SERIES 131N HI-PERCARB

Kyocera SGS Precision Tools Case Study

INDUSTRY

MEDICAL

MATERIAL

7075 ALUMINUM

PRODUCT

SERIES 131N HI-PERCARB 5XD DRILL

APPLICATION

DRILLING

COMPETITOR

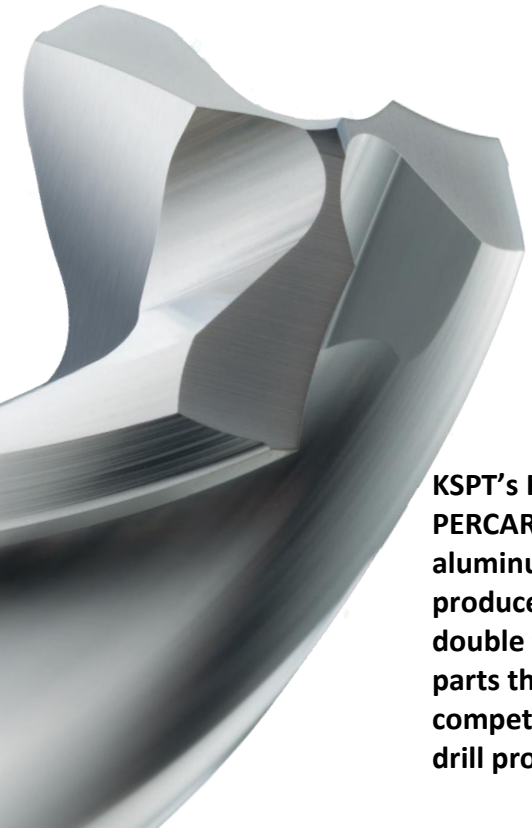
COMPARABLE 3 Flute Drill

COOLANT

FLOOD

TOOL INFORMATION

8.2mm DIA / 37mm LOC / 79mm OAL



KSPT's HI-PERCARB aluminum drill produced double the parts that the competitors drill produced.

GOALS

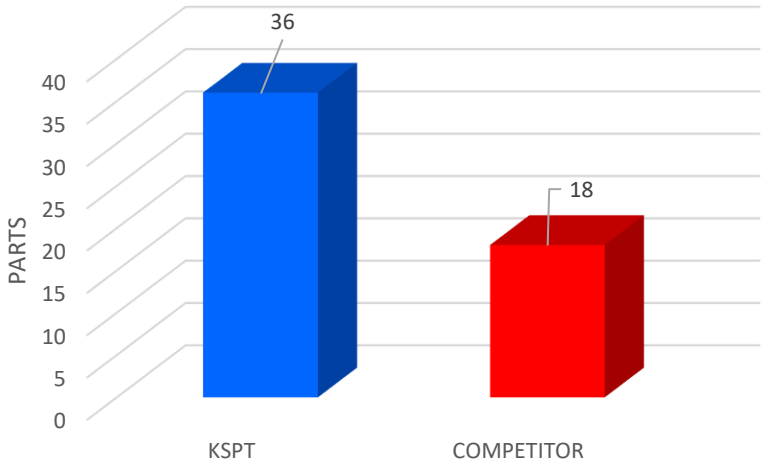
The goals of this study were to significantly reduce job cost through increasing tool life, reducing machining time and improving overall manufacturing efficiency.

STRATEGY

KSPT approached this job with a 3 flute HI-PERCARB aluminum drill. The tri-margin design offers superior surface finish and hole cylindricity. Additionally, the sculpted gash allows for a reduction of cutting forces over competitive three-flute designs.

	KSPT	COMPETITOR
TOOL DIAMETER	8.2mm	8.2mm
SPEED	5000 RPM	4000 RPM
FEED	60 IPM	16 IPM
RADIAL CUT (AE)	N/A	N/A
AXIAL CUT (AP)	1.135"	1.135"
CYCLE TIME	60 SECONDS	60 SECONDS

TOTAL PARTS AVAILABLE PER TOOL



RESULTS

The overall findings of this study indicate the series 131N HI-PERCARB drill outperformed the competition in every statistically category. The HI-PERCARB's tool life doubled that of the competitor because the HI-PERCARB was able to capacitate a 73% higher feed rate and a 20% improvement in RPM. It also produced twice the amount of parts as the competition's drill. The engineer's knowledge of the tool heavily factored into how efficiently the tool performed. He was able to achieve a material removal rate nearly 4 times that of the competition's drill. In this case, the net price per new tool was irrelevant because the reduction in necessary tools produced a savings in new tool cost of over $33,000. When you combine that with the machining cost savings, the customer experienced a **total cost savings of $33,910.44.**