



DATRON DYNAMICS, INC.
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Application Notes

Part: Extruded Aluminum Front Panel
Material: 0.100" 6061 Aluminum
Machine Used: M5 - 4750
Features Utilized: 600 watt h/f spindle, automatic tool change, pneumatic clamps & Z probe
Software Used: PrimCam
Total Cycle Time: 4:09 machining time (26 seconds for the Z probe field)



Machining Details:

Tool 1: .078" diameter double flute end mill at 40,000 rpm / 80 i.p.m. for cut throughs and pockets

Tool 2: 45 degree bevel at 25,000 rpm / 60 i.p.m. for chamfered edge around rectangular opening

Tool 3: .039" diameter single flute end mill at 48,000 rpm / 30 i.p.m. for finish cuts and sharpening up corners

Programming Time: Approximately 1 hour

Summary of the Application:

Datron Dynamics is able to offer this customer a dramatic reduction in cycle time with a complete turn-key solution. The high frequency spindle allow for ultra-high feed rates, with the smaller diameter tooling. The Z probe ensured consistent milling depths, regardless of any surface variances or improper operator clamping errors. The pneumatic clamping fixture allows set-up to take seconds, not minutes. The coolant used eliminates secondary cleaning operations often associated with oil-based coolants. The combination of tooling, coolants, and high RPM speeds eliminates any burring, thus again reducing any secondary operations. In conclusion, this application establishes Datron Dynamics as the world leader in front panel applications.