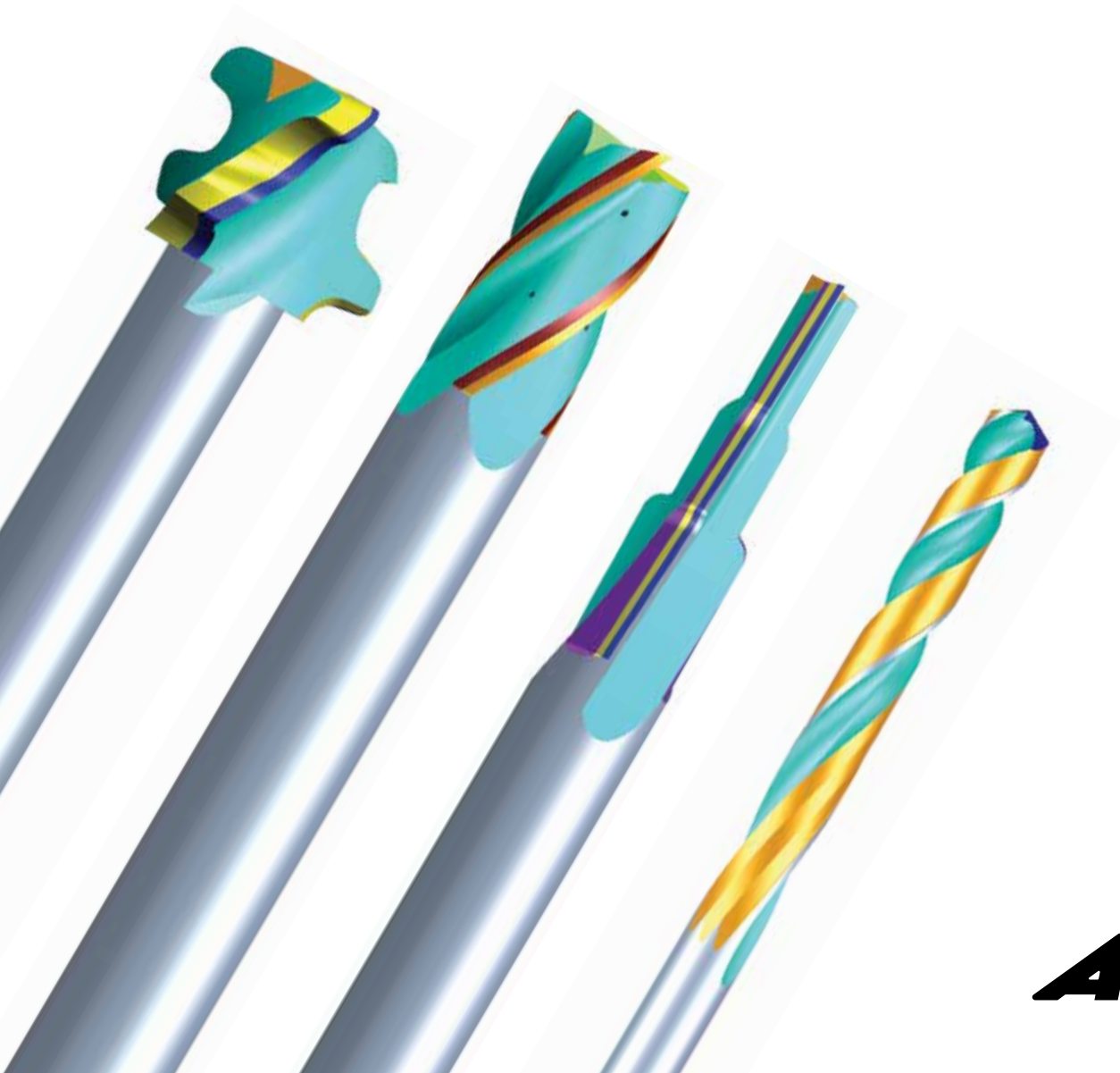


TOOLROOM

2016



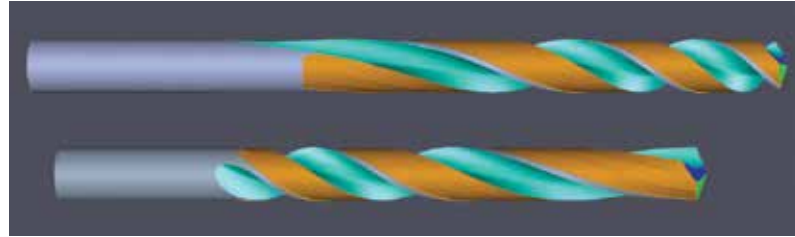
ANCA's latest release of ToolRoom software includes new features and enhancements that boost productivity and improve usability. Flexibility to design complex tool geometries has always been one of the strengths of ToolRoom software. New features in ToolRoom 2016 expand its ability to define and grind a wide range of custom tool geometries.



ANCA

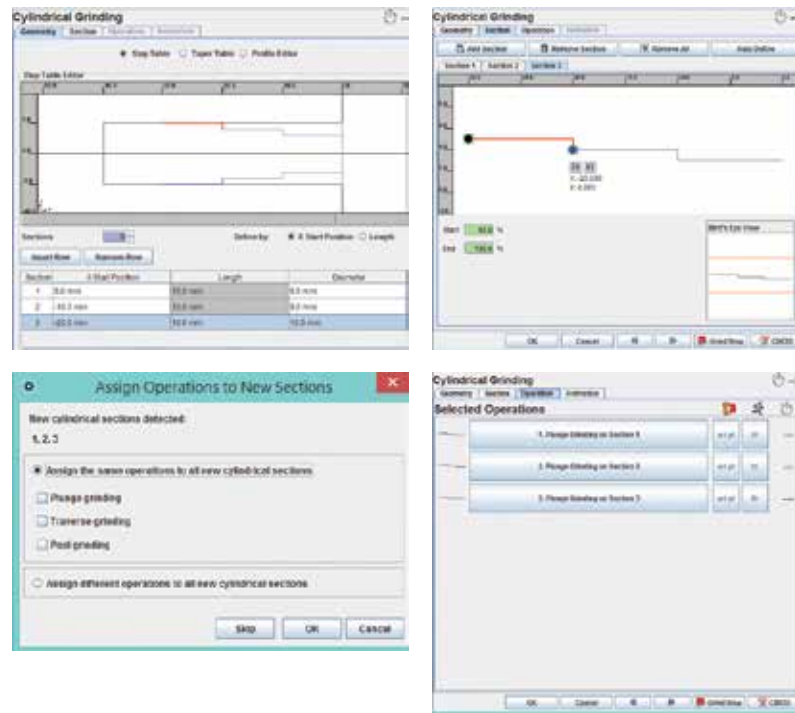
Formed flute from solid and formed flute polish

- Supports variable helix
- New operations for Formed Flute from Solid and Formed Flute Polish
- Old operations will be made legacy
- Dress per pass and also for roughing and finishing
- Coolant holes - correct offset from hole to edge
- Correct diameter when Y offset is non-zero
- Correct helix with core taper - no tapering radial margin



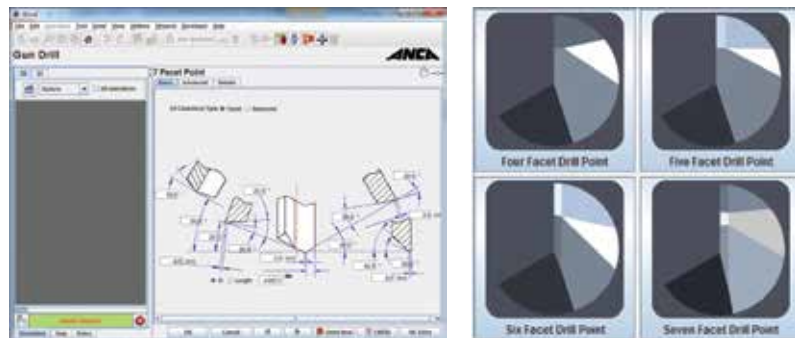
Cylindrical grinding

- Replacement of the existing cylindrical grinding operation with old operations made legacy
- Focus on ease of use and integrates with the Endmill and Drill Wizards
- Geometry and grinding operations separated
- Multiple geometry definition modes: step table, taper table, profile
- Intelligent stock removal, cascading from operation to operation and arcs are supported Shows no of passes depending on stock removal
- Oscillations on both grinding spindle and headstock spindle to avoid the grinding patterns
- Dress after rough and finish control
- Includes support for peel grinding and no more profile software required



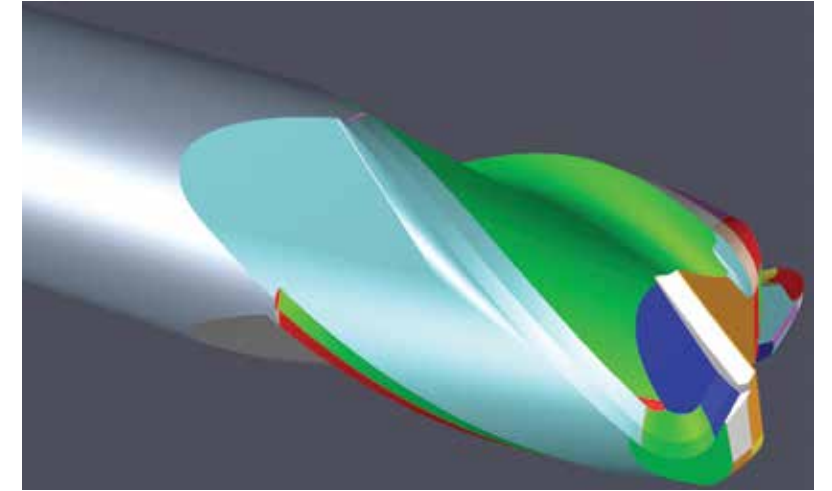
New ToolType in iGrind - Gun drill

- Gun Drill ToolType has been added to iGrind
- Wizard based design for ease of use



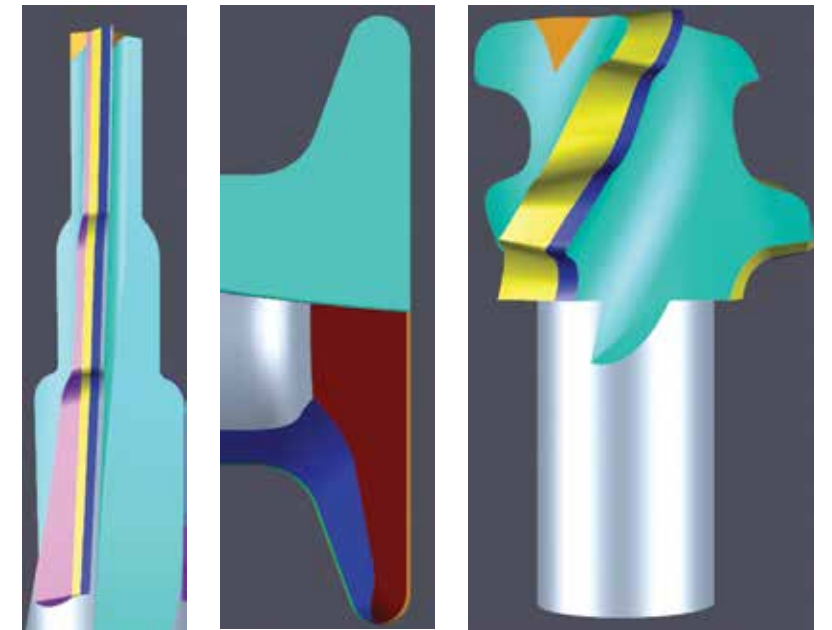
Corner radius

- OD-Corner-End and gash operations have been completely redesigned. Old operations will be made legacy
- OD-Corner-End operation features:
 - Eccentric OD relief blending to facet around corner
 - Complex values for relief and land parameters
 - 4 axis grinding & fixed grind point grinding
 - Unlimited reliefs
- Gash operation features:
 - Plane or curvature gash face
 - Classic or convex core profile
 - Continuous or separate grinding for corner and end



Profile editor

- Linear change of relief over profile
- Changing relief per element, variable land and relief angles
- Loop around sharp corners
- Dished sections at 12 o'clock grinding with dished cup wheel
- Addition of ellipse to the menu list
- Introduction of pivot style face grinding with wheel contact distance
- Federate control per relief or global
- Roughing with wheel toroid larger than concave radii in profile
- Automatically choose both sides of 1A1 wheel when choosing 12 o'clock grinding with zero shear
- Variable Clearance + Oblique editor with animation
- Link profile sections for eccentric after facet grinding. Also option to trim profile
- Error messages are clear and actions recommended
- Profile Editor dimensioning

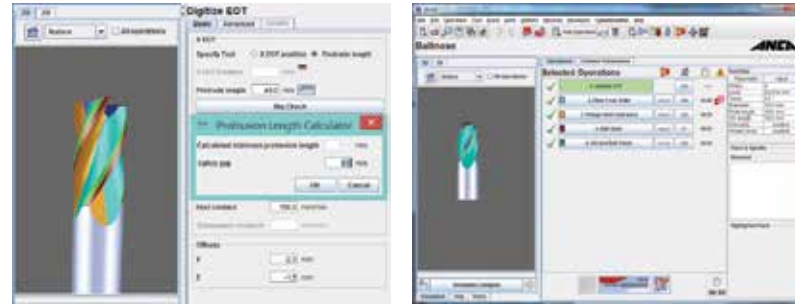


Location	Radial	Axial	Width
1	10.0 *	5.0 *	0.5 mm
2	20.0 *	10.0 *	0.5 mm
3	30.0 *	15.0 *	

Location	Radial	Axial	Width
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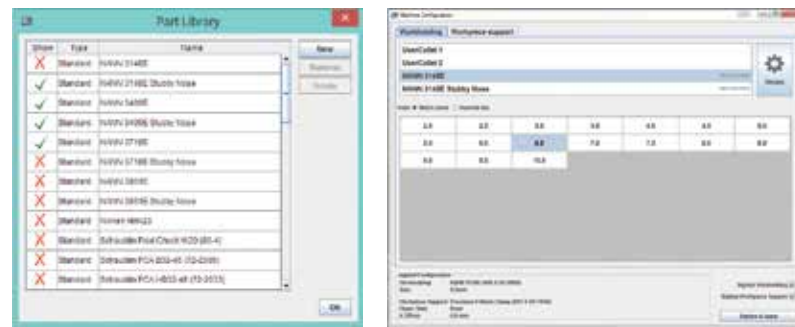
Collet protection

- Dig EOT has a button next to the protrusion length field to calculate the minimum protrusion length prior to grinding
- Check will be made after in-process digitising to prevent wheel collet collisions
- Error message will inform the user of the minimum protrusion length required to avoid collision
- I3DG simulation will indicate which operations will have collision with the collet or top clamp
- When running Loadermate tools with detected collisions will be returned to pallet unground



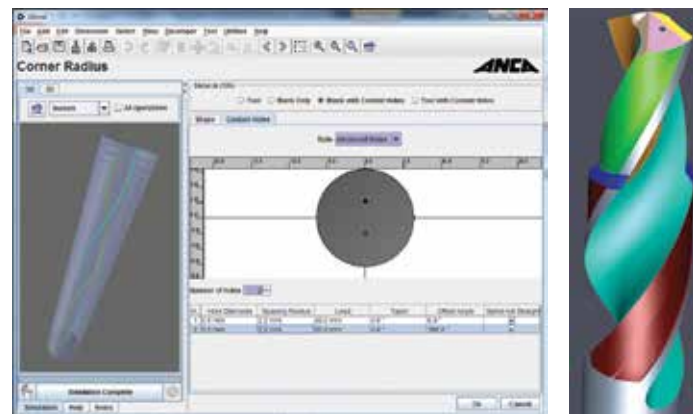
Machine configurator

- Machine configurator is a utility provided to configure collet, adaptor and top clamp
- A library of all the ANCA supplied collet adaptors and collets are available for the user
- An option is provided to import special collet adaptors the user may have



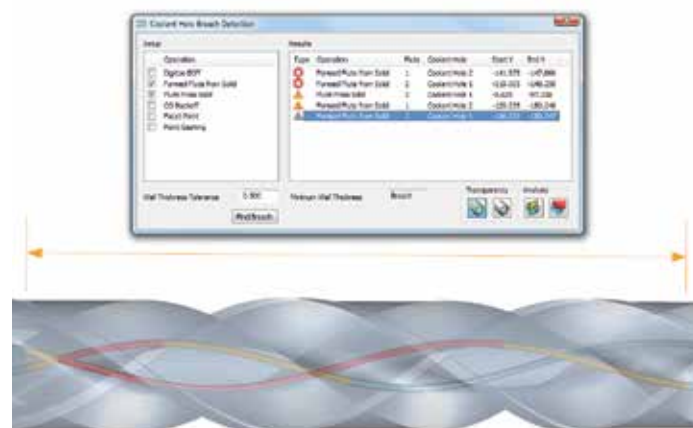
Coolant hole editor

- Blank editor used to define helical, straight or branched coolant holes in the CIM3D blank



Coolant hole analysis in CIM3D to support ToolRoom

- Automatically detect coolant hole breaches and colour coding of breaches.
- Analysis tool that provides minimum wall thickness and wall thickness tolerance



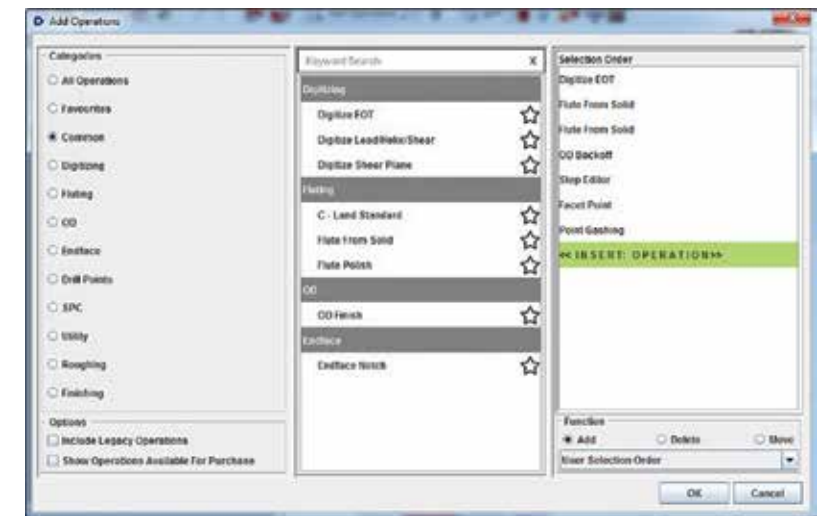
Weldon flat operation

- A new operation Weldon flat is available under Add Operations/Utility section
- This operation is typically used to grind one or more flat sections and has the option to grind wings



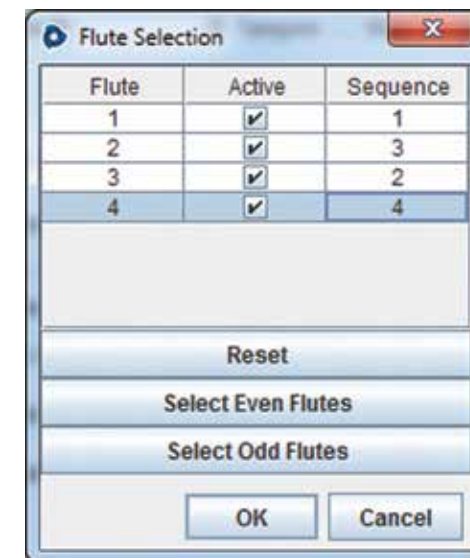
Add/Delete operations dialog

- Complete redesign featuring single list of available operations
- Supports user defined favourite operations
- Keyword search support and displays legacy operations



Flute selection and sequencing

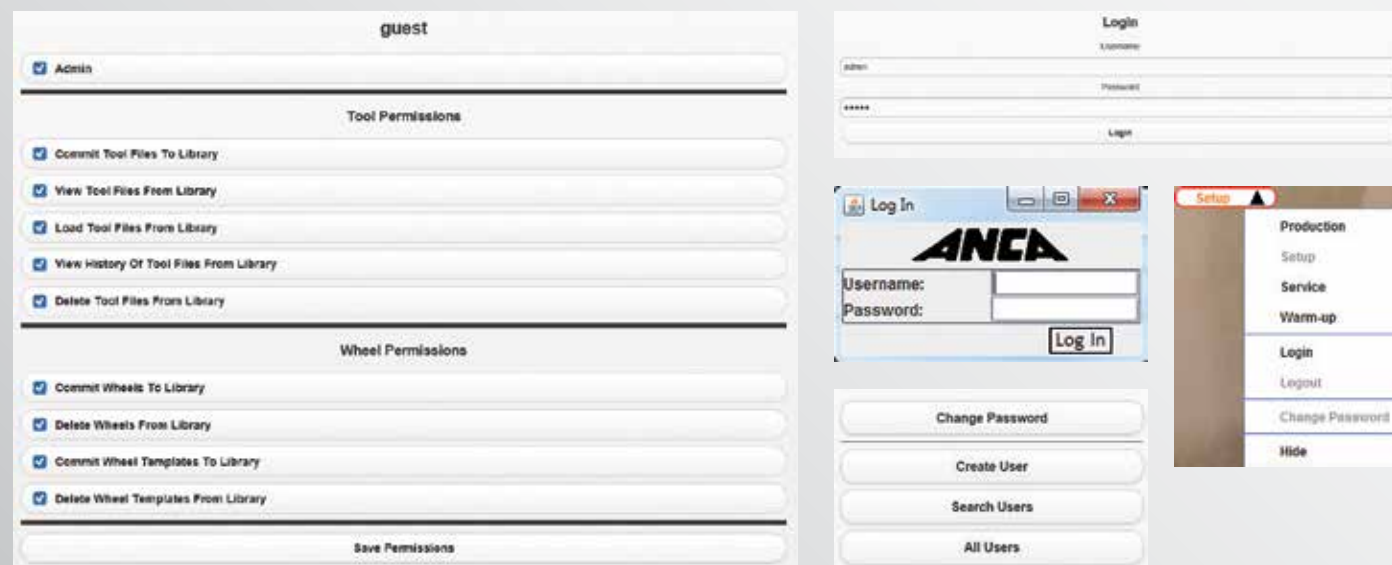
- Controls the order in which flutes will be ground
- Fluting can be performed on opposing flutes to balance grinding force
- Controls the operations on a flute by flute basis



Management Suite

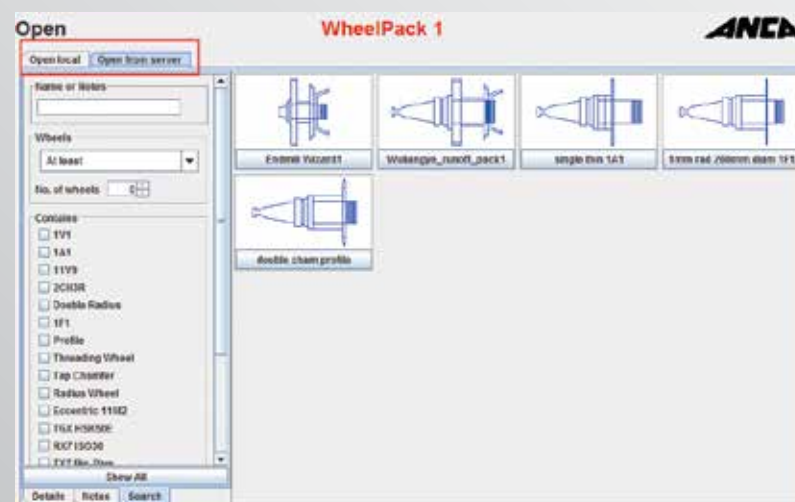
Tool, wheel and production management

- Company's administrator to create end users with different level of access
- Add limited number of users and change access rights any time
- User required to log in for access rights
- Can choose between different modes like production, service, warmup, and setup



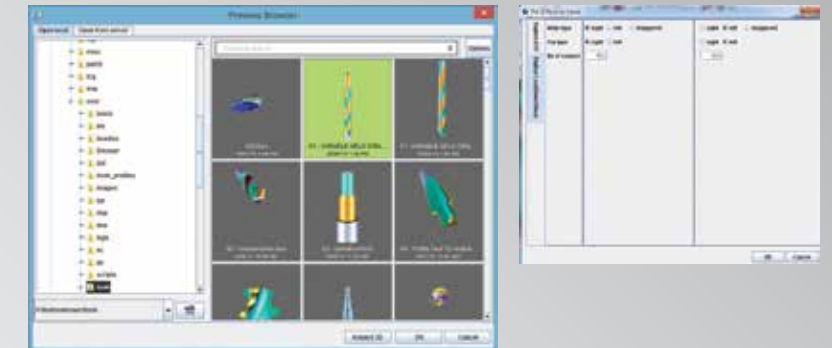
Network wheel library

- Wheel library is activated from the preferences tab
- Can open from both local and server
- Central management of wheel inventory
- Provides a means to easily share wheel packs and qualification data between machines
- Search/Filter facility
- Simulation/Machine qualification state where protection is provided to prevent wheel packs qualified on simulator from being used on a machine
- Different 11A2 and 11V9



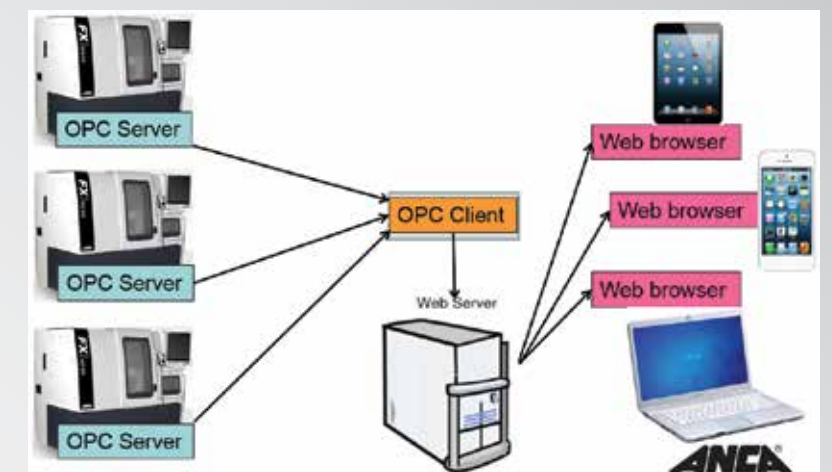
Network tool library

- Central network management of tool files
- Version control and difference viewer tool



Production monitoring

- Monitor all machines on the network
- Log the cycle time, down time, setup time etc
- Separate logins provided for different levels and access rights
- OPC UA server part of the release on machine
- Client server will be a separate installer along with tool server and wheel server



Production monitoring - client

- The overview page with machine numbers or identifications
- This page is configurable



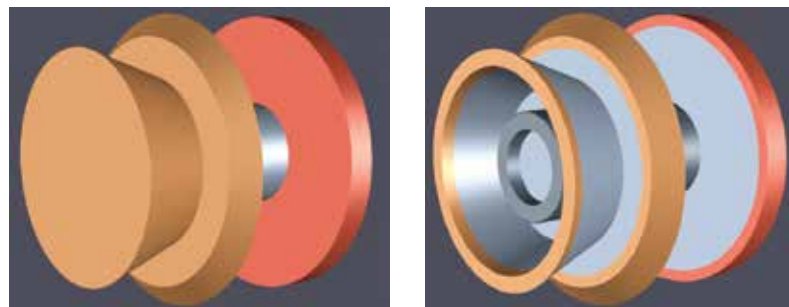
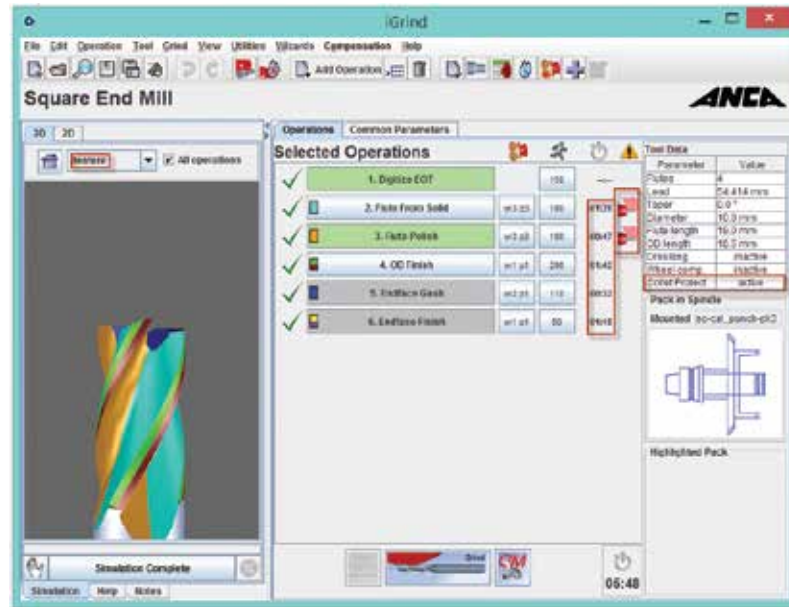
Production monitoring - detail

- Option to choose production data dates and time based report
- Option to choose report from machine to machine, shift to shift, etc
- Web Browser supports Internet Explorer, Safari, Google Chrome, & is available for all the latest smart phones, iPad etc



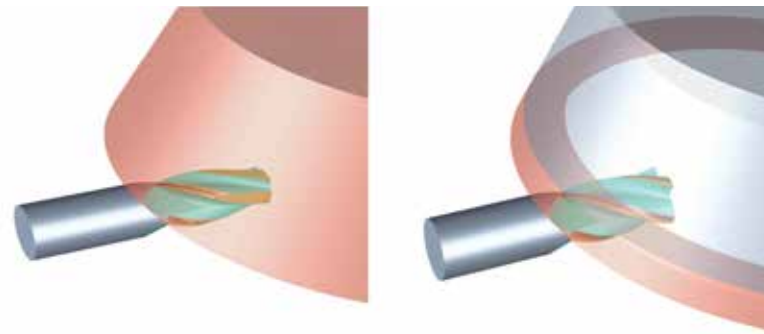
I3DG and Simulation enhancements

- CIM3D v8 quality improvements
- Anti-aliasing is now active (hardware dependant) with Windows 8
- User preference to control 3D optimisation or cycle time estimation has been removed. Cycle time will now automatically be generated for all optimised operations in a subsequent pass
- Timeouts and memory limits can be increased for the current tool only via a button on the error window
- Feature colour mapping implemented and is default option
- Streaming between TPD generation and CIM3D/I3DG. Both processes now run in parallel for better performance
- Collision images displayed on the main page along with the collet protect status
- Simulate-Now button will automatically enable CIM3D mode regrind behaviour, simulating only one operation



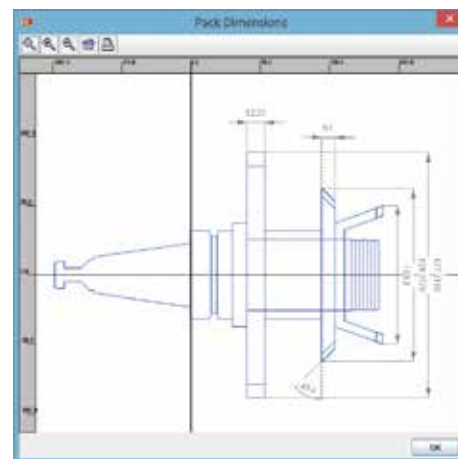
Improved wheel models

- More realistic looking wheels
- Model wheel grit and core independently



Wheel Dimensioning

- A new function is now available in the file menu to display the current wheel pack with wheel width and diameter
- This information can also be printed



User input wheel qualification

- A column for the diameter has been added to the Qualify User Input dialogue
- A label has also been added to show the modified values



Swipe to enable/disable

- It is now possible to disable/enable multiple operations by swiping over multiple operations on the touch screen

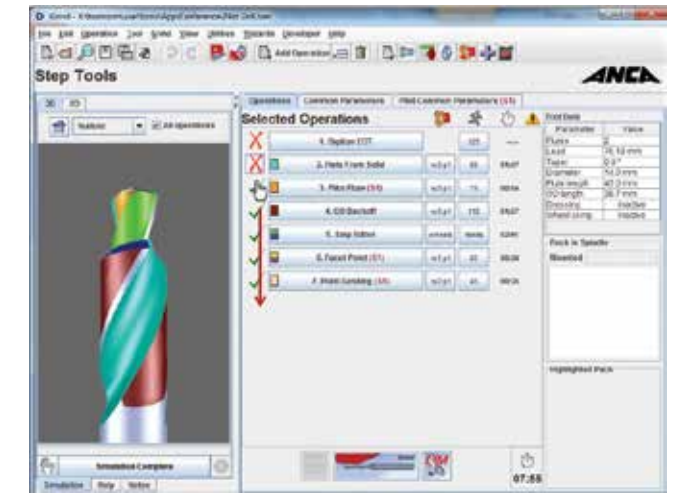
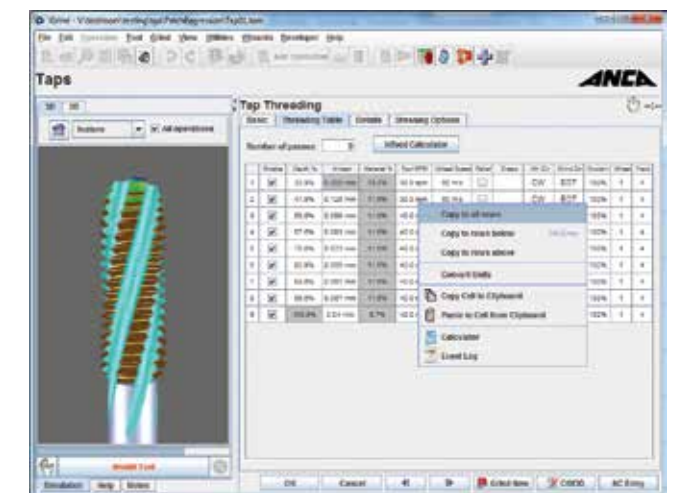


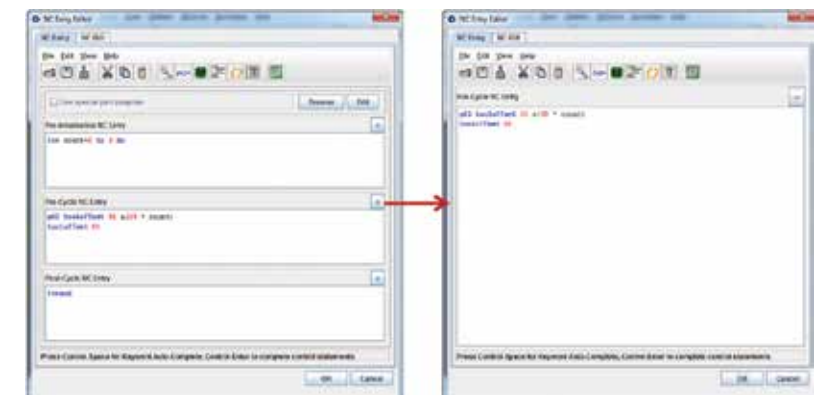
Table editing functions

- Right click menu for tables
- CTRL-Enter to fill down all rows below
- Prevents repetitive data entry for large tables tap threading-land compensation etc



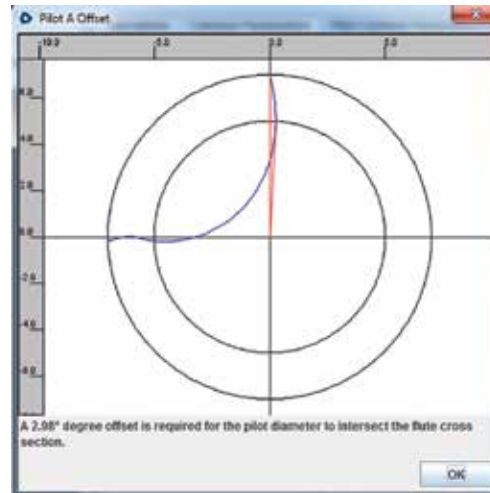
Expandable NC entry fields

- Buttons now appear to expand a field to the entire window and can be restored back to normal window
- View more NC codes without needing to scroll



Pilot tool segment A-offset calculator

- Button appears on the pilot tool segment page next to offset field
- Calculates the intersection between major flute cross section and the pilot diameter



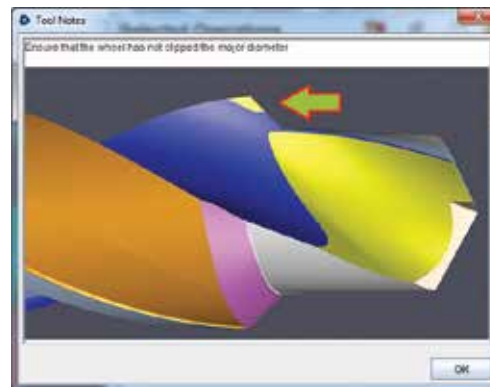
Windows 7 & 8 Compatible

- RN33 is compatible with Windows 7 & 8 Professional 32 and 64 bit versions



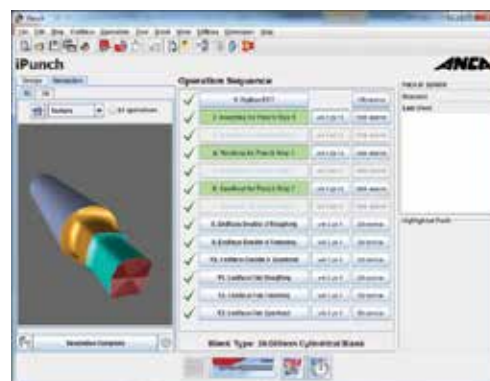
Notes & attachments

- Drag and drop to add attachments
- Images can be embedded in notes (!photo.jpg!)



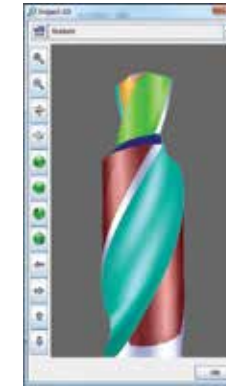
I3DG for punch

- Integrated simulation graphics has been added to iPunch. Every time a change is made to the tool a simulation will be performed in the background and displayed in a tab



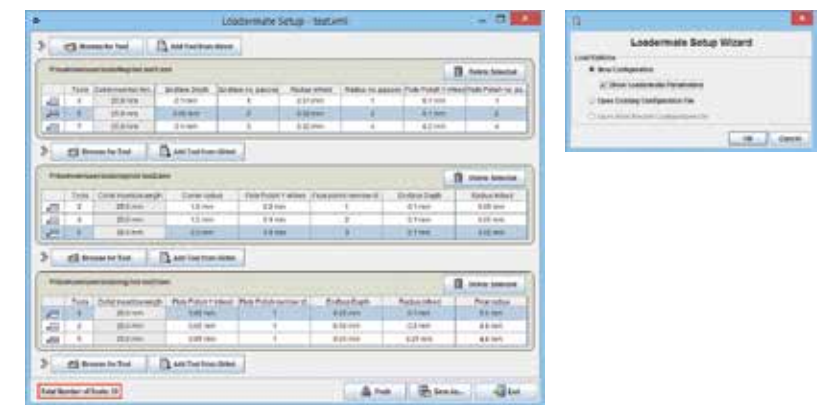
3D file view

- I3DG simulation is now embedded within TOM file
- Available from tool preview browser and file browser
- Available when loading tools in LoaderMate/Robomate
- Does not simulate but just loads the 3D geometry and is very quick



Loadermate setup

- Loadermate setup has been enhanced in RN33 with a setup wizard
- Has an option to display Loadermate parameters such as insertion length and shank diameter
- Displays the number of tools to control the tool numbers in pallet
- Browse for template TOM files for easy adjustment of parameters between tools
- Option to add any number of tools or ToolType to the toolgroup
- Option to add tool from iGrind which will add the current open tool from iGrind
- Push button provided to push the toolgroup direct to Loadermate which will add them to the current job



Other new features of ToolRoom 2016 include:

- Tool preview browser has a filter field where you can type a search phrase only to display wheel files that contain the search phrase in their file names
- An option has been added to Windows Explorer and select the bundle after it has been created
- The wheel selection tool has been changed for wheel exchangers which is now presented with a scrollable panel
- A filter has been added to the wheel selection table to filter out the disabled operations, so you can see the actual wheel change sequence performed during grinding
- A new function has been added to the right click menu that will list why a parameter is disabled
- An option for C-probe at -90 has been added to ATM for Centre flute for left cut left helix tools
- Anti-aliasing is now used in integrated 3D simulation for better image quality
- A button has been provided to "increase timeout" when I3DG simulation exceeds the limit
- A new command is available from the k-land menu to delete previously digitised or calculated points that make the lip geometry
- Help images are now scaled so that they occupy the entire window
- A filter field has been added for parameter links and hidden parameters
- New functionality has been added to highlight parameters that will be enabled due to enabling another parameter in a different tab

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