

Z-CARB HPR



Kyocera SGS Precision Tools Case Study

INDUSTRY



MOLD AND DIE

MATERIAL

P21 Die Steel (28HRC hardness)

PRODUCT

KSPT Z-CARB HPR

APPLICATION

MILLING

COMPETITOR

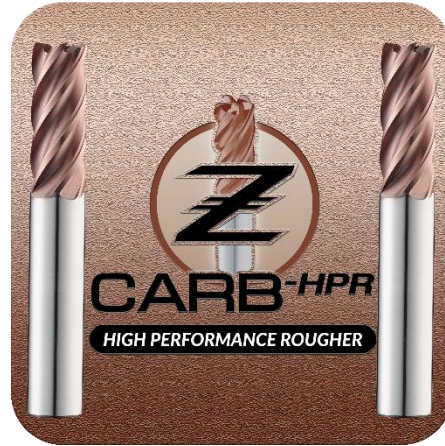
4-Flute End Mill

COOLANT

Synthetic Emulsion

TOOL INFORMATION

.1250 DIA / .25" LOC / 1.5" OAL



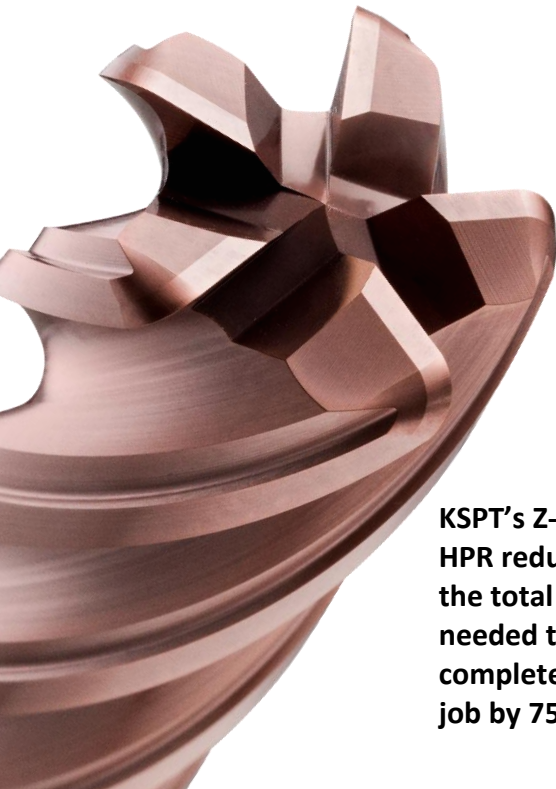
GOALS

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

STRATEGY

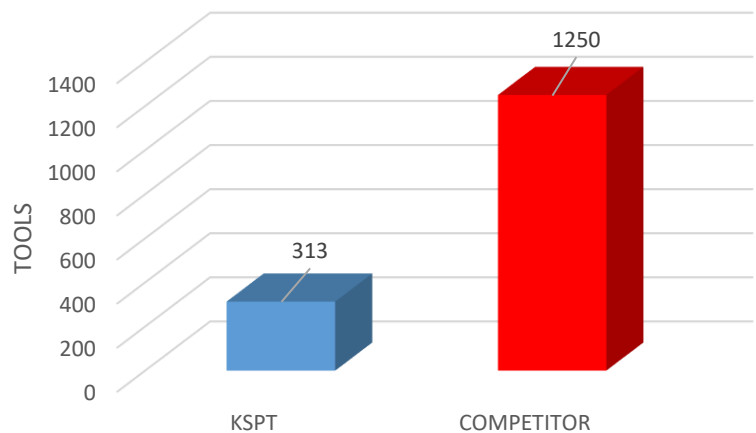
KSPT approached this job with a 5 flute Z-Carb high performance rougher (HPR) end mill. KSPT's Z-Carb HPR ideal for achieving high metal removal rates, while at the same time achieving an optimal surface finish. The specialized five flute design is engineered for increased productivity over three and

	KSPT	COMPETITOR
TOOL DIAMETER	.1250"	.1250"
SPEED	13,350 RPM	11,000 RPM
FEED	22.7 IPM	16.5 IPM
RADIAL CUT (AE)	.050"	.120"
AXIAL CUT (AP)	.250"	.188"
CYCLE TIME	2.203 MINUTES	3.03 MINUTES



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

NEW TOOLS REQUIRED TO COMPLETE JOB



RESULTS

The overall findings of this study indicate that KSPT's HPR has a slightly lower list price. We were also able to **reduce the tools needed to complete the job by over 75%**. We were able to use **75% fewer tools used** because we were able to **improve our speed by 17% and our feed rate by an additional 27%**. When you combine these manufacturing efficiencies with the reduced number of tools necessary for the job, we **reduced the cost per part by 63%**. Subsequently, the total new **tool cost was reduced by over \$18,000**. When you combine this with the **\$2200 saved in machining cost**, we were able to provide a **Total Job Savings of \$20,458.58!!**

