



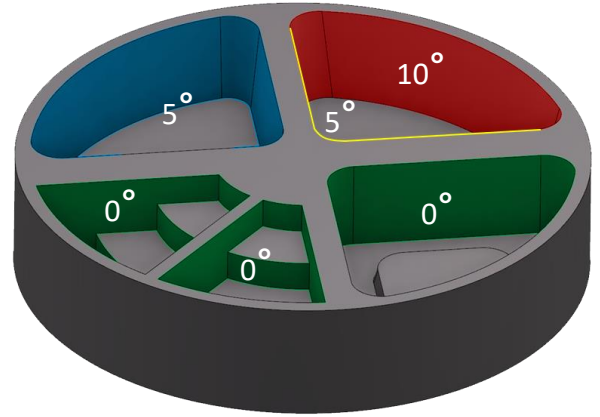
**Mastercam®**



# MILL VS. 3DMILL

## MASTERCAM MILL AND 3DMILL COMPARISON

Axsys Technical Services conducted a test to determine the time and effort required to program and machine a part that is representative of parts encountered by our customers and typically programmed utilizing the 2D toolpath strategies found in the Mastercam Mill product. Key points of differentiation include: modeling requirements, programming time, machine time and surface finish.



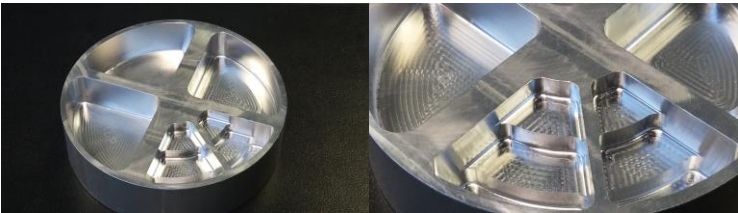
**Stock:** 4.75" Dia. X 0.75"D - 6160 Aluminum

**Machine:** HAAS VF2

**Emco Aluminum Tooling:** 1/4", 3/16" Bullnose

**1/4" Tool:** 11,450 RPM, 128 IPM, 15% Step  
100% Step-down, 0.125" Step-up, 0.01" Stock  
Finish: 0.005" Step-down, 0.125" Step-over

**3/16" Tool:** 11,205 RPM, 126IPM, 15% Step  
100% Step-down, 0.0093", Step-up, 0.01 Stock



**Mastercam MILL**

**PROGRAMMING TIME:** 60 minutes

Majority of time spent modeling to create containment boundaries & surfaces needed to create toolpath.

**Note:** On the multi-draft pockets offset geometry must be created for the 3D-Sweep tool path. Optionally extract and combine wall surfaces into one surface and use the waterline path. Requires intermediate to advanced skills not typically found in existing users.

**Machining Time:** 61 minutes

Tool paths generated: (7) Roughing, (15) Finishing



**Mastercam 3DMILL**

**PROGRAMMING TIME:** 5 minutes

No additional modeling required.

**Machining Time:** 66 minutes

Tool paths generated:

- (2) Roughing
- (1) Stock model
- (1) Finish

