

# SERIES 51 T-CARB



Kyocera SGS Precision Tools Case Study

## INDUSTRY



## ENGINEERING

### MATERIAL

347 STAINLESS STEEL  
(32 HRC Hardness)

### PRODUCT

KSPT SERIES 51 T-CARB

### APPLICATION

TROCHOIDAL MILLING

### COMPETITOR

5-Flute End Mill

### COOLANT

WATER SOLUBLE

### TOOL INFORMATION

.500 DIA / .1.25" LOC / 3.0" OAL



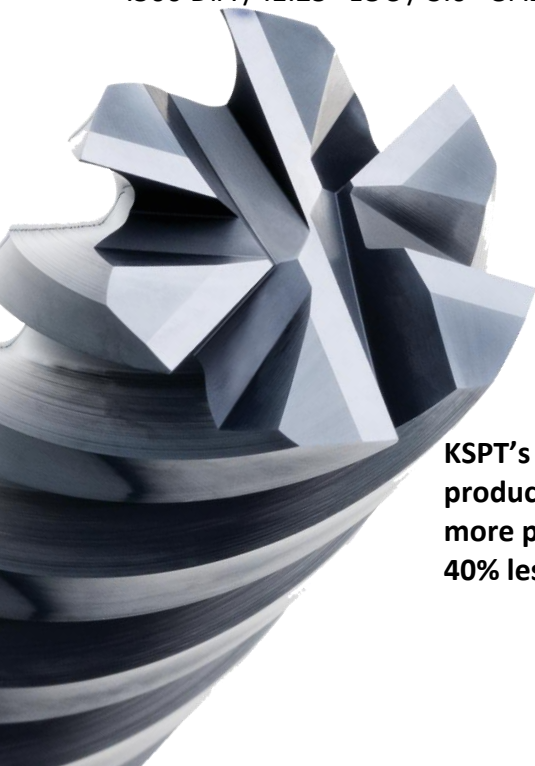
## GOALS

The goals of this study were to significantly reduce job cost through increasing tool life, reducing cycle time and increasing tool efficiencies.

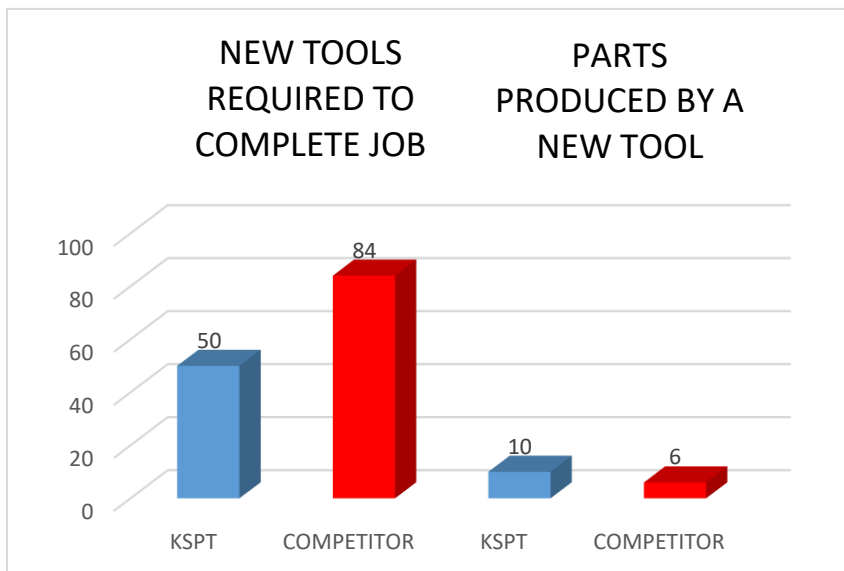
## Features

KSPT approached this job with a 6 flute T-Carb end mill. KSPT's T-Carb excels at high-speed machining. Specifically, trochoidal and peel milling, the T-Carb's 6 flute design with eccentric relief provides strength and supreme chip control at high speeds, and with surprising finish results.

	KSPT	COMPETITOR
TOOL DIAMETER	.500"	.500"
SPEED	7500 RPM	3056 RPM
FEED	176.3 IPM	54.1 IPM
RADIAL CUT (AE)	.0250"	.0250"
AXIAL CUT (AP)	.6500"	.6500"
CYCLE TIME	8.51 MINUTES	27.73 MINUTES



KSPT's T-Carb produced 40% more parts with 40% less tools!!



# RESULTS

The overall findings of this study indicate that KSPT's T-Carb is priced almost **40% less than the competitor's tool**. The T-Carb, being a **higher quality tool**, was able to capacitate more than double the speed and triple the feed of the competitor's tool. Thusly, the **cycle time was more than 3 times longer with the competitors 5 flute end mill** than with the T-Carb. With the reduction in cycle time per part, the T-Carb **reduced the hours of machining by 160 total hours!** Subsequently, because it took the T-Carb **40% less tools**, the total **new tool cost was reduced by over \$6,000!** When you incorporate the savings in new tool cost with the over **\$16,000 in machining cost savings**, KSPT was able to save the customer a total of **\$22,396!!**

