

# Z-CARB HPR

Kyocera SGS Precision Tools Case Study

**TOTAL SAVINGS**  
**\$61,962**



**INDUSTRY**  
ENGINEERING

**MATERIAL**  
17-4 PH STAINLESS STEEL

**PRODUCT**  
KSPT Z-CARB HPR (Enhanced Geometry)

**APPLICATION**  
PROFILING

**COMPETITOR**  
COMPARABLE 5 FLUTE END MILL

**COOLANT**  
SYTHETIC FLOOD

**TOOL INFORMATION**  
.5 DIA / 1.25" LOC / 3" OAL

## GOALS

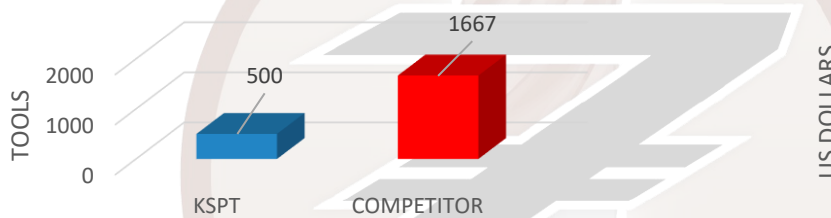
The goals of this study were to significantly reduce job cost using a higher quality tool to maximize tool life.

## STRATEGY

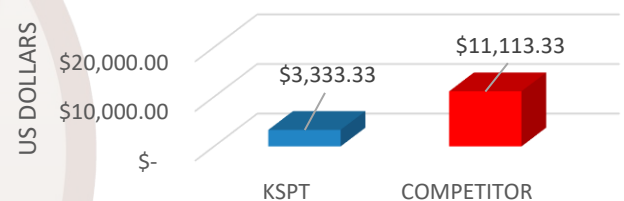
KSPT approached this job with a 5 flute Z-Carb high performance rougher (HPR) end mill. KSPT's Z-Carb HPR is ideal for achieving high metal removal rates while achieving optimal surface finishes. The specialized five flute design is engineered for increased productivity.

	KSPT	COMPETITOR
<b>TOOL DIAMETER</b>	.5"	.5"
<b>SPEED</b>	2500 RPM	2500 RPM
<b>FEED</b>	23 IPM	23 IPM
<b>RADIAL CUT (AE)</b>	.1"	.1
<b>AXIAL CUT (AP)</b>	.6"	.6"

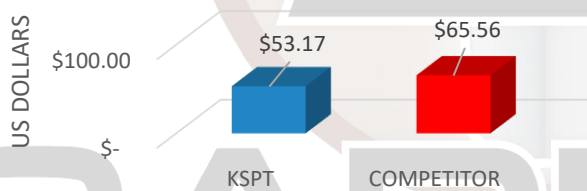
NEW TOOLS REQUIRED TO COMPLETE JOB



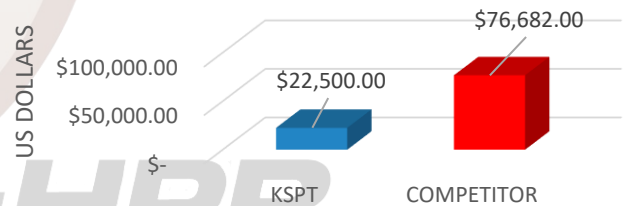
TOOL CHANGE COST



TOTAL COST PER PART



TOTAL NEW TOOL COST



## RESULTS

Tool quality goes a long way, even if speeds and feeds are equal. This case is proof of that. In this case, the Z-Carb HPR was able to prove its unsurpassed quality and precision. The end user ran the HPR and the competitor's tool at identical speed and feed, and because the HPR is a higher quality tool, one tool was able to produce over 3 times as many parts as the competitor's tool. With the customer's need to produce 5000 parts in order to complete the job, the HPR was able to do so and only use 500 tools. The competitor took 1,667 to complete the same job. With the use of fewer new tools, several things are affected. The tool change cost was reduced by over \$7,700 and the total new tool cost was reduced by over \$54,000. The customer saw a reduction in total cost per part of \$12.39, and when all was said and done, the customer saved a grand total of \$61,962!

