



Real-Life Stories

Case Study: H-Carb Series 77 Helps Defense Industry Company Reduce Overall Total Job Cost

Brought To You by KYOCERA SGS Precision Tools | Apr 03, 2023

Goals

The goal of this opportunity was to reduce overall total job cost by increasing tool life and decreasing cycle time per part.

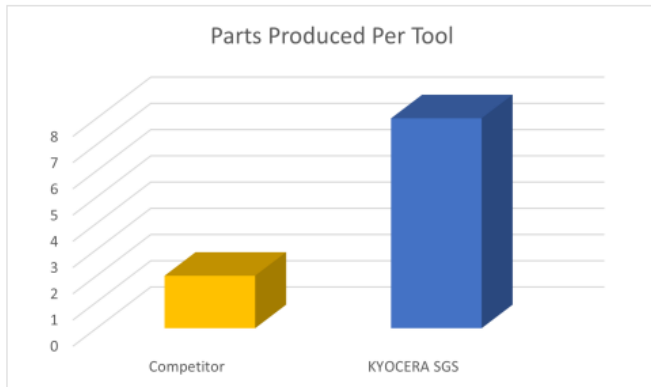
Strategy

The existing application utilized an indexable shell mill to take a peripheral cut on a 2" thick plate. Subsequently, an end mill was used to clean up the smaller corners and finish the outside. The new strategy utilized a single 7-flute end mill for both operations.

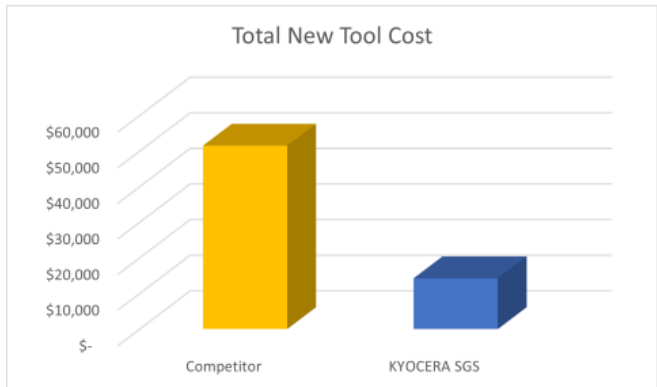
	KYOCERA SGS End Mill	Competitor Shell Mill
Cutting Diameter (DC)	0.750"	2.000"
RPM	1552	802
SFM	305	420
Feed (IPM)	28.2	28.1
IPR	0.0182	0.035
RADIAL DEPTH (AE)	0.0525"	0.200"
AXIAL DEPTH (AP)	2.000"	0.275"
CYCLE TIME	9:30 MINUTES	31 MINUTES

Conclusion & Results

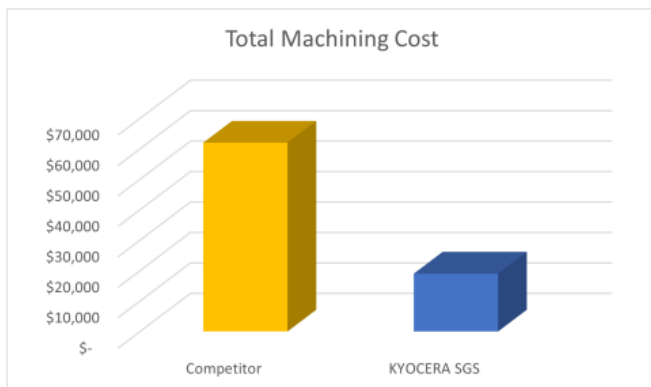
Using the SGS Series 77 end mill, the customer was able to reduce the number of axial passes from 8 to 4 and eliminated the need for an additional tool to perform the clean-up and finishing cuts. Cycle time was decreased from 31 minutes to 9:30 minutes per part, and part count per tool went from 2 to 8. Major improvements were realized in total machining cost, new tool cost, and tool change cost, resulting in annual savings of nearly \$89,000.



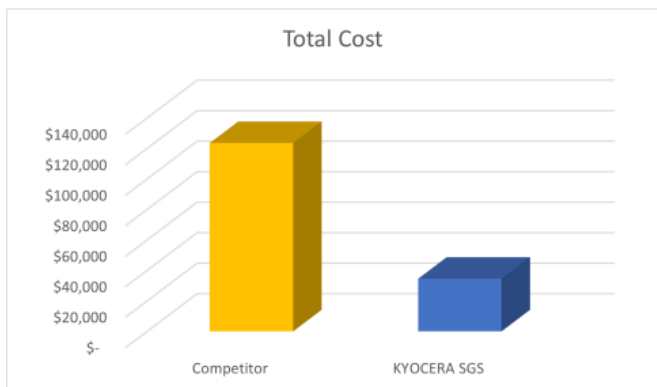
KYOCERA SGS was able to increase the parts per tool from 2 to 8.



KYOCERA SGS was able to reduce the annual tool cost from \$51k to \$14.2k



KYOCERA SGS was able to reduce the annual total machining cost from \$62k to \$19k



KYOCERA SGS was able to reduce the annual total machining cost from \$123.5k to \$34.5k

Download a PDF of the complete case study here where you can scan a QR code to see the H-Carb Series 77 in action.

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