KYOCERA

CUSTOMER SUCCESS

Milling: Roughing | General Engineering | Steel

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MFH-Raptor Milling

Material
A572 Steel

Part Type
Mounting Arm

Application
Milling: Roughing

Machine Type
TSUGAMI

Kyocera Holder
MFH050R105TM
EDP: THN07671

Kyocera Insert
SOMT140520ERGM PR1825
EDP: TLT00106

Existing Product
2.0482" Dia. 4-Flute End Mill

Total Cost Savings
$11,986

Tool Life (pcs/edge)
136%

Tool Running Cost
67%

Total Cost Per Part
24%

Goal

A manufacturer of mounting arms for general engineering applications needed better chip control in a roughing operation on A572 structural steel, with the broader objective of lowering total machining cost.

Strategy

The previous setup was limited by lower flute count and feed rate, which capped productivity and chip evacuation. Kyocera engineers recommended the MFH-Raptor Milling system, a high-feed face mill paired with the PR1825 grade, whose higher flute count and increased feed per tooth boosted material removal while improving chip control in the demanding roughing application.

Result

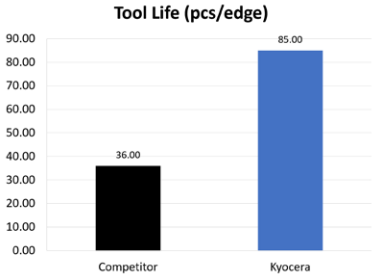
The implementation of the MFH-Raptor delivered a 136% increase in tool life, a 67% reduction in tool running cost, and a 24% reduction in total cost per part. The customer saved more than $11,000 annually.

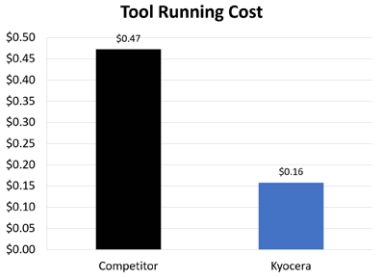
Tools	Cutting Dia. (Dc)	Cutting Speed Vc (sfm)	Cutting Feed Vf (ipm)	Radial Depth (Ae)	Axial Depth (Ap)	Coolant
Kyocera (MFH-Raptor)	1.9385"	600	236.45	1.4000"	0.0400"	Internal air
Competitor (4-Flute)	2.0482"	800	208.87	1.4000"	0.0400"	Internal coolant

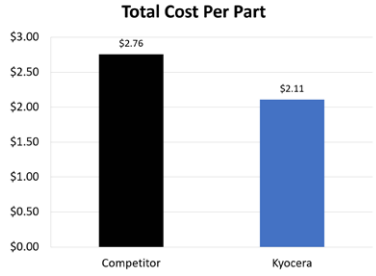
Tool Life (pcs/edge)
136%

Tool Running Cost
67%

Total Cost Per Part
24%







KYOCERA SGS Precision Tools
(800) 823-7284

ctsales@kyocerapti.com

www.kyoceraprecisiontools.com