Z-CARB HPR

Kyocera SGS Precision Tools Case Study

INDUSTRY

MOLD AND DIE

MATERIAL

A36

PRODUCT

KSPT Z-CARB HPR

APPLICATION

SLOTTING

COMPETITOR

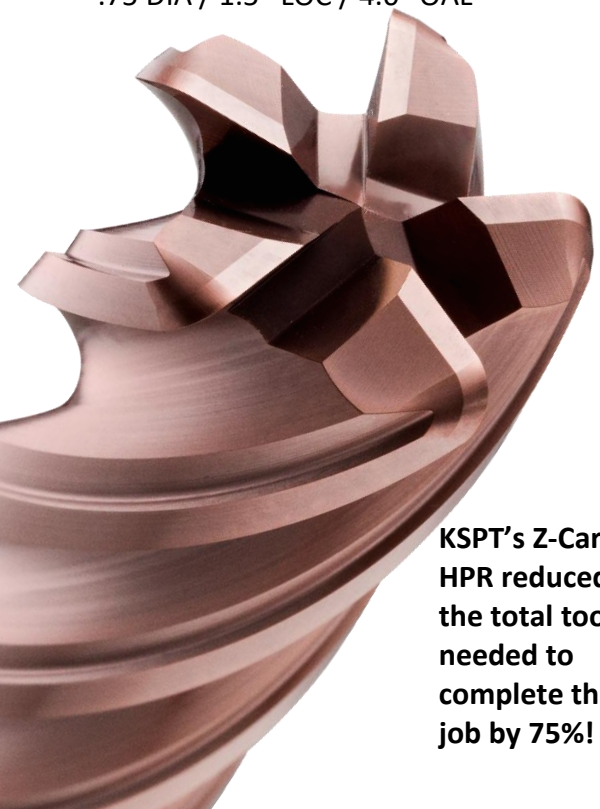
4-Flute GENERAL PURPOSE END MILL

COOLANT

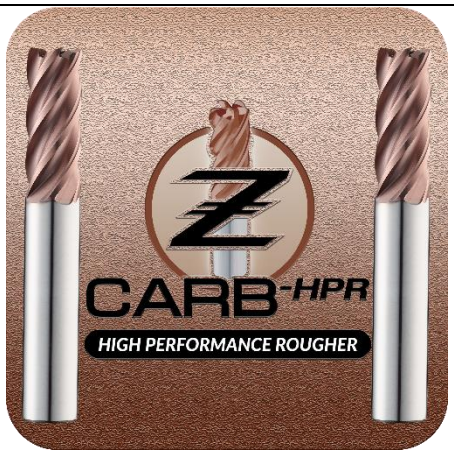
FLOOD

TOOL INFORMATION

.75 DIA / 1.5” LOC / 4.0” OAL



KSPT’s Z-Carb HPR reduced the total tools needed to complete the job by 75%!



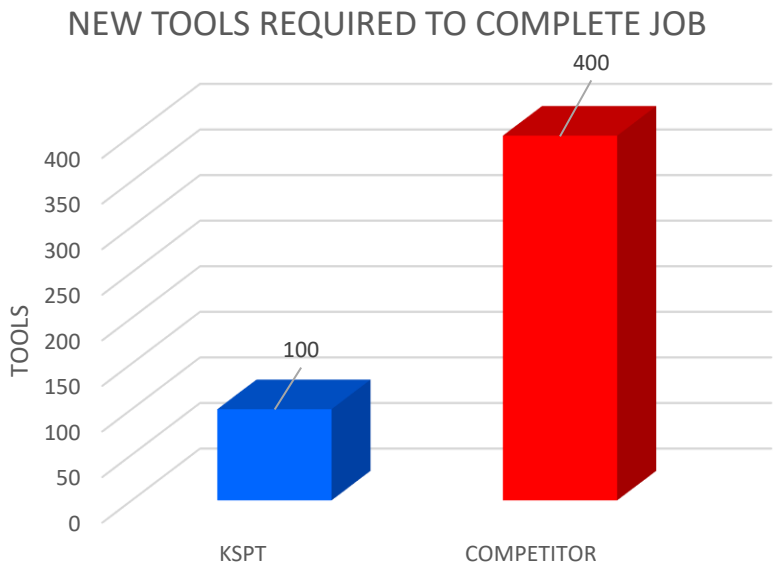
GOALS

The goals of this study were to significantly reduce job cost through increasing tool life, reducing machining time and improving manufacturing efficiency.

STRATEGY

KSPT approached this job with a 5 flute Z-Carb high performance rougher (HPR) end mill. KSPT’s Z-Carb HPR ideal for achieving high metal removal rates, while at the same time achieving an optimal surface finish. The specialized five flute design is engineered for increased productivity over three and four flute end mills.

	KSPT	COMPETITOR
TOOL DIAMETER	.7500”	.7500”
SPEED	2400 RPM	1800 RPM
FEED	32 IPM	12.1 IPM
RADIAL CUT (AE)	.7500"	.7500"
AXIAL CUT (AP)	1.05"	1.05"
CUTTING TIME / PART	7.5 MINUTES	19.9 MINUTES



RESULTS

The overall findings of this study indicate that KSPT's HPR heavily outperformed the competitor's tool in every statistical category. The HPR was able to produce 4 times the amount of parts with a fourth of the necessary new tools. This was done because the HPR could capacitate a 25% higher speed and a 65% higher feed rate. Thus, the material removal rate was more than double that of the competitor's tool. To complete the job, the HPR only required 12.5 hours to the competitors 33! When you put a price tag on the saved machining time, the customer saved over $2,000. When that is combined with the over $19,000 saved in cost of new tools, the customer experienced a total cost savings of $27,018.44!