

# SOLIDWORKS MACHINIST MATRIX

Features	Feature Details	CAM Standard	CAM Professional	CAM Machinist Standard	CAM Machinist Professional
Rules-Based Machining	Uses rules-based machining to enhance the programming process while leveraging tolerances that were assigned to components; lets you focus on the critical areas of making a part rather than touching every feature that needs to be machined.	●	●	●	●
Tolerance-based Machining (TBM)	Tolerances and annotations in 3D models are used to automatically create machine programs; automatically adjusts asymmetric tolerances to mean tolerances for cutting tool strategies.	●	●	●	●
Knowledge-Based Machining (KBM)	Once features are identified by automatic or interactive feature recognition, KBM defines machining strategies and tools to best machine the geometry. Using these rules will automatically allow you to define repeatable machining processes based on your company standards.	●	●	●	●
Associativity with SOLIDWORKS 3D CAD	Any change made to a design in SOLIDWORKS CAD is automatically updated, applied, and reflected in SOLIDWORKS CAM.	●	●	●	●
Automatic Feature Recognition (AFR)	Recognize certain types of geometry (holes, pockets, bosses and turn—Professional only) not only as CAD features. Automatic feature recognition allows prismatic parts to be identified at a feature level based on machinable shapes.	●	●	●	●
Automate Machine Times	Automate machine time calculation and compare it to traditional methods for ensuring all aspects of a part are accounted for ahead of time before committing to production.	●	●	●	●
3 + 2 Programming	Can employ a machining technique where a three-axis milling program is executed with the cutting tool locked in a tilted position using the five-axis machine's two rotational axes.		●		●
High-Speed Machining	Using VoluMill technology maintains constant tool pressure throughout the cutting process. The variable feed rate allows the tool to cut at full depth to shorten cycle times while extending machine and tool life.		●		●
Turning Capabilities	Turning capabilities that include face rough and finish, rough and finish turn, groove rough and finish, rough and finish bore, cut-off, ID and OD threading, and drill, and tap on center.		●		●
Part Modeling/Import	Part modeling and import is the foundation of programming in a digital world. Creating and importing parts allows the user the ability to communicate with designers, read MBD data and make necessary manufacturing adjustments.			●	●
Assembly Modeling/Import	Assemblies take our components to the next level by allowing us to check fits and tolerances plus explain to manufacturers how we want to build our products. Import clamps and vises to make sure parts are made the first time correctly and provide the necessary clearances to be able to remove the finished product when completed.				●