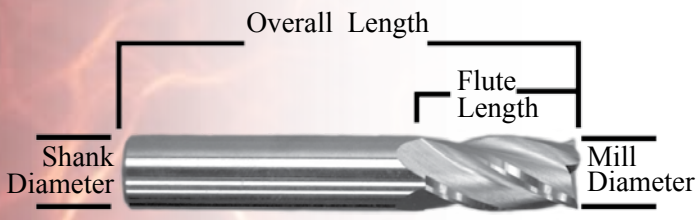
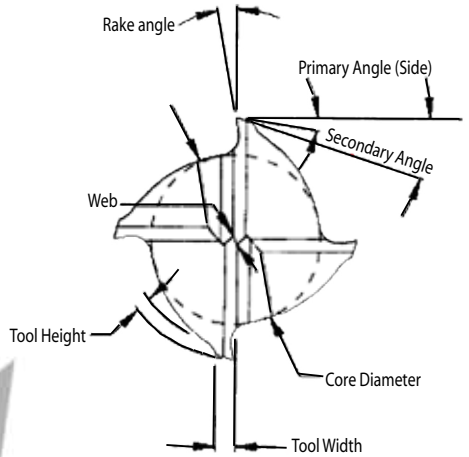


2 Flute

3 Flute

4 Flute

Materials	2FL	3FL	4FL	6FL	Straight
Aluminum		●		●	
Brass, Bronze	●		●		●
Fiberglass				●	
Iron	●		●	●	
Plastics		●		●	
Steel nickle, Chrome	●		●	●	●
Steel: Carbon	●		●	●	●
Steel: 39-48Rc	●		●		●
Steel: 46-86Rc	●		●	●	●
Steel Stainless	●		●		●
Steel Weldments	●		●		●
Titanium	●		●		●
Zinc		●			



Basic List of Endmill Use

FACE MILLING: For small face areas of relatively shallow depth of cut. The surface finish produced can be "scratchy".
KEYWAY PRODUCTION: Normally two separate endmills are required to produce a quality keyway.
WOODRUFF KEYWAYS: Normally produced with a single cutter in a straight plunge operation.
SPECIALITY CUTTING: Includes milling of tapered surfaces such as "T" shaped slots & dovetail production.
FINISHING PROFILING: To finish the inside/outside shape on a part with a parallel side wall.
CAVITY DIE WORK: Generally involves plunging and finishing cutting of pockets in die steel. Cavity work requires the production of three dimensional shapes. A Ball type endmill is used for the finishing cutter with this application.

Types of Milling Procedures

CLIMB MILL CUTTER: Direction for a milling operation. The cutter tending to "Climb" into the workspace, relieving feed force requirements. First choice for CNC machining. Increases cutter tool life. Sometimes called down-milling.
CONVENTIONAL MILLING: Cutter Direction for a milling operation. The cutter tendency to push the workpiece away from the part, increasing the required feeding force. First choice for manual machining. Sometimes called up-milling.
END MILLING: Metal removal process that is achieved by feeding a workpiece into a revolving cutter. The cutting removes material as it chips.
PERIPHIAL MILLING: The machine edge surface of a part. Periphial milling is accomplished by presenting the workpiece to the circumference or the periphery of the milling cutter.
PLUNGE CUT: Axial feeding into a part. CNC machine movement in the Z-axis direction. Direct plunging into the face of a part. Plunge feeding in an axial direction. Requires a center cutting endmill.
RAMP CUT: Axial feeding into a part. CNC machine movement in the Z-axis direction and an additional axis (X or Y). Angle plunged into the face of a part, feeding in other than the axial direction. Requires a center cutting endmill. Ramp cutting will assist the endmill to enter a part face.