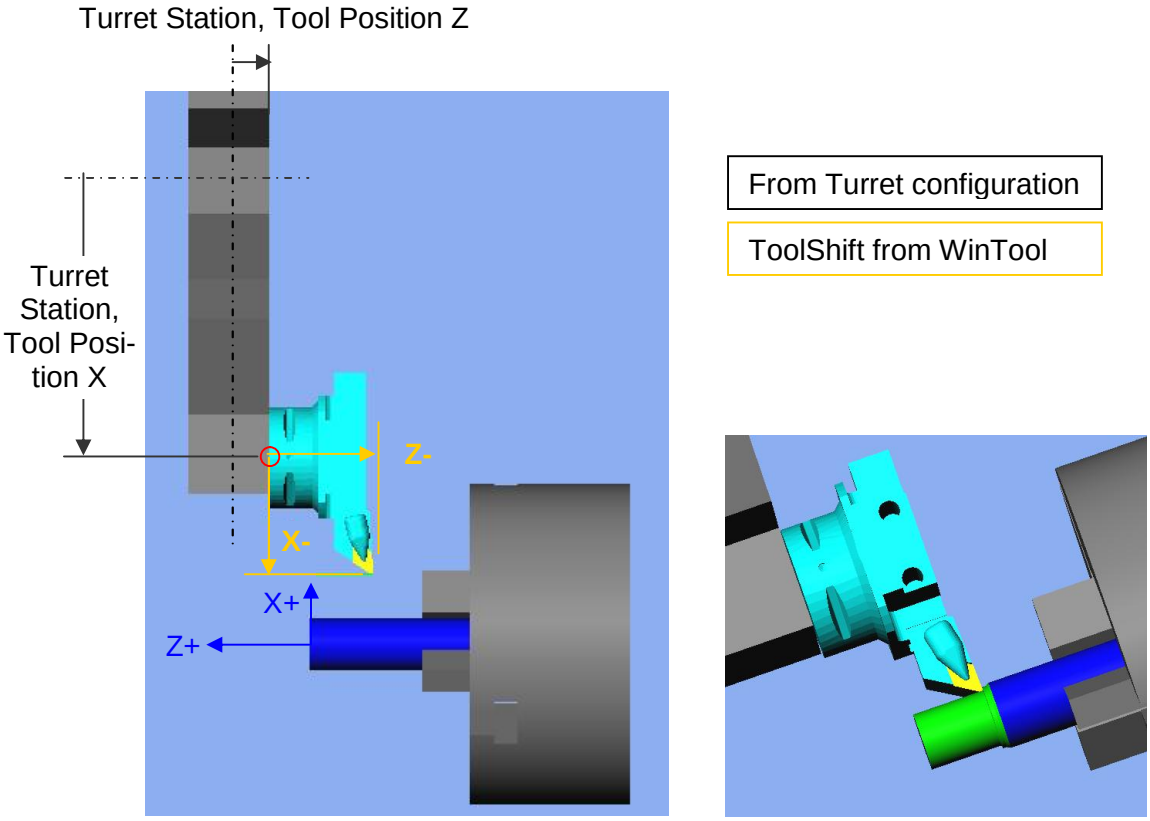
- Note: You do not need to assign the STL file to the assembly to force it's use. Whenever an STL with proper naming is available in the configured FOLDER "UserModelspath" folder it will be automatically loaded.

- Add the link to this STL-file in *WinTool* assembly tab "AD" so you can access it quickly (just click on it) using a viewer. This is not a requirement but it helps to manage 3D models.

Configuring the ESPRIT Machine Setup

- Set the appropriate values for the tool stations of your machine:





Custom Specific Assemblies with ETL

A custom specific ETL can be used if the standard 3D representation in ESPRIT is not sufficient. Note: Not supported for Versions before Esprit 2010.

Preparing the ETL

- Create the assembly in *WinTool*
- Assign the assembly to a tool class configured either as /ES14 (Custom Mill) or /ES15 (Custom Turning Tool)
- Import the tool into Esprit
- Modify the tool according to your needs
- Save the tool to your user models folder and name it like the assembly's ID in *WinTool* as you would with a STL file (but with .etl extension)

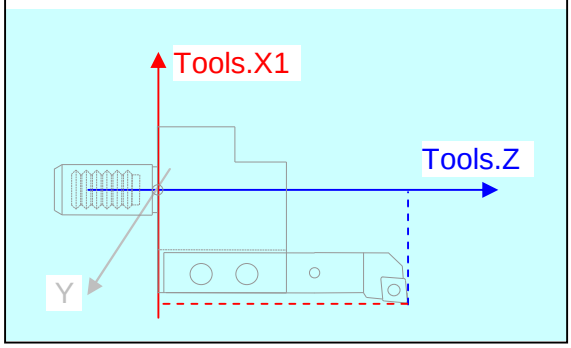
Usage of ETL files

- If the Interface finds an ETL file in the configured UserModels folder on tool import, it will automatically import the ETL file instead of the *WinTool* geometry data and graphics

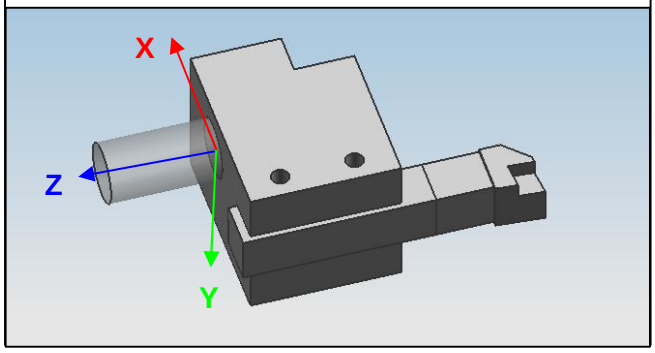
Axes orientation

STL Files

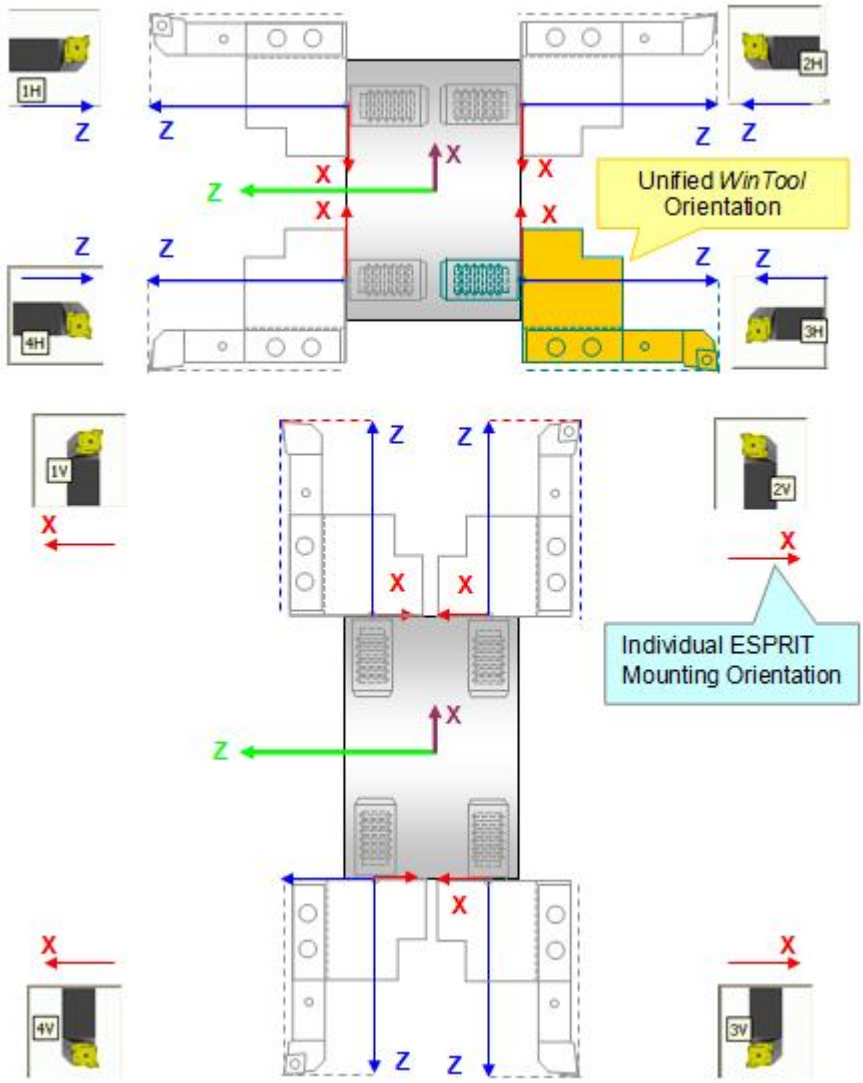
WinTool Database



STL Files for Simulation

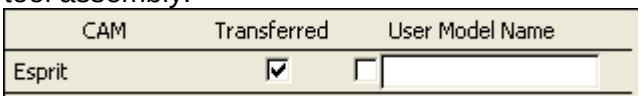


ESPRIT mounting orientation



Transferred Flag for Assemblies

- The "transferred Flag" is a checkbox in the folder “Geometry” in the row "Esprit" of each tool assembly.



- The "transferred flag" helps to speed up the interface. If the transferred flag is set, no shape contour will be created during transfer. It is assumed then, that the shape (DXF) is already available in ESPRIT from a previous transfer.
- Whenever a tool is exported, the flag "transferred" will be automatically set for the assembly. The flag will be automatically erased whenever the WinTool picture of the assembly is changed (rebuild). The flag can also be erased manually.
- Since the Shape Generator is very fast, hardly any time is lost to create the same contour-DXF again and again. Therefore, the functionality is **switched off** in the WT-Esprit-Interface.cfg file by default but can be switched on if required. Do not use it before problem free operation of the interface is accomplished.

ToolShift Z for rotating Tools

For unknown reason, ESPRIT mounts the tool holder with a Z-displacement to the spindle nose. This Z-Displacement depends of the configured Tool Holder size in the ESPRIT machines settings.

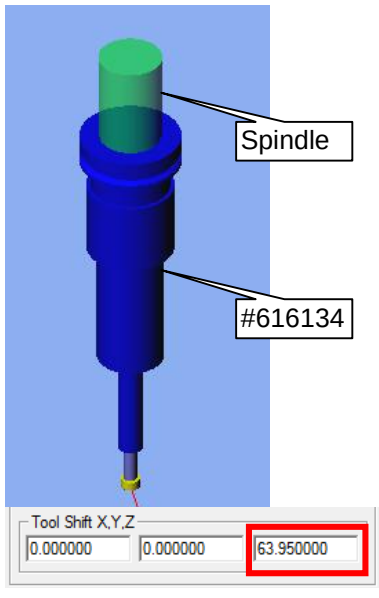
WinTool does automatically add the appropriate value in the Tool Shift Z-register to adjust the displacement.

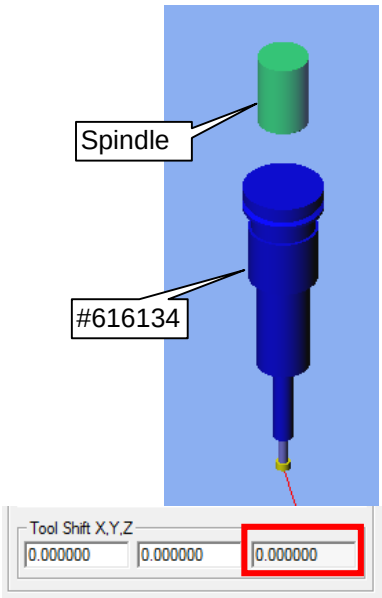
It is important, that the Post Processor does not add the Tool Shift to the NC-Program coordinates calculated. The following parameters must be set in the PP Machine mode:

```
XEXCLUDEGAGELENGTH : 1
ZEXCLUDEGAGELENGTH : 1
```

Tool Shift Z Adjustment

Size **30**	63.950
Size **40**	84.125
Size **45**	98.425
Size **50**	117.500
Size **60**	177.800



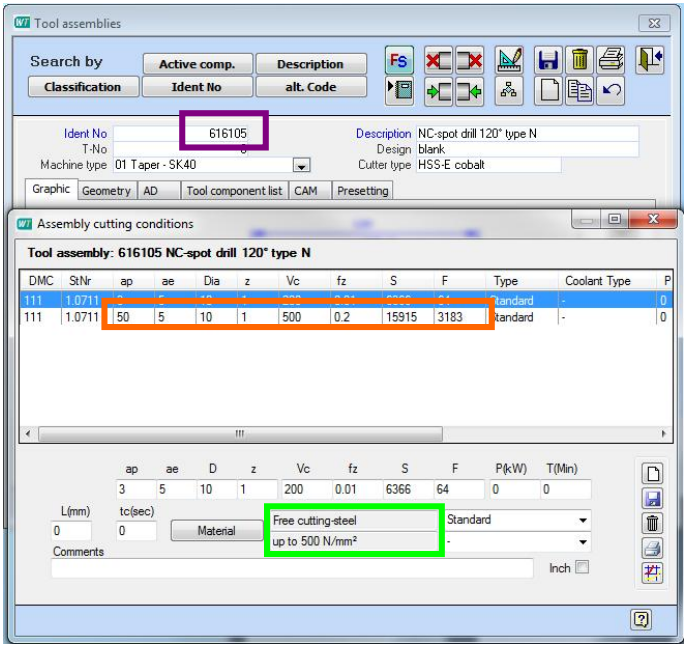


Note: This functionality can also be switched off. For more information see WTEsprit.cfg in the Annex of this manual.

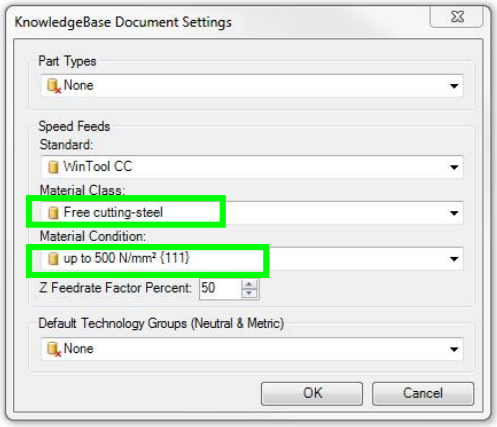
Feed and Speed in KB

Cutting conditions stored with the Assembly and linked to a work material.

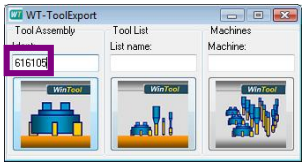
In this case, the cutting conditions are for two different depths of holes but for one an the same work material.



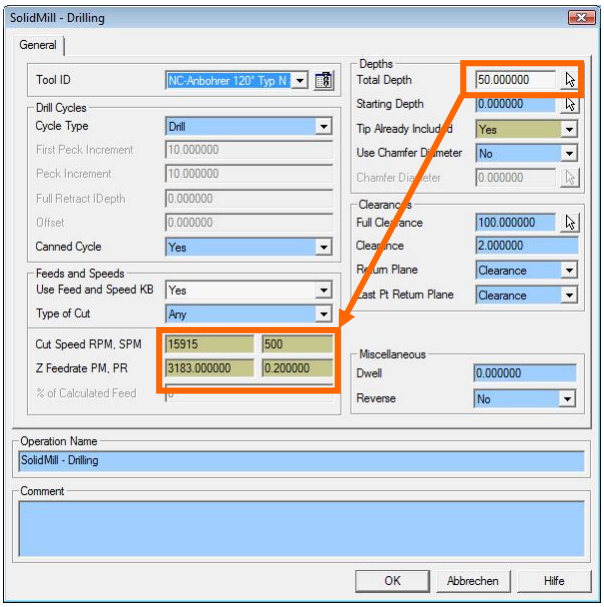
Work material must be selected in ESPRIT

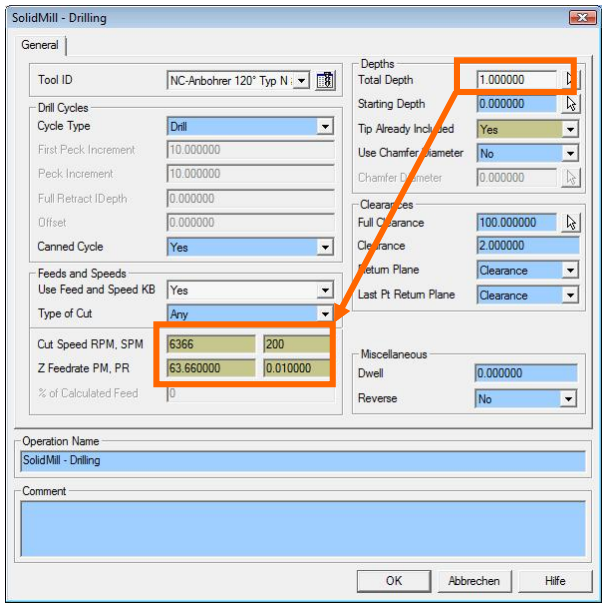


The assembly and the cutting conditions for the selected material are transferred to ESPRIT



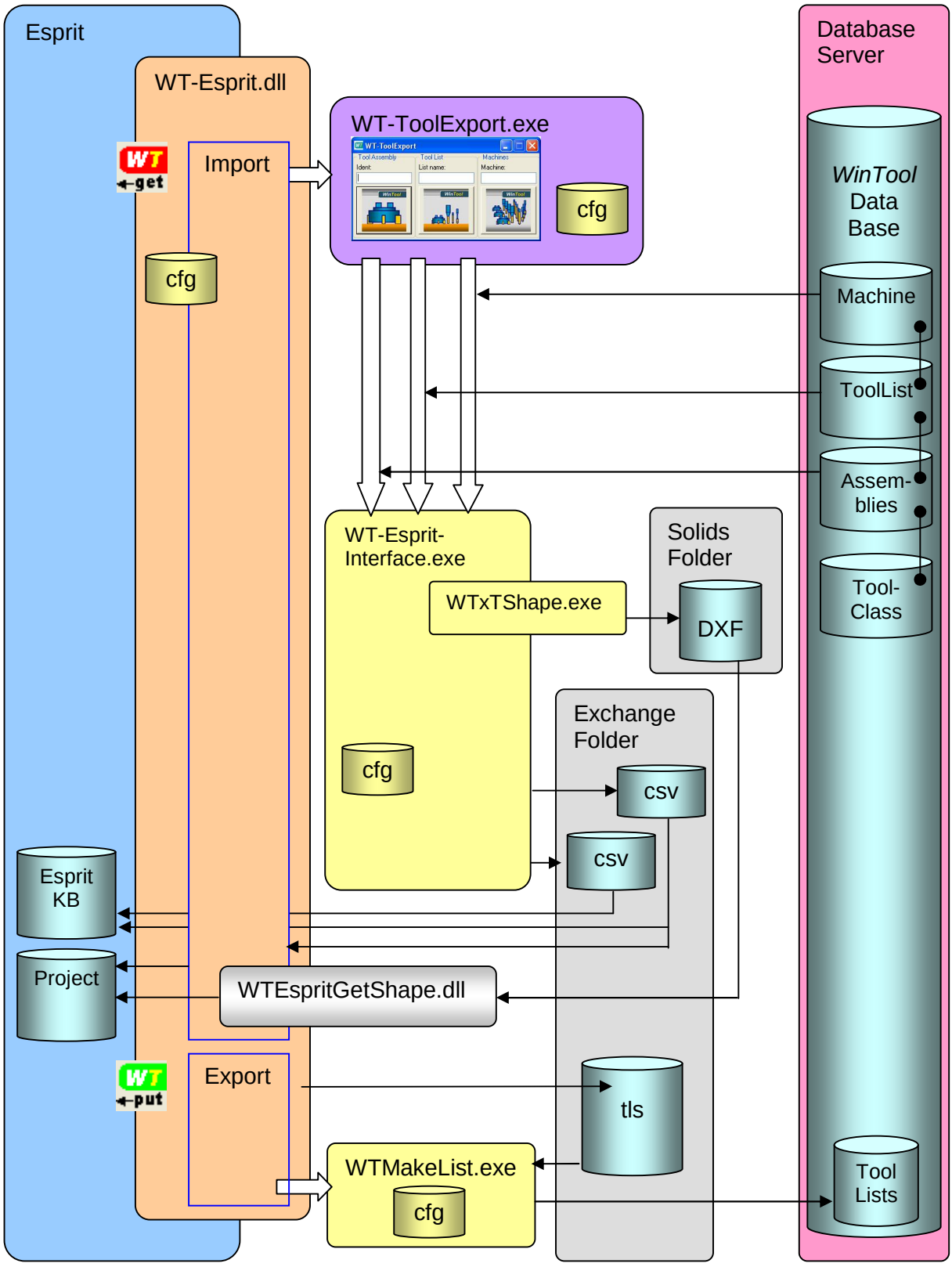
The KB uses the transferred cutting conditions to calculate best values for the operation.



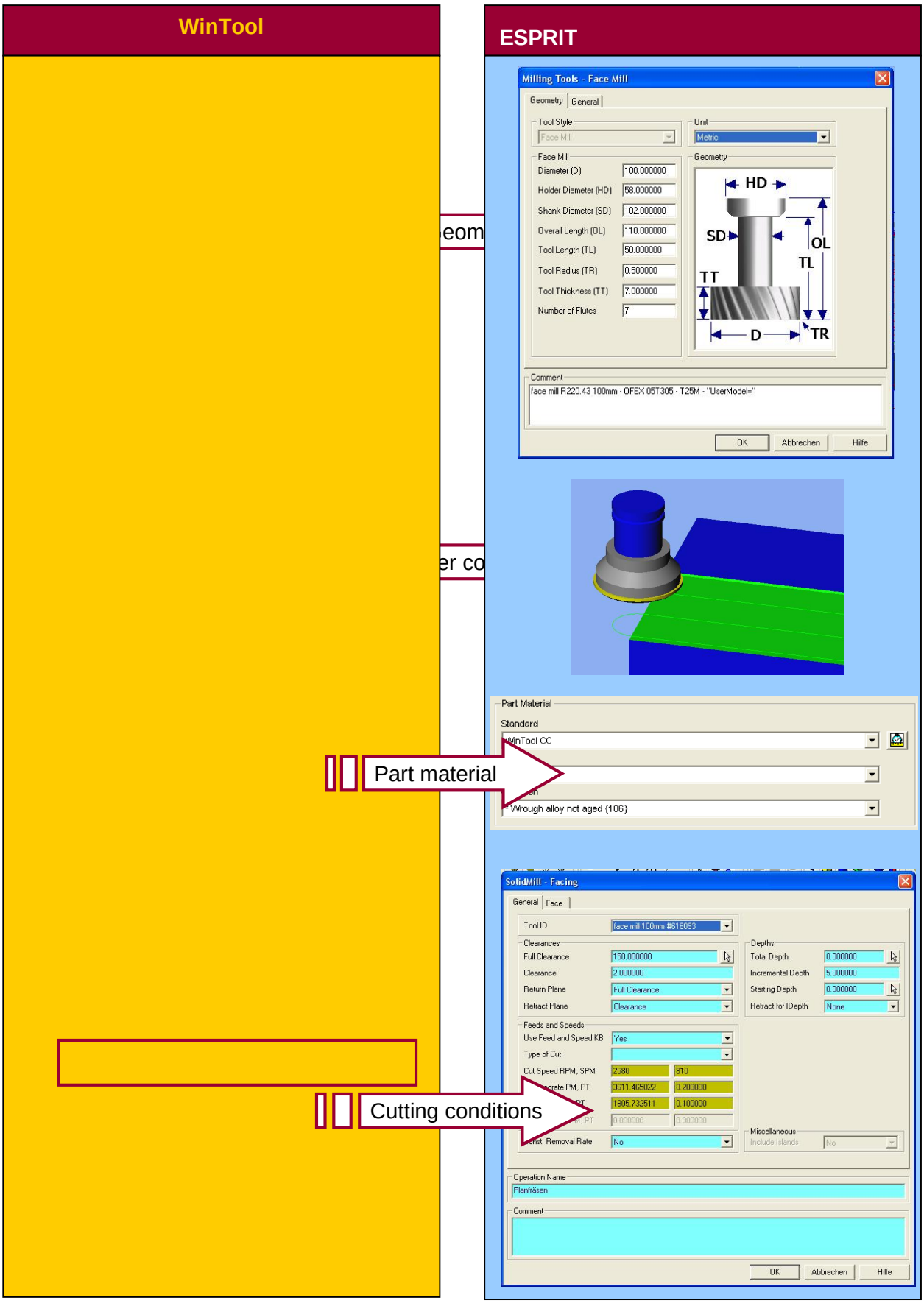


Software Structure

Software-Modules and Data-Exchange



WinTool-ESPRIT Data Integration

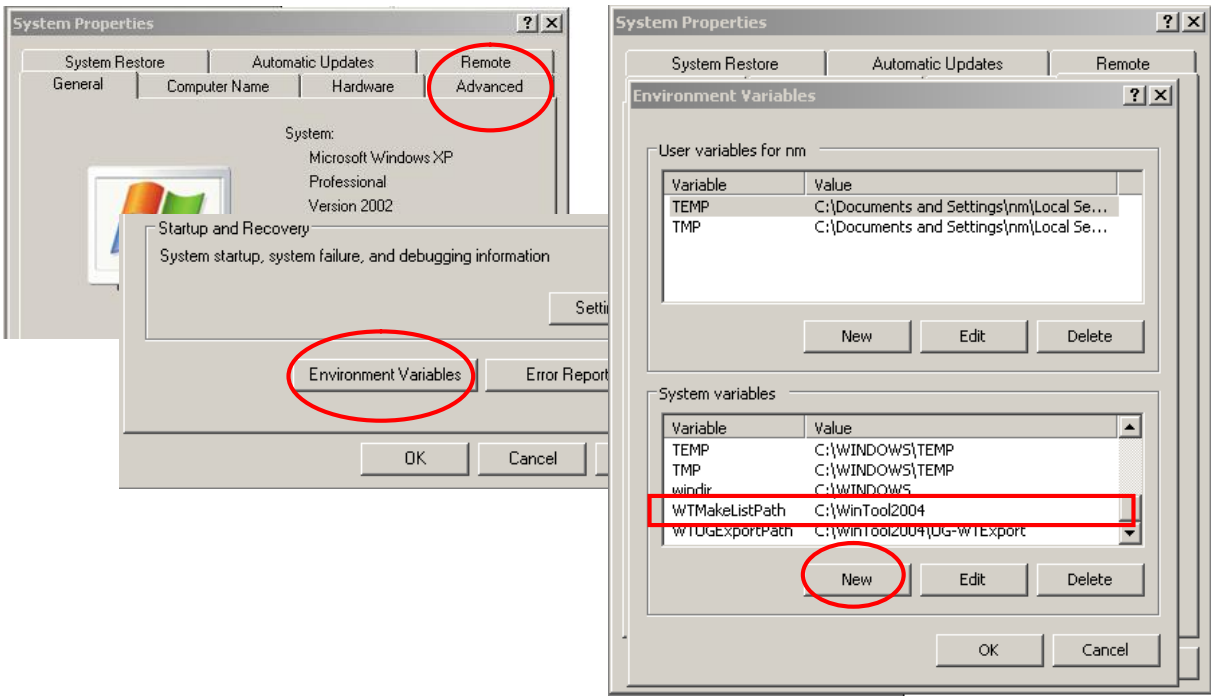


Annex

Set Windows System Variables

Use advanced system control of Windows to set the "environment variable" for the MakeList module:

```
WTMakeListPath = C:\Program-Files\DATOS\WT-Esprit-Interface\exchange\
```



Configuration File Parameters

General Information

Configurable parameters have their default as long as they are not set differently in the cfg file. The cfg file can be edited with any text editor. Lines starting with a "#" sign are comment lines and will be ignored. Some parameters have their default as system variable. These defaults will be overwritten by those values configured in the cfg file as soon as the software is launched.

WT-Esprit-Interface.cfg

```
# Exchange Path configuration
# ---------------------------
# OutputPath = "C:\"
#   Default OutputPath is "exchange" folder in local path
# WTEspritUserModelsPath = "C:\"
#   Default WTEspritUserModelsPath is "UserModels" folder in local path
# WinToolAppPath =
#   Default WinToolAppPath is set in registry
  OmitComments = false
  ignore_TransferredFlag = true


# Shape configuration
# -------------------
  ShapeFormat = DXF
#   DXF format is required for this application
# ShapeAppPath = "C:\WinTool2006"
#   Default ShapeAppPaths are "localpath", "registry settings" and "Win-
    ToolAppPath".
# SkipShapeGen = False
#   No Shape file is created if set to true


WinTool database user and password
# ---------------------------------
# WinToolAppPath = directory or path to WinTool.mde
# WinToolSystemdb = (directory or path to workgroup DB (system.mdw))
#    (Enclose Paths with space in double quotes)
# WinToolUserName = admin (user name for connecting to WinTool.mde)
# WinToolUserPass = (user password for connecting to WinTool.mde)
#   Leave commented out if empty.
#   Default is used from registry (see manual)


# Inteface operation control
# --------------------------
  DefaultToolType = 1
#   Regular toolType is set by the user for each WinTool tool class
  QuietMode = true
#   use the "false" option for debugging


# PostProcess command
# -------------------
# PostProcessCmd = cmd /C copy file.txt Exchange\file.txt
# PostProcessCmd = taskkill /F /IM wt-ug*
# h1CopyFileToOutputPath = WTESFinished.txt
#   Application to be launched after collecting tools
```

```
#   Currently no post process command is used


# Language resource file and settings
# -----------------------------------
# ResourceFile = "WT-Esprit-Interface.res.xml"
  ResourceCulture = en-US
#   for German use: ResourceCulture = de-DE

# log file options
# ----------------
# LogFile = WT-Esprit-Interface.log
# log = true


# --- End of configuration file ---
```

WTEsprit.cfg

The defaults for the variables being transferred from Esprit via the Put-Function to the *WinTool* tool lists are configured in the file "WTEsprit.cfg".

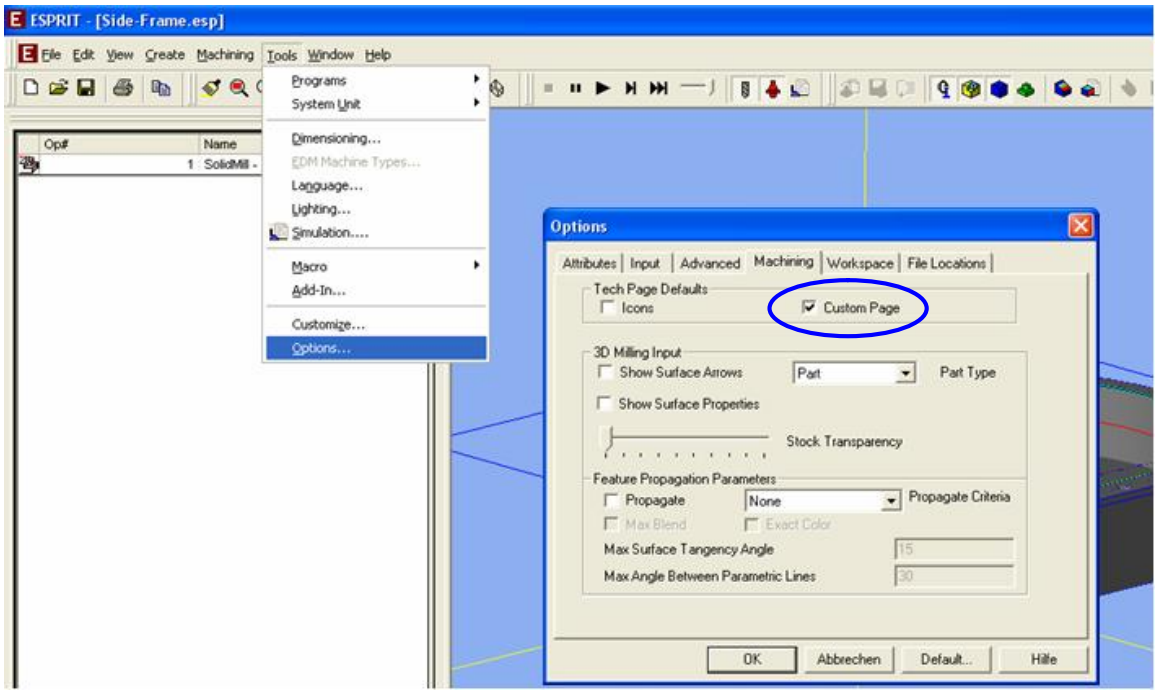
```
# Configuration file for WTEsprit.dll and WTEspritGetShape.dll
# ------------------------------------------------------------
# Copyright 2009 DATOS Computer AG

# Defaults for Assembly Input Rotating Tools
# ------------------------------------------
Orientation = 1
TurretID = 1
StationID = 1
XTCMovement = 1
YTCMovement = 1
ZTCMovement = 1
IgnoreToolShiftForHolderBase = 0
# Setting this to 1 does not adjust ToolShiftZ acc. holder size

# Defaults for ToolList Export
# ----------------------------
#
ToolListsIdent=328
# 328 = ESPRITNAME, out of "Miscellaneous Register"
ToolListsDescript=462
# 462 = ESPRIT ProgramName, out of "CL File Register"
MachineName=1592
# 1452 = ESPRIT MachineName, out of "CL File Register"
MachineNr=1561
# 1355 = ESPRIT ToolHolder, out of "CL File Register"
ToolListsWho= 1593
# ESPRIT Comment, out of "CL File Register"
ToolListsNCP=155
# 155 = ESPRIT ProgramNumber, out of "CL File Register"
DeleteUnusedTools=0
# Tools loaded into the ESPRIT model but not used within
# the current NC-Program, will be deleted if parameter is set to 1.
ExportUnusedTools=0
# Tools loaded into the ESPRIT model but not used within the
# current NC-Program, will be exported if parameter is set to 1.
ToolOutputorderByMillOperation = 0
# If Parameter =1 Milling Tools are exported in sequence of usage
# used tools are exported only if this parameter is set to 1
```

The above mentioned parameters are listed in the "ESPRIT Post Processor help". The next chapters will show you where to find them in the menu.

ESPRIT Parameters in CL-Register and Custom Properties

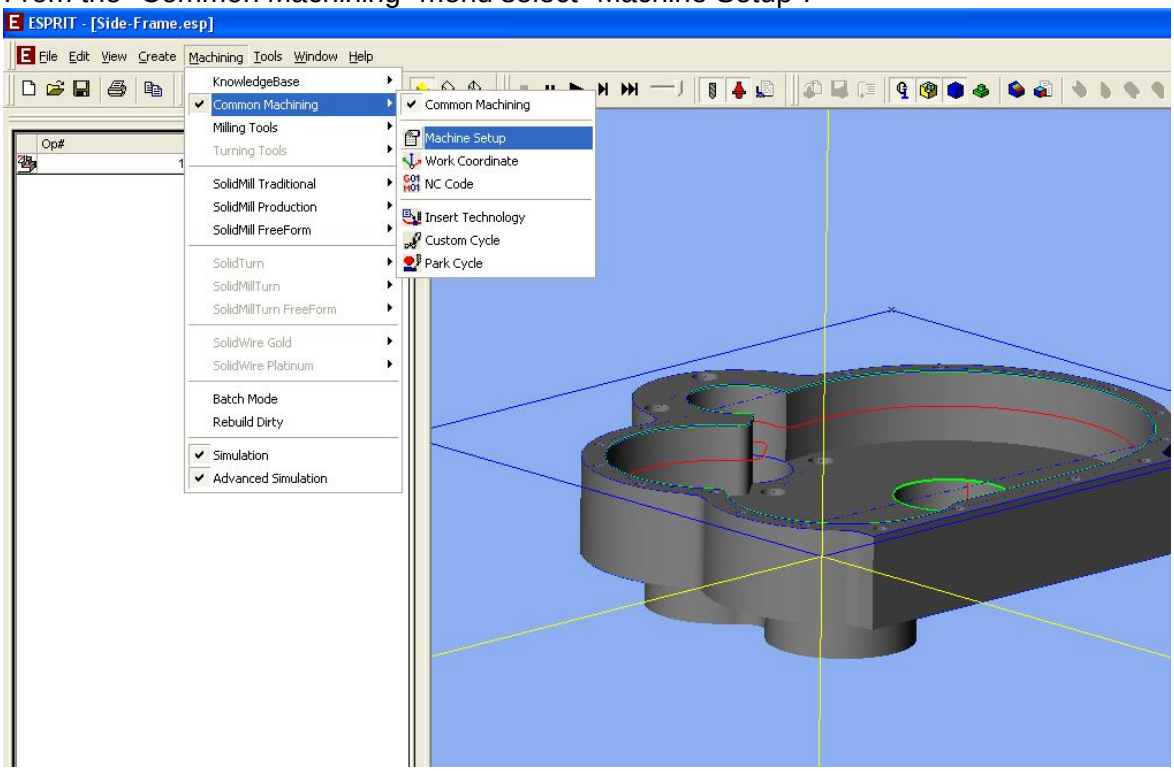
Enable data fields for custom properties:

- Select "Tools", "Options" and activate the tab "machining".
- Mark the selection box "custom page" to enable entering custom property values



To set values for CL-Register fields open the "Machine Setup" windows:

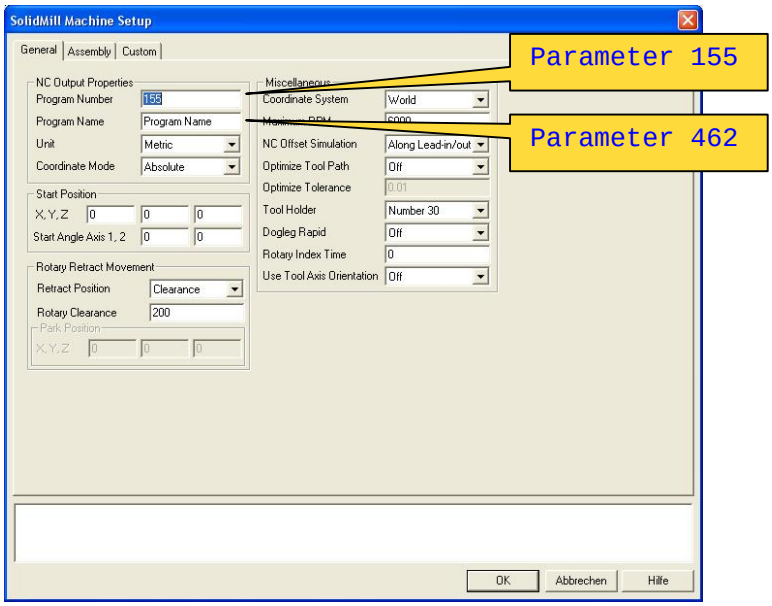
- From the "Common Machining" menu select "Machine Setup".



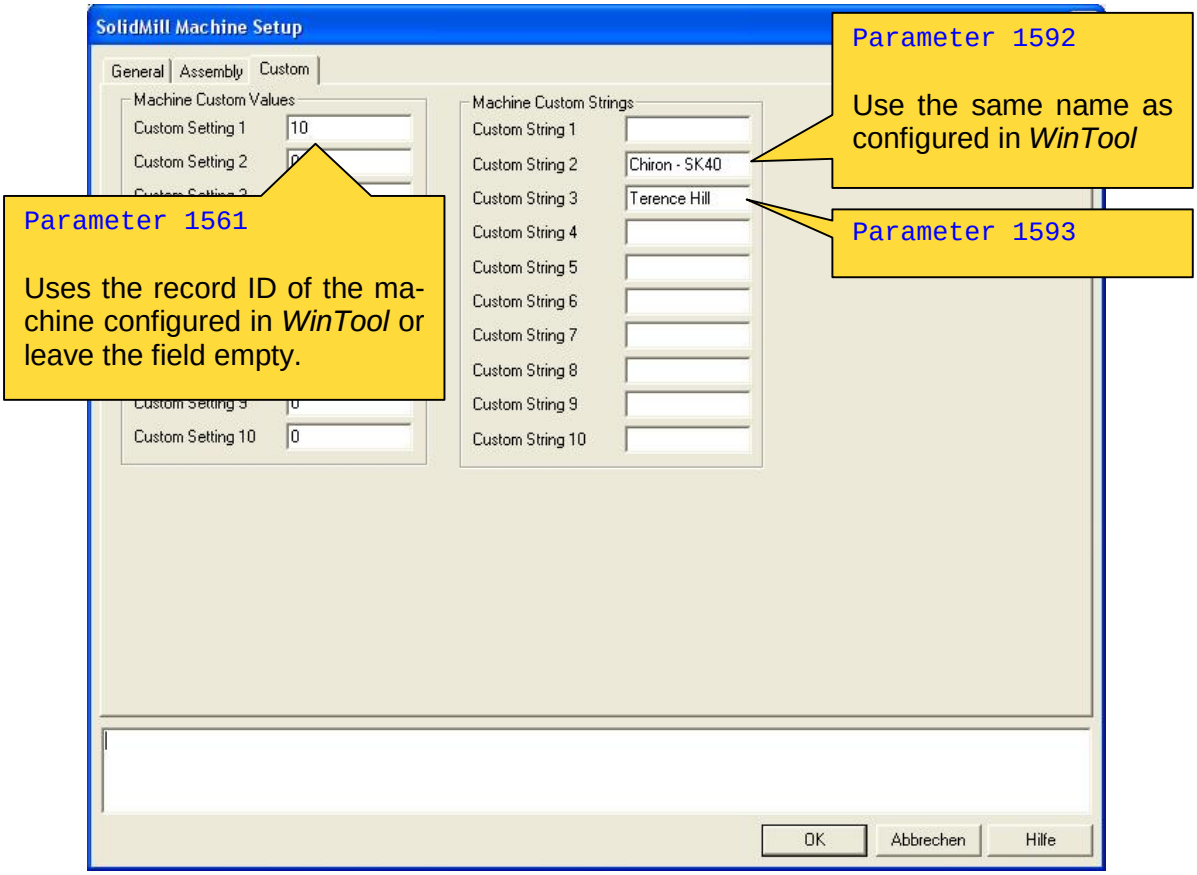
or

- Right-click inside the Operations page of the Project Manager (press F2 to display), then select "Edit", "Edit Machine Setup".

- Select the tab "General" to change the values in the CL register

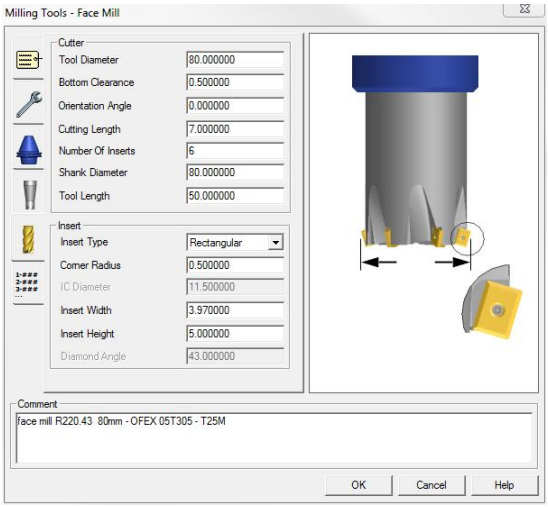


- Select the tab "Custom" to change the values of custom property fields.

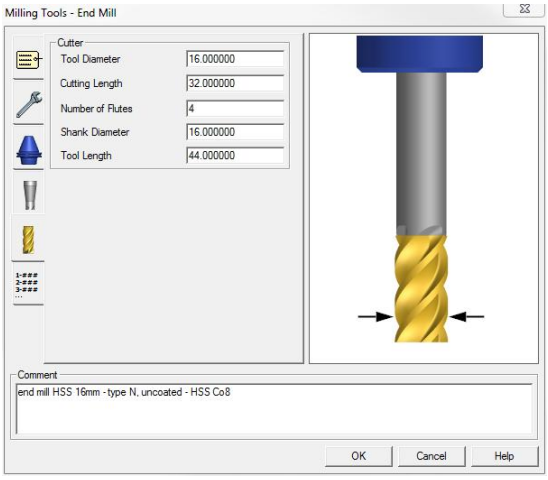


Supported Esprit Tool Types

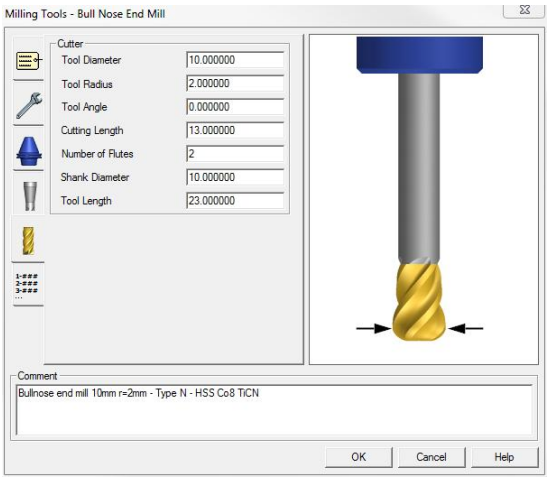
Face Mill (Walzenstirnfräser) /ES08



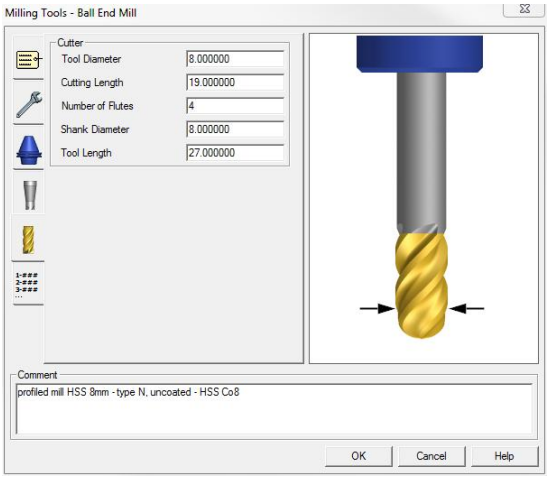
End Mill (Schaftfräser) /ES01



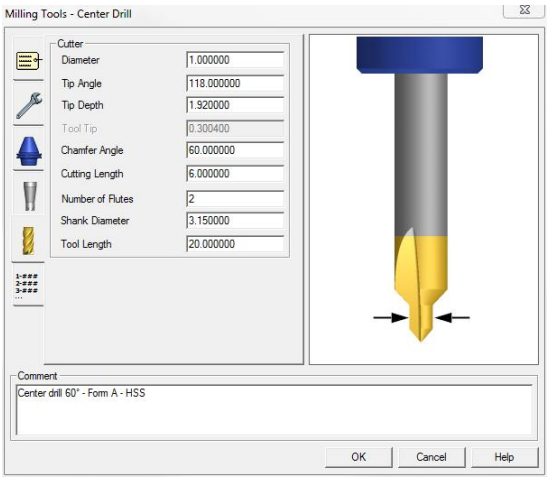
Bull Nose End Mill (Formfräser) /ES07



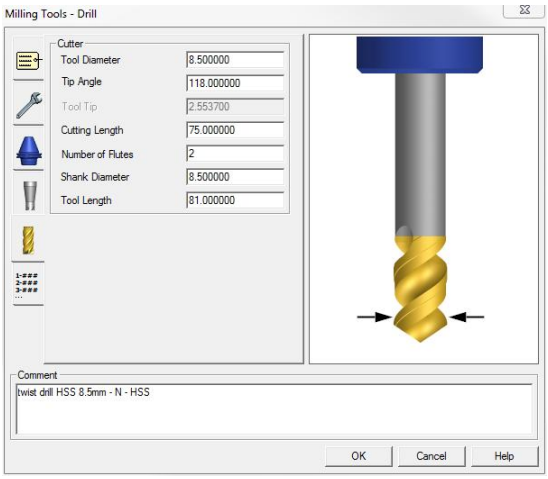
Ball End Mill (Kugelfräser) /ES09



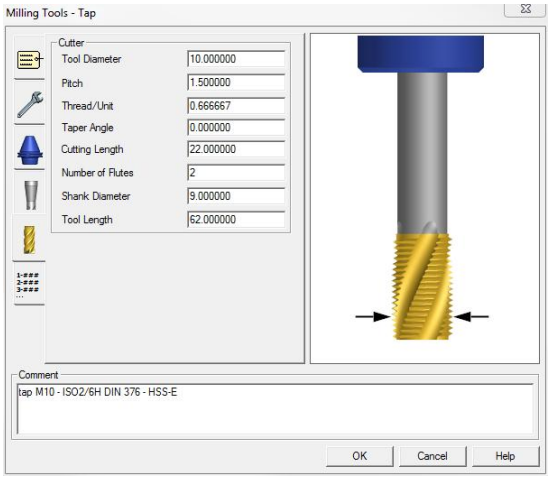
Center Drill (Zentrierbohrer/Stufenbohrer) /ES03



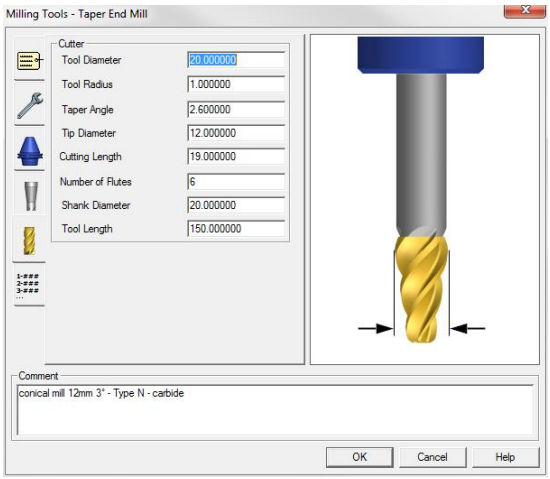
Drill (Bohrer) /ES02



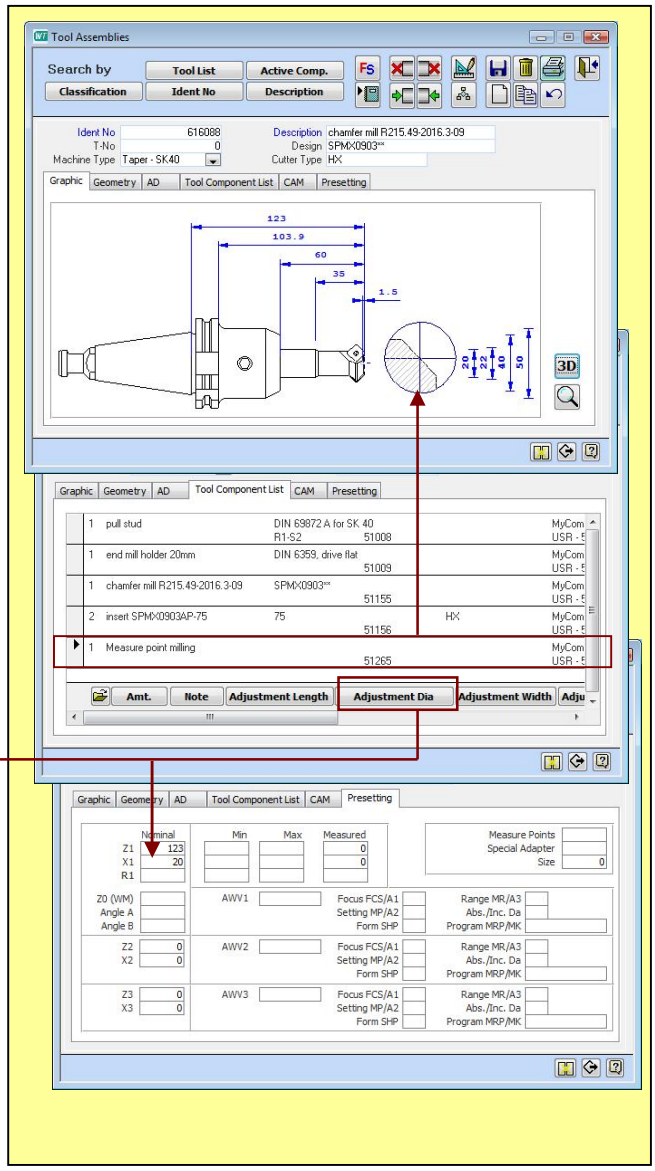
Tap (Gewindebohrer) /ES04

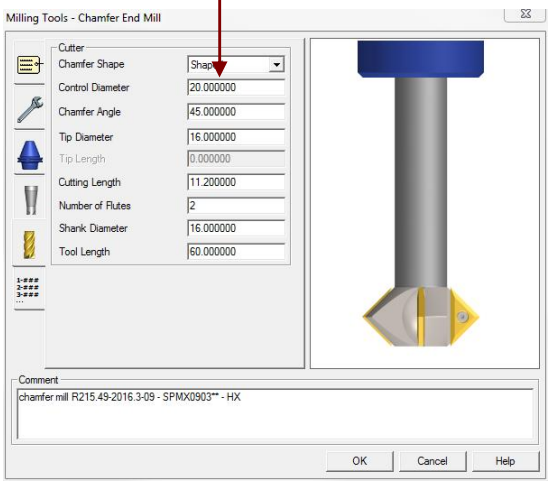


Taper Radius End Mill (Konischer Fräser) /ES10

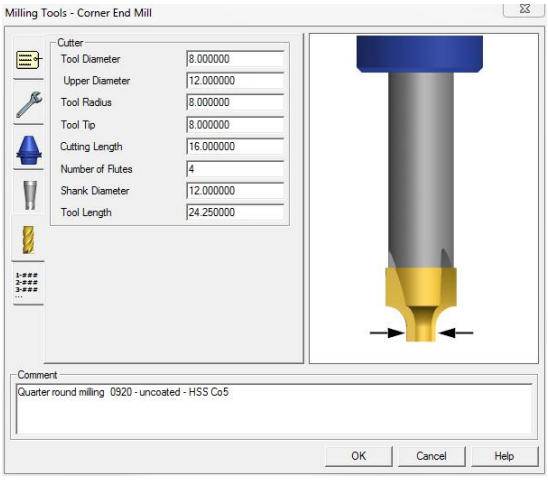


Chamfered End Mill (Fasfräser) /ES11



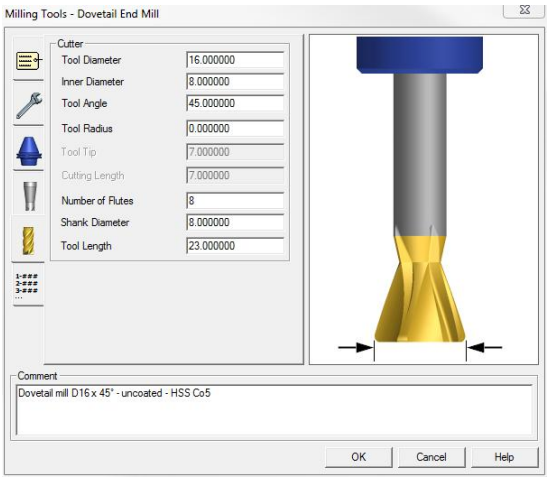


Corner Round Mill (Vierteilkreis Fräser) /ES12

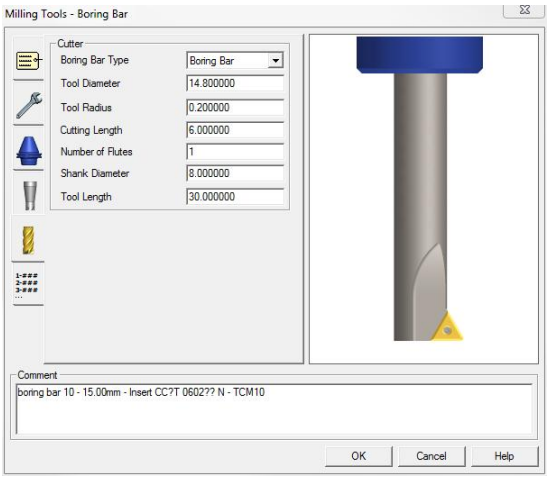


Note: Tool Radius is negative in *WinTool*)

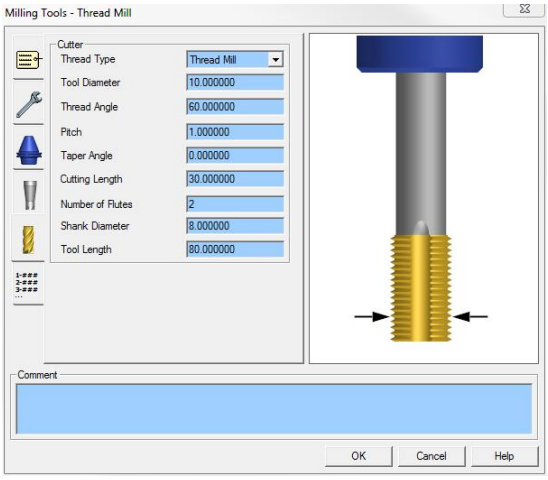
Dove Tail End Mill (Schwalbenschwanz Fräser) /ES13



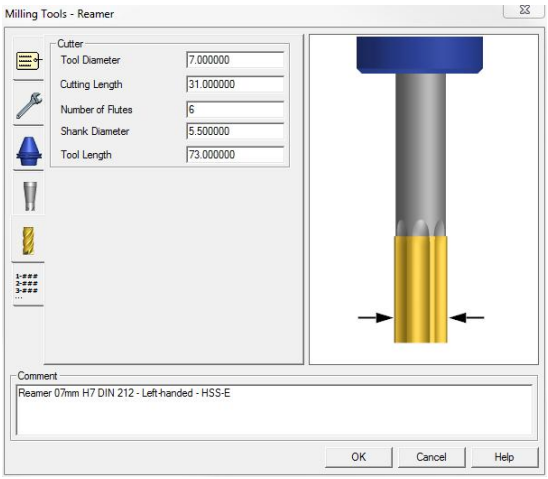
Boring Bar (Bohrstange) /ES06



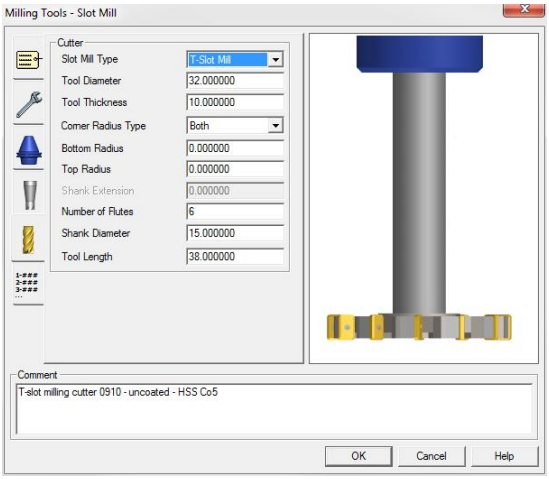
Thread Mill (Gewindefräser) /ES20



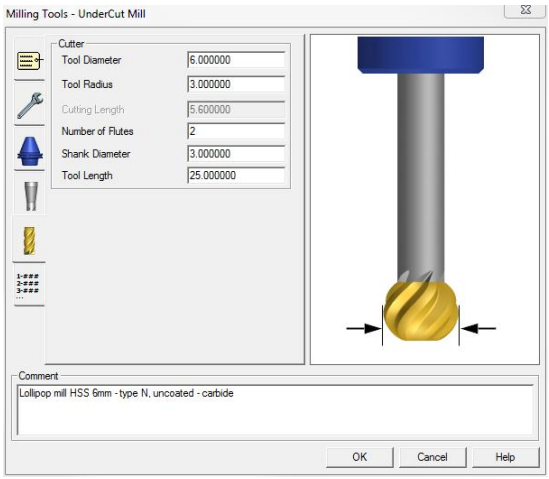
Reamer (Reibahle) /ES05



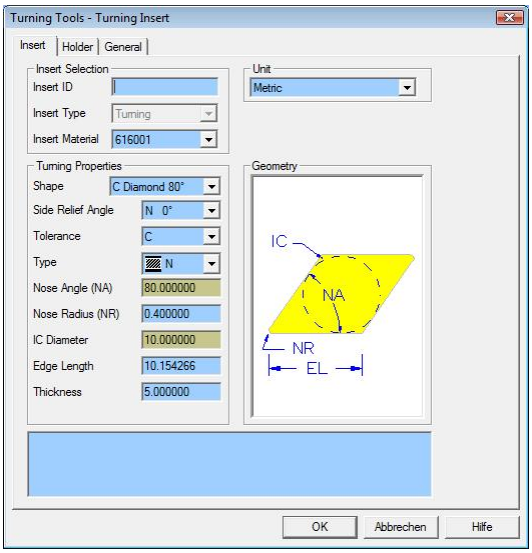
Slot Mill (Scheibenfräser) /ES25



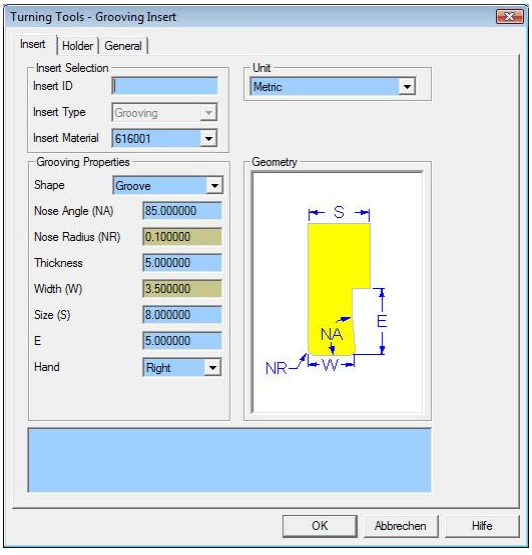
UnderCut Mill (Lollipop Fräser) /ES26



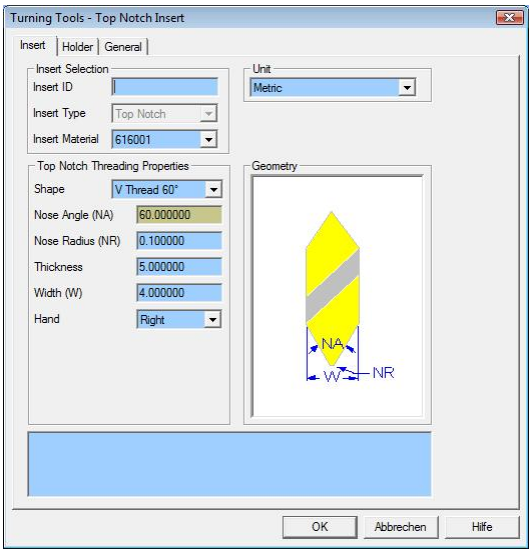
Turning Tool (Drehwerkzeug) /ES16



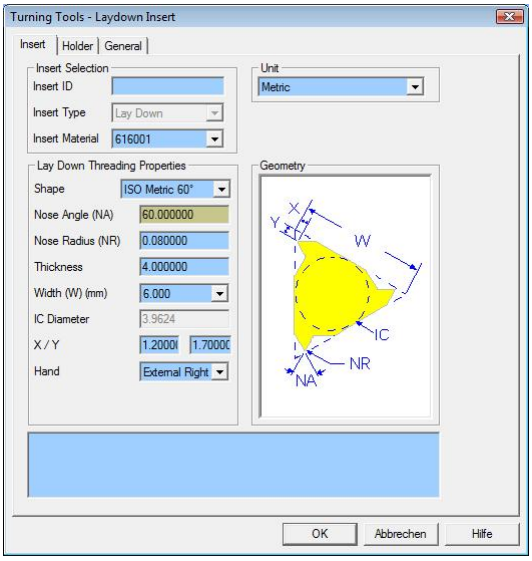
Grooving Insert (Stechwerkzeug) /ES17



Top Notch Insert /ES18



Lay down Insert /ES19



Custom Milling Tool /ES14

See chapter Custom Specific Assemblies with ETL

Custom Turning Tool /ES15

See chapter Custom Specific Assemblies with ETL

Not Supported Esprit tool types

- Mini-Turning
- Mini-Grooving
- Mini-Boring
- Undercut Mill

Known Issues

Message: WTEsprit / Runtime Error 13, Type Mismatch

Different Versions of Esprit sometimes provide a different programming interface. This error can occur if the version of the WT-Esprit-Interface doesn't match the version of your installed Esprit software.
Please check whether there is a WT-Esprit-Interface available that matches your Esprit Version.

History

2.13.1 (11.03.2011)

- Corrected issue with missing file WT-MakeList.cfg in setup
- Improved STL rotation algorithms
- Added STL rotation algorithms for tool changers with any B-axis angle
- Setting insert type acc. *WinTool* Schema for face mills
- Corrected tool length calculation
- Importing taper angle for taps
- Corrected calculation of taper angle for thread mills
- Correctly setting thread type for thread mills acc. selected *WinTool* schema
- Corrected tool angle calculation for bullnose mills
- Corrected ToolUpperDiameter for corner round mills
- Support for Back boring bars (Rückwärtssenker)
- Support for UnderCut Mills (Lollipop Fräser)

2.12.0 (02.11.2010)

- Fixed Interface registration issue in setup
- Support for systems with decimal comma (e.g. Germany)
- Improved cut data transfer algorithms
- Usage of multiple samples of the same tool on different turret stations
- Improved tool ID reading algorithms
- Moving STL with tool if it is moved to another station
- Corrected CustomSetting6 value usage for standard mills and drills
- Corrected calculation of InsertWidth for face mills
- Corrected cut data reading from *WinTool* allows usage of material field "User"
- Supporting thread angles for thread mills
- Support for single-point thread mills
- Support for Tool Types /ES14 and /ES15 (custom tools)

2.11.0 (20.08.2010)

- Support for Esprit 2011
- Better sample files
- Support for Tool Types /ES14 and /ES15 (custom tools)
- Support for STL orientation for different mounting orientations for rotating tools
- Rotating STL according mounting orientation useable without license
- Changed color and transparency of STL files on import
- Support for embedded STL files
- Corrected STL orientations for turning tools
- Not rotating STL if CS6 setting is unknown
- Message box if CS6 for turning tools is invalid
- Reloading STL at beginning of simulation

- Basic implementation of STL rotation on automatic tool changers
- Support for ETL files
- Tool import and export useable as trial version without license
- Support for crossheads
- Corrected insert type
- Support for different cutting types
- Corrected import of cutting data (importing all cutting data at first import)
- Support for *WinTool* 2010 field TypeOfCut
- Using tool geometry data if no DXF file was generated
- Corrected Insert Type

2.10.3 (01.07.2010)

- Ensured compatibility with *WinTool* 2009 and *WinTool* 2010

2.10.3 (07.04.2010)

- Support for Esprit 2010 SP3

2.10.3 (25.11.2009)

- Support for Esprit 2010

2.10.3 (11.09.2009)

- Bottom Radius for T-Slotter supported
- Mounting orientation, Station and Turret ID for ToolLists supported
- STL position supported for all different mounting orientations

2.10

- A set of all assemblies linked to one machine type can now be transferred
- Chamfer mills without adjustment diameter supported
- Round inserts for face mills supported
- Bottom radius now supported
- Required write permissions for Exchange-Folder and Registry mentioned in manual
- Support for new Coolant Types in *WinTool* assemblies
- Final correction in STL movements for Mounting Orientation

2.9.11

- Correction in STL movements for different Mounting Orientations
- WTMakelist automatically installed
- Description for ToolShift Z added in manual

2.9.10

- New data fields in Esprit 2009 are supported
- Grooving tools are supported
- Mounting orientation supported with data and STL adjustment
- Adjustment of holder position according the cone size configured for the spindle
- Mounting Orientation, Station ID and Turret ID supported for tool list transferred ("Get" and "put" function)

2.8.6

- Support for Esprit 2009 and 2008
- *WinTool* Assembly fields C1 up to C10 are transferred to the ESPRIT custom fields
- ToolShift is recalculated properly after assembly is re-mounted in different orientation.
- STL are re-positioned after assembly is re-mounted in different orientation.
- STL now supported for rotating assemblies
- If STL is available it is loaded automatically (no more usermodel flag required) .
- When loading the STL the "suppressed" box s not marked any longer.
- *WinTool* default orientation for lathe tools required for proper calculation of mounting orientation.

- Put: Sequence of the assemblies in can be forced to be the same as the used in the Esprit operations. WTEsprit.cfg Parameter ToolOutputorderByMillOperation=0 or 1.
- Put: Station + Turret + Orientation now exported to exchange list but not yet imported to WinTool (planned for *WinTool* 2009).
- If station is set to ToolTip, the ToolShift values are set. If station is set to Holder Base, no ToolShift values are set. (Rotating tools only)
- Automatic adaptation of machine configuration to ToolTip for late tools can be activated by a new WTEsprit.cfg parameter: LathToolAlwaysToTip = 0 or 1.
- Extended configuration (cfg) and rsx files
- Adjusted STL sample files

2.8.4

- Spindle Direction from custom field C6 repaired (Woodward, Jeff, WG. 30.10.08)
- For Drills ToolTip (TT) now calculated properly (Woodward, Jeff, WG. 30.10.08)
- Now allowed to transfer assemblies not linked to a machine type.

2.8.2

- No more " - sign as last character of the comment
- Tools without assigned machine type can be transferred now
- ToolTip (TT) correctly calculated for tool type 2 (Drills)
- Spindle direction now transferred from field C7
- ThreadPerUnit: New specifications for metric and inch
- Default LatheToolOrientation now correctly determined
- Inside Turning Tools: Dimension A and D now correctly supported.

Fix: 2.8.1, dll 2.0.101

- Coolant Type: Default supported in assembly field C10
- Inch tap: Pitch supported correctly
- Cutting length of turning tools correctly supported
- No more error message if 2 cutting or 2 name giving components within the assembly
- ToolShift now recalculated according mounting orientation
- STL for rotating Tools now supported
- STL is now automatically loaded if present n usermodels path (no more flag required)
- If mounting type "Holder base" is selected for a station, ToolShift is set to 0
- Easier password handling for database access of the interface

2.7.4

- WT-Esprit.dll for Esprit 2008 now registered in Setup

2.7.3

- Cutting conditions in KB are now linked to a "ToolMaterial"
- Mounting procedure tools and STL optimized

2.7.2

- Versions for ESPRIT 2007 and 2008 available
- Problem with decimals for cutting conditions solved

2.7.1

- Round shank for boring bars supported
- "LatheToolOrientation" is transferred for horizontal (Z-direction) machine adapter
- "Mounting Orientation" and "LatheToolOrientation" for tools (i.e. V3) can be preset in assembly field C6
- Default for "Spindle Direction" supported
- Value ThreadPerUnit is transferred from inch components
- Station ID is exported to ToolList (but not yet imported)
- Color for STL models is set to silver and STL is embedded in project now
- If T (Toolnumber) is set for assembly, it is used as station number for turning tools
- ToolShift is set to presetting value X,Z if configured as ToolTip, else it is set to 0
- Toollist export (put) checked and description extended for default transfer

2.6.0 (03.07.2007)

- Turning Tools supported
- STL Models supported for simulation
- Enhanced support for Holder Diameter
- Full support for Chamfer Mills
- Full support for Quarter round mills
- Full support for dove tail mill
- Full support for thread mills
- Old cutting conditions are no more deleted in KB
- Cutting conditions for drills adjusted
- New Tool selection module (WT-ToolExport)
- Enhanced error handling and better language support

2.2.0

- #696: Neck diameter and die overall length correctly supported (Fill)
- #697: Esprit-Type /ES7 calculation of arc for Lollipop corrected.
- #698: Esprit Tool Type 7 CRadius transferred from cutting component (Pres Block)
- #699: Esprit Tool Type 8 CRadius transferred from cutting component (Centriforce)
- #700: Log File: No more warning appears when not needed. (Claval)
- #701: Quality field in KB is now filled with comment, before it was "Any" (DloG)

2.1.2

- User models Path supported
- New WTMakeList module implemented
- New Shape module implemented
- Separate Interface versions for ESPRIT 2006 and 2007
- Complete Setup D and E
- Proper Text, English or German, is installed for assembly queries

1.1.2

- Automatic GetShape call if simulation is started with properties but without profile
- DXF support with GetShape
- Work material import to KB
- Work material class export from WTEsprit DLL to WTMakelist