



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.

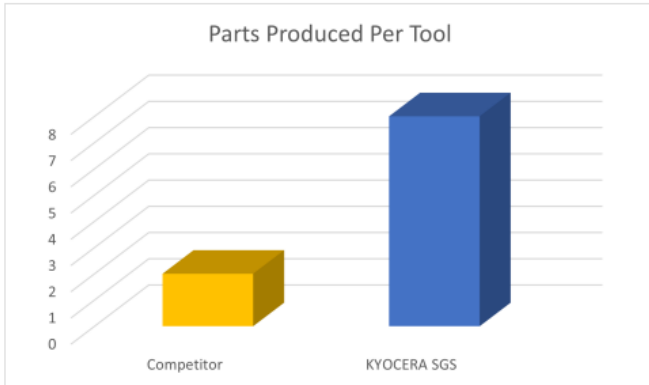
### Strategy

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.

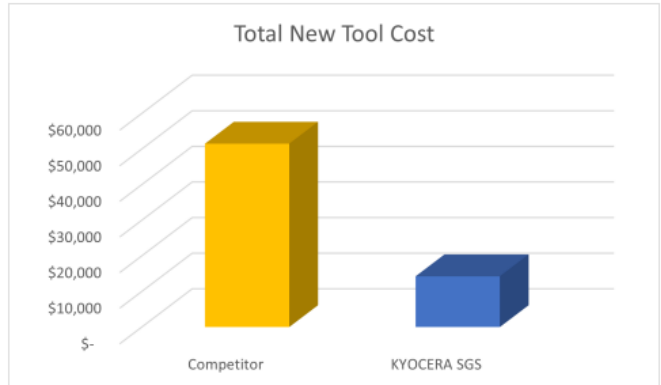
	<b>KYOCERA SGS End Mill</b>	<b>Competitor Shell Mill</b>
<b>Cutting Diameter (DC)</b>	0.750"	2.000"
<b>RPM</b>	1552	802
<b>SFM</b>	305	420
<b>Feed (IPM)</b>	28.2	28.1
<b>IPR</b>	0.0182	0.035
<b>RADIAL DEPTH (AE)</b>	0.0525"	0.200"
<b>AXIAL DEPTH (AP)</b>	2.000"	0.275"
<b>CYCLE TIME</b>	9:30 MINUTES	31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

## Conclusion & Results

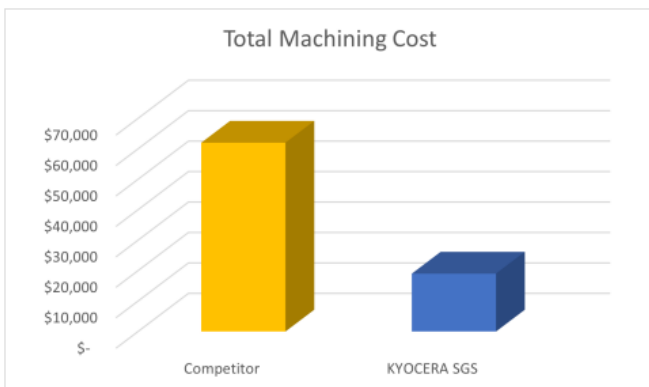
Using the SGS Series 77 end mill, the customer was able to reduce the number of axial passes from 8 to 4 and eliminated the need for an additional tool to perform the clean-up and finishing cuts. Cycle time was decreased from 31 minutes to 9:30 minutes per part, and part count per tool went from 2 to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



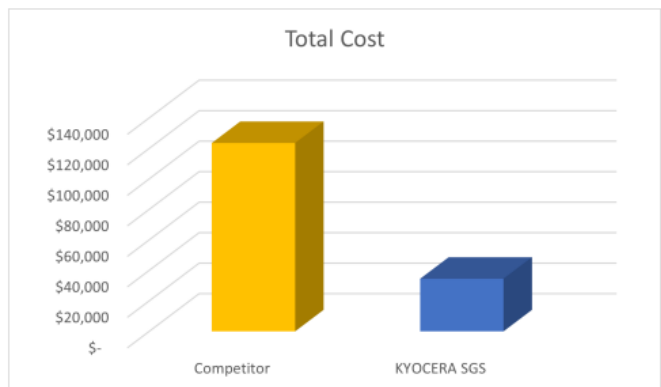
*KYOCERA SGS was able to increase the parts per tool from 2 to 8.*



*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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