

MEC Milling



Material
Aluminum Non-Ferrous

Part Type
Frame

Application
Milling: Roughing

Machine Type
vertical machining center

Kyocera Holder
MEC0750S75011T
EDP: [OTM87645](#)

Kyocera Insert
BDMT 11T331ERJT PR1825
EDP: [TLT00046](#)

Existing Product
0.6250" Dia. 2-Flute End Mill

Goal

An aerospace parts manufacturer needed to improve productivity in a roughing operation on an aluminum frame component, reducing total machining cost without sacrificing tool life.

Strategy

The previous tool was limited by a conservative feed rate that capped material removal. Kyocera engineers recommended the MEC Milling system, a 90-degree end mill paired with the PR1825 grade, engineered to run heavier feeds and deliver a higher metal removal rate in aluminum while doubling tool life.

Result

The implementation of the MEC Milling system delivered a 123% increase in material removal rate, a 100% increase in tool life, and a 67% reduction in cycle time. The customer saved more than \$67,000 annually.

Total Cost Savings
\$67,009

Tool Life (pcs/edge)
↑ 100%

Tool Running Cost
↓ 59%

Total Cost Per Part
↓ 67%

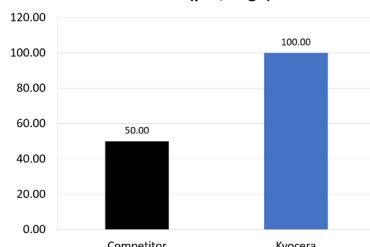
Tools	Cutting Dia. (Dc)	Cutting Speed Vc (sfm)	Cutting Feed Vf (ipm)	Radial Depth (Ae)	Axial Depth (Ap)	Coolant
Kyocera (MEC)	0.6250"	1,100	45.04	0.2000"	0.0600"	External coolant
Competitor (2-Flute)	0.6250"	1,100	20.17	0.2000"	0.0600"	External coolant

Tool Life (pcs/edge)
↑ 100%

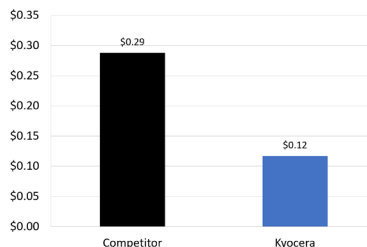
Tool Running Cost
↓ 59%

Total Cost Per Part
↓ 67%

Tool Life (pcs/edge)



Tool Running Cost



Total Cost Per Part

