

PROSPECTOR™

The Gold Standard In Toolmaking

HSM Technique for Z-Planar With Clear and Pocketing

The information in this tip applies to:

- Prospector (all versions)

ISSUE

A key to high speed machining is to minimize abrupt changes in direction. Sharp corners when transitioning from one clearing cut to the next can generate sharp changes in direction. Smoothing these sharp corners can improve your machine time and cause the machine to run smoother.

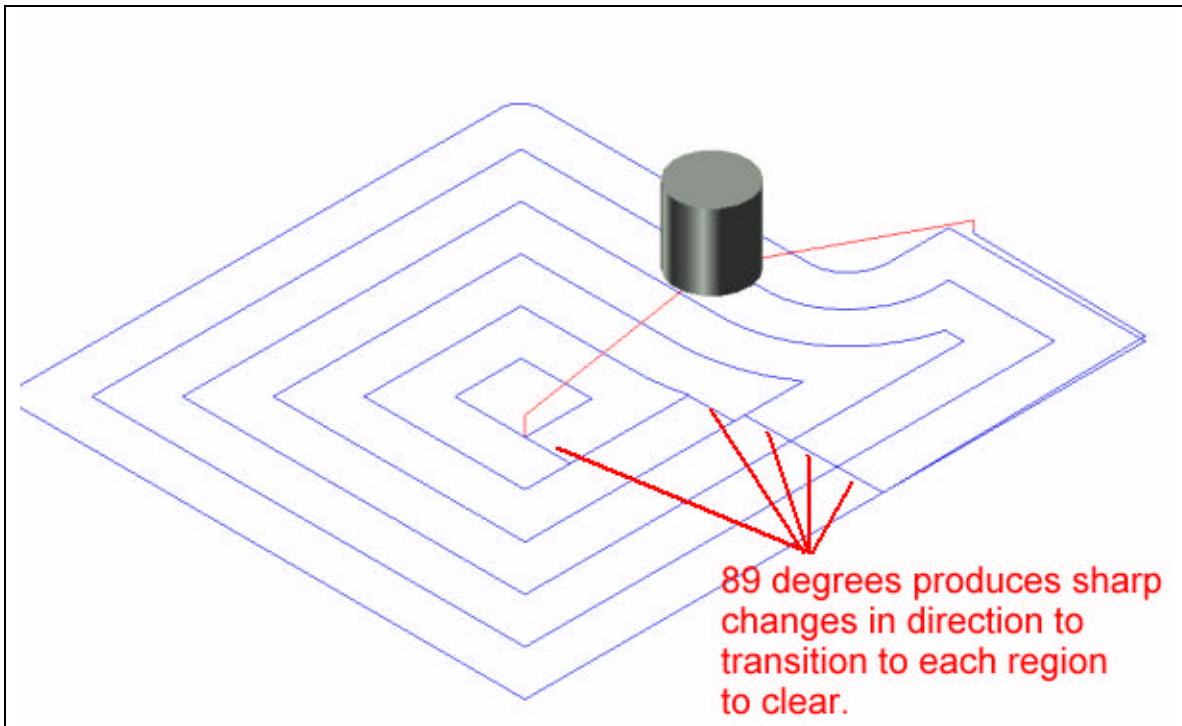
MORE INFORMATION

The angle to cut from one clearing path to the next is established by the program property Contour Transition Angle:

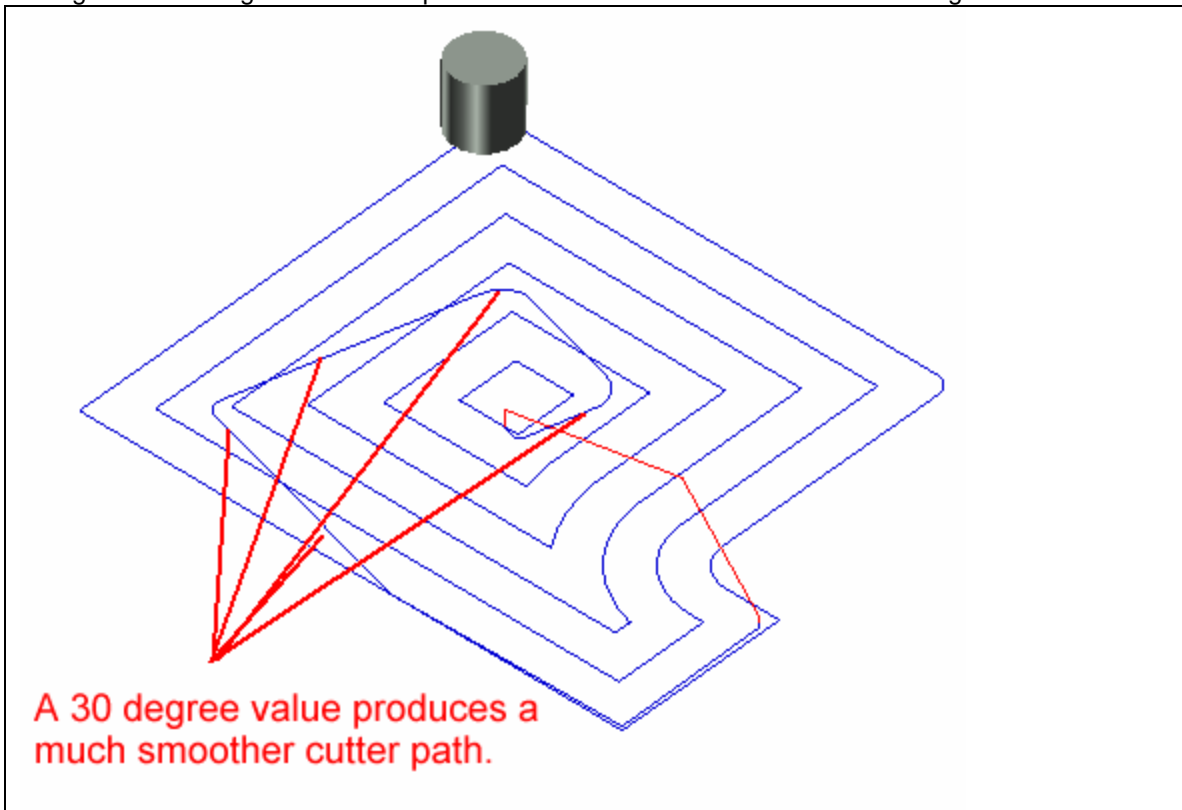
| Property | Value |
|--------------------------|-------|
| Minimum Pocket Radius | 16 |
| Ramp Angle | 1 |
| Zig Zag Cut Angle | 90 |
| Quick Start | No |
| Quick Start Levels | 6 |
| Contour Transition Angle | 89 |
| Quick Rough | No |
| Optimize For Performance | Yes |
| Precise Level Machining | No |
| Lift Between Islands | No |
| Fast Feed Rate | 26 |
| Home Position | |
| Tool | |

Contour Transition Angle controls the angle of the cut from one clearing cut to the next.

Using a large angle will produce sharp changes in direction:



Using a smaller angular value will provide a smoother transition to each clearing cut:



Although the total cutting distance is longer with the shallow angle, you may find that the machine time is actually less because the sharp corners are eliminated. Tool life may benefit as well because you will not take a full-width cut directly into the material.

This technique applies to both Z-Planar With Clear and 2D Pocketing.

Like all program properties, you can customize your PowerSource database to automatically set the contour transition angle you feel works best.