

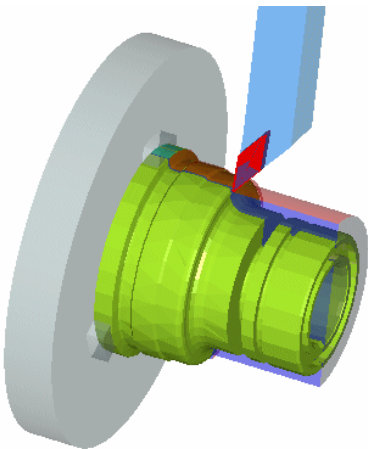
Automatic Feature Recognition

CAMWorks is a feature-based machining 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 Definition

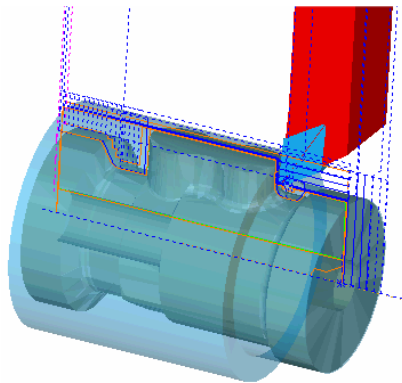
CAMWorks provides an Interactive Turn Feature command for defining features that are not recognized automatically or features that need to be defined for your facility's machining requirements, such as custom OD and ID grooves. The interactive definition of features is similar to SolidWorks feature definition.



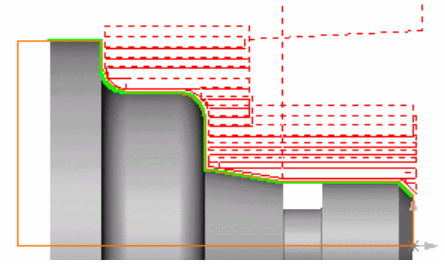
2 Axis and 4 Axis Turning

CAMWorks 2 and 4 Axis Turning includes automatic roughing, finishing, grooving, threading, cutoff and single point (drilling, boring, reaming and tapping) cycles.

- Machining algorithms use the latest toolpath and gouge protection methods.
- 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.
- Define stock as bar stock or as a revolved sketch to represent castings and forgings.
- Work In Process (WIP) monitoring of stock.
- Define chuck to use for toolpath simulation.



- Simulated stock shape can be saved as an STL file for use as Mill or EDM stock.
- Extend or shorten the length of a turn feature from within Face Rough/Finish, Turn Rough/Finish, Bore Rough/Finish and Cutoff operations.
- Option to transition around sharp corners without rolling the tool radius around the corners for Finish Face, Turn and Bore operations.
- Reverse machining for Face Finish, Turn Finish, Bore Rough and Bore Finish.
- Reverse machining for threading to generate left hand threads.



- Canned cycle support for Turn Rough, Bore Rough, Face Rough, Drill, Center drill and Threading.
- Set user-defined absolute machine depth globally or for individual operations.
- Tapping operation support for ID features.
- Four leadins and leadouts: none, arc, perpendicular, parallel.
- Two methods for defining the default setup origin and spindle centerline: automatic and from a SolidWorks Coordinate System.
- Drill and Center drill tools for both mill and turn can be specified from a common drill and center drill database.
- 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.
- Multiple groove tool driving point options.
- Option for no back angle cutting (no undercuts) for Turn, Bore and Face Rough and Finish operations.



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