

Z-CARB

Kyocera SGS Precision Tools Case Study



INDUSTRY

GENERAL ENGINEERING

MATERIAL

17-4 STAINLESS STEEL

PRODUCT

KSPT Z-CARB END MILL

APPLICATION

MILLING

COMPETITOR

4 FLUTE GENERAL PURPOSE END MILL

COOLANT

EMULSION

TOOL INFORMATION

.3125 DIA / .813" LOC / 2.5" OAL



GOALS

The goals of this study were to significantly reduce job cost through an increase in tool life, a reduction in machining time, and an improvement in manufacturing efficiency.

STRATEGY

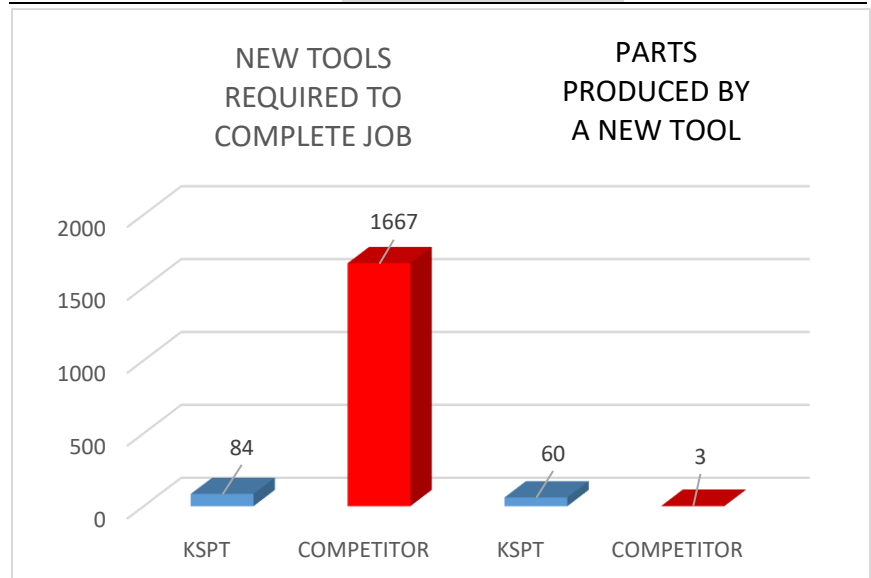
KSPT approached this job with a 4 flute Z-Carb high performance end mill. KSPT's Z-Carb was able to capacitate higher speed and feed rates, while still producing an optimal finish.



KSPT's Z-Carb produced 20 times the parts than the competition with almost 1500 less tools!

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	KSPT	COMPETITOR
TOOL DIAMETER	.375"	.375"
SPEED	3800 RPM	3000 RPM
FEED	9.9 IPM	5.1 IPM
RADIAL CUT (AE)	.2500"	.2500"
AXIAL CUT (AP)	.0750"	.0750"
CYCLE TIME	2.02 MINUTES	3.92 MINUTES



RESULTS

The overall findings of this study indicate although KSPT's Z-Carb has a **slightly higher list price**, it was able to save the customer money in the long run. This was done through an **increase in speed and feed capacity** as well as the use of a higher quality tool. Given the vastly smaller number of tools used, the tool change cost for the Z-Carb was **reduced by over \$9,000** and total new tool cost was **reduced by over \$24,000**. Additionally, with the speed and feed improvements the **total machining time was cut in half!** When you combine the savings in new tool cost with the savings in tool change cost with the **total machining cost savings of \$11,383.66**, you get a **total cost savings of \$45,051.20!!!**

