



5-Axis Benefits

The Benefits of Machining with 5 Axes:

- **Reduced machining time:** By using a flat bottom endmill and maintaining perpendicularity to the complex surface you can step-over the full diameter of the cutter thereby dramatically reducing the required number of passes across a surface. The same principle applies to side milling of angled surfaces.
- **Better surface finish:** Using a flat bottom endmill to maintain perpendicularity to the complex surface can eliminate ribbing caused by ball-nose endmills.
- **Eliminate multiple setups** required to re-position the work-piece at complex angles.
- **Eliminate costly tooling and fixtures** required to hold the work-piece in place.
- **Eliminate manual millwork and handwork** required to cleanup kellered surfaces.
- **Machine complex parts** that are not otherwise possible, including holes required to be normal to a complex surface.
- **Fewer competitors with 5-axis** = Higher profit margins!

Tri-Tech Precision Products Inc. manufactures a unique milling head that quickly attaches to virtually any 3-axis machining center allowing the spindle to be positioned at any angle within a hemisphere, instantly converting the machine to a fully programmable 5-axis machining center.