

# Z-CARB AP



Kyocera SGS Precision Tools Case Study

## INDUSTRY



**AUTOMOTIVE MATERIAL**  
8620 STEEL

## PRODUCT

KSPT Z-CARB AP END MILL

## APPLICATION

MILLING

## COMPETITOR

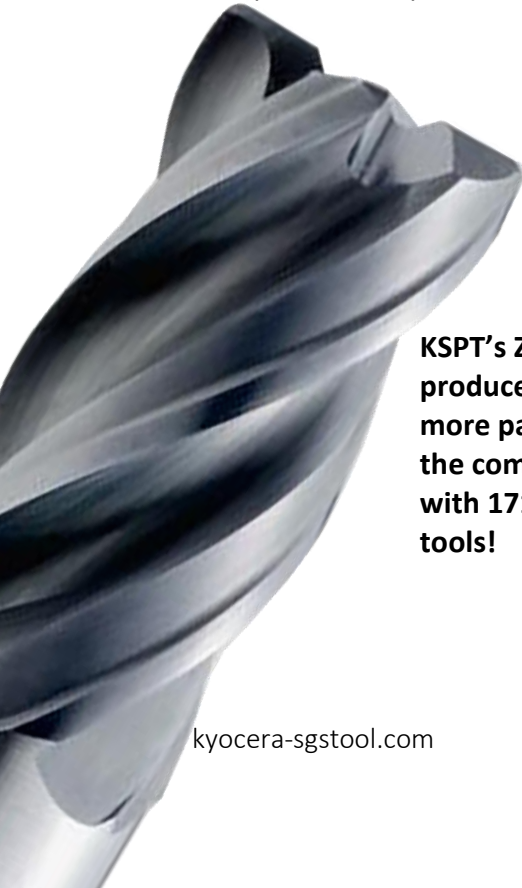
4 FLUTE GENERAL PURPOSE END MILL

## COOLANT

FLOOD

## TOOL INFORMATION

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



**KSPT's Z-Carb produced 150 more parts than the competition with 171 less tools!**

[kyocera-sgstool.com](http://kyocera-sgstool.com)



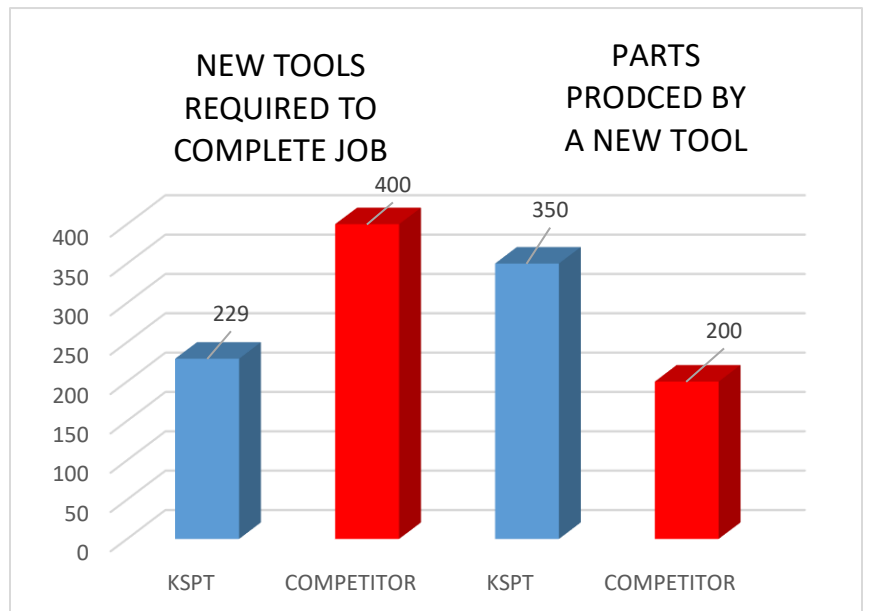
## GOALS

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         | COMPETITOR   |
|----------------------|--------------|--------------|
| <b>TOOL DIAMETER</b> | .1875"       | .1875"       |
| <b>SPEED</b>         | 3800 RPM     | 3000 RPM     |
| <b>FEED</b>          | 9.9 IPM      | 5.1 IPM      |
| <b>CYCLE TIME</b>    | 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 **improvement in speed and feed efficiency**, as well as the use of a higher quality tool. Given the noticeably smaller number of tools used, the tool change cost for the Z-Carb was **reduced by over \$3,400** and total new tool cost was **reduced by over \$2,200**. Additionally, with the smaller number of **high-quality tools doing the job**, the machining cost for this job was **reduced by \$33,333.34**. When you combine that with the savings in new tool cost and the savings in tool change cost you get a **total cost savings of \$39,031.33!!!**

