

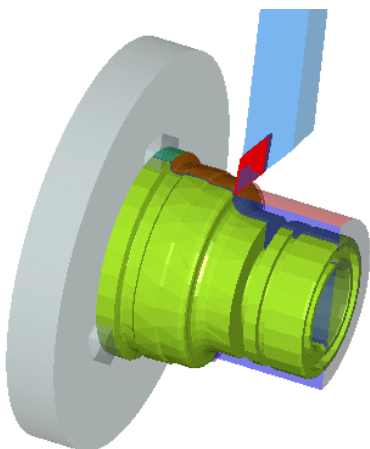
Automatic Feature Recognition

CAMWorks is a feature-based CAM system. To make feature-based machining even more powerful, CAMWorks provides the ability to automatically recognize many machinable features.

- Automatic Feature Recognition (AFR) analyzes the part shape and attempts to define the most common machinable features such as the OD and ID of the part, front face and grooves.
- AFR recognizes features on native SolidWorks part models or on solid parts imported via IGES, SAT, etc.
- AFR can save considerable time when defining machinable features.
- When bar stock is used, AFR generates a Cutoff feature on the opposite side of the Face feature.
- Features can be modified to add or remove elements at any time, to add or delete areas to be machined, or to limit the extent of the tool path.

Interactive Feature Recognition

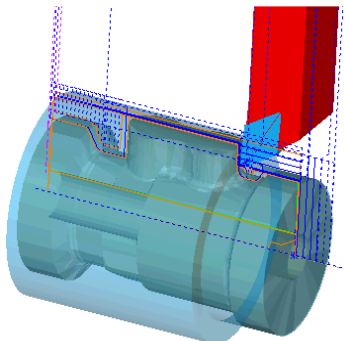
CAMWorks provides an Interactive Turn Feature command for defining features that are not recognized automatically or features that need to be defined for your facility's machining requirements, such as custom OD and ID grooves. The interactive definition of features is similar to SolidWorks feature definition.



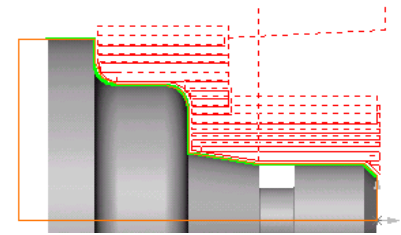
2 and 4 Axis Turning

Includes automatic roughing, finishing, grooving, threading, cutoff and single point (drilling, boring, reaming, tapping) cycles.

- Cutting cycles provide fast, error-free cutting using standard inserts for both front and rear turret configurations.
- Toolpath, simulation and post processing support for sub-spindles.
- Output for turning canned/fixed cycles for drilling, rough OD/ID turning and facing operations.
- Define stock as bar stock, a revolved sketch, 2D WIP sketch or from an STL file.
- Work In Process (WIP) monitoring of stock increases cutting efficiency.
- Enhanced WIP support with flexibility to define work-in-process for turning operations. **NEW**
- Define chuck for toolpath simulation.



- Reverse direction of Turn Setups.
- Extend or shorten turn feature length from within Face Rough/Finish, Turn Rough/Finish, Bore Rough/Finish and Cutoff operations.
- Option to transition around sharp corners without rolling tool radius around the corners for Finish Face, Turn and Bore operations.
- Reverse machining for Face Finish, Turn Finish, Bore Rough, Bore Finish and Thread to generate left hand threads.
- Tapping operation for ID features.
- Back turning support.
- Generate gouge free approach / retract strategy with minimum user interaction.
- Define varying allowances on turn toolpath.
- Mirror about centerline option to generate toolpath below centerline.



- Cutter compensation support for Turn, Face and Bore Rough operations with canned cycles; Turn, Face, Bore and Groove Finish operations; and Cutoff.
- Set user-defined absolute machine depth globally or for each operation.
- Two methods for defining the default setup origin and spindle centerline: automatic and from a SolidWorks Coordinate System.
- Option to generate a cleanup pass to remove scallops generated by a Rough Groove toolpath.
- Steppoff option for rectangular grooves so that the tool does not retract on the groove wall for Finish Groove operations.
- User defined turn inserts can be used to machine the features of the turn part. Helps when the standard inserts cannot machine the part completely. **NEW**
- Single pass option for Groove cycles.
- Multiple groove tool driving point options.
- Option for no back angle cutting (no undercuts) for Turn, Bore and Face Rough and Finish operations.

CAMWorks Modules

Modules are available in a variety of bundles or combinations:

2 ½ Axis, 3 Axis, 3 Axis with undercut; 4 Axis and 5 Axis Simultaneous Milling; 2 and 4 Axis Turning; Rotary Milling; 2 and 4 Axis Wire EDM; ElectrodeWorks[™]; Volumill[™] **NEW**



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