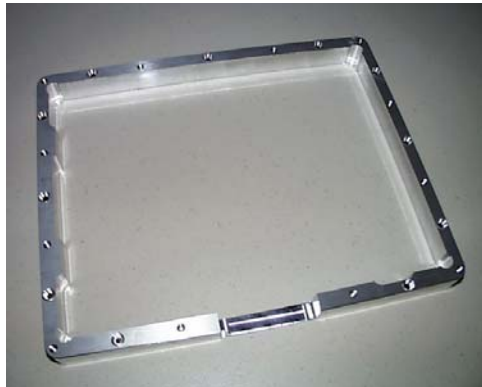




DATRON DYNAMICS, INC.
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Application Notes

Part:Secondary frame of enclosure
Material:7/8" aluminum
Machine Used:M5 4750
Features Utilized:2 kwatt spindle, tool changer and "Z" height probe
Software Used:Datron macro programming language and PrimCam
Total Cycle Time:23 minutes and 4 seconds



Machining Details:

Tool 1: .315" dia. s/f endmill at 30,000 rpm / 100 i.p.m.
 Tool 2: .225" dia. s/f endmill at 35,000 rpm / 60 i.p.m.
 Tool 3: .118" dia. s/f endmill at 40,000 rpm / 40 i.p.m.
 Tool 4: 10-32 thread mill at 40,000 rpm / 30 i.p.m.
 Tool 5: .1675" dia. drill at 20,000 rpm / 20 i.p.m.
 Tool 6: 82 degree countersunk bit at 25,000 rpm / 20 i.p.m.

Note: A custom undercut tool will also be required but was not used in the qualifying sample due to lead time for tool.

Summary of the Application:

The secondary frame offered many of the same challenges as the front frame. These similar issues were also easily accomplished. The alignment of this frame with the front frame was an additional critical requirement. The compact Datron machine offered tolerances well within the application specifications and facilitated proper alignment. The Datron software also offered many unique canned macros such as thread milling which were utilized. The ability to machine threads with a high speed machining system is difficult to achieve. Due to the standard canned cycles with the Datron software and unique tooling, the thread milling can be accomplished easily for a complete turn-key part. The open-architecture design also utilized programming from an external CAD/CAM package. The third party software was used for some of the more complex tool paths. Not only was Datron's unique hardware features beneficial for the application but the software control offered distinct advantages as well.