

INDUSTRY



ENGINEERING

MATERIAL

CFRP

PRODUCT

KSPT Series 120 CFRP Drill

APPLICATION

Hole Making in Composite Rings

COMPETITOR

Uncoated Comparable Drill

COOLANT

Dry

TOOL INFORMATION

.277 in DIA / 1.312 in LOC /
3.125 in OAL

SERIES 120 CFRP DRILL

GOALS

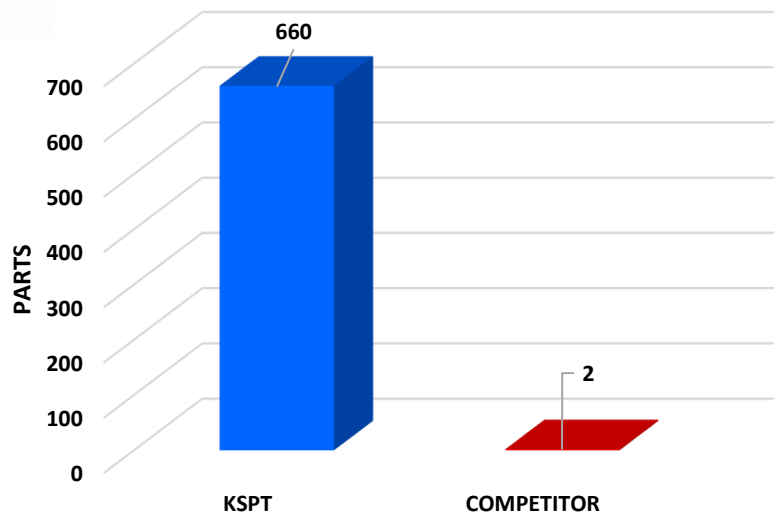
The goals of this study were to significantly reduce cost through a reduction of machine downtime and elimination of a lengthy and expensive regrind process.

STRATEGY

KSPT approached a customer who was using an uncoated drill to make holes on CFRP composite. They were seeking a more efficient machining process. KSPT's series 120 CFRP drill was the ideal choice for this job.

	KSPT	COMPETITOR
SPEED	3000 RPM	3000 RPM
FEED	30 IPM	30 IPM
RADIAL CUT (AE)	N/A	N/A
AXIAL CUT (AP)	.2800	.2800
CYCLE TIME	3.5 Minutes	3.5 Minutes

PARTS PRODUCED BY A NEW TOOL

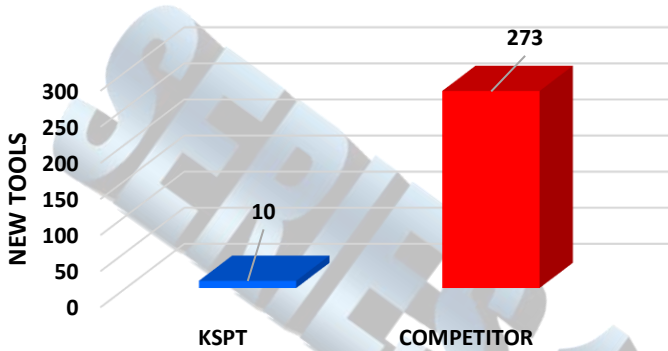


1 KSPT's series 120 CFRP drill was able to produce 330 times the parts as the competitor's drill!

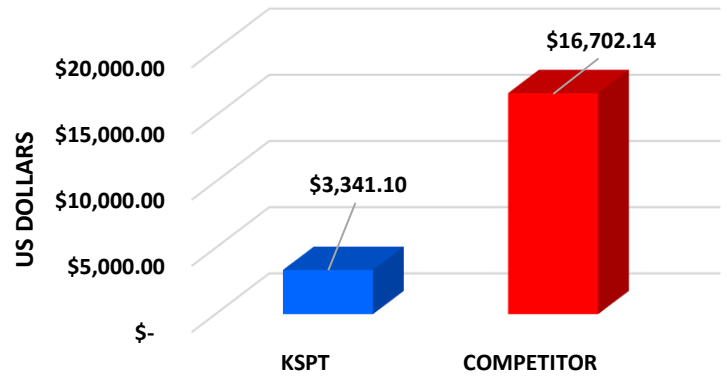
RESULTS

Increasingly, people are trying to do more with less time. Competitiveness have all converged to force people and businesses into a frenzied pace to be more productive and time-sensitive than ever before. A machine losing minutes of downtime equals dollars lost to the manufacturer. Anytime you can provide a solution to a manufacturer that saves them an abundance of downtime, it matters as much as saving them dollars. Here is a case where a manufacturer needed a way to reduce machining downtime as well as internal regrind costs when fabricating CFRP composite rings. The operation in question was a drilling one so the KSPT series 120 CFRP drill was the optimal tool for the task. The competing drills were run at identical speed and feed rates but because the competitors tool required a lengthy regrind process, the 120 drill saved this customer an abundance of both time and money. To complete 6000 rings, it only required 2 series 120 drills and 660 competitor drills to accomplish the same task. That means to complete the entire job, the manufacturer only needed 10 series 120 drills but 273 competitor drills. Because the series 120 drill didn't require a length and expensive regrind process, it saved the manufacturer an immediate \$44,000. The tool change cost was reduced by over 99% and over \$16,000. When the total new tool cost is combined with the tool change cost, machining cost and regrind cost, this manufacturer saved \$73,870.62. A reduction of over 73%!!!!

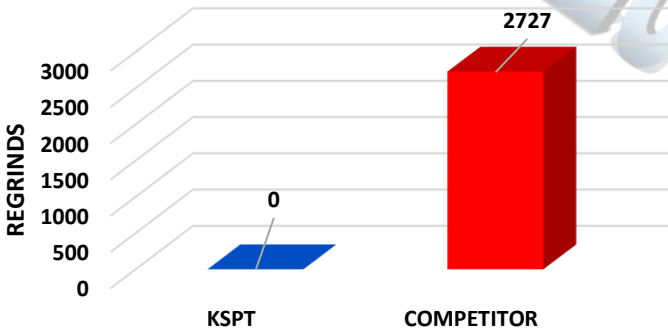
NEW TOOLS NEEDED TO COMPLETE THE JOB



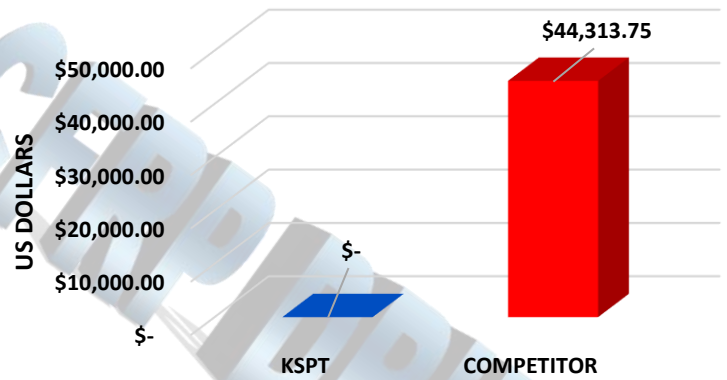
TOTAL MACHINING COST



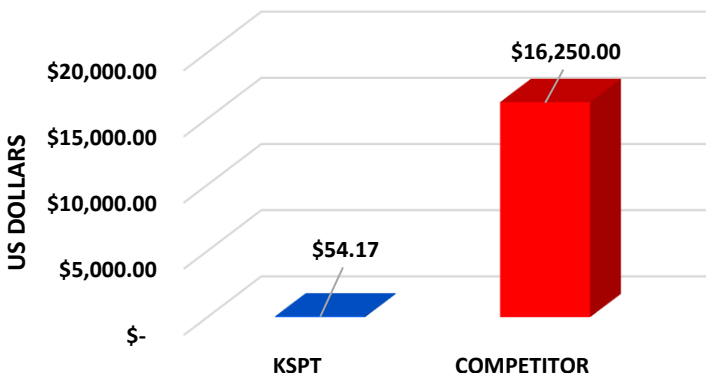
REGRINDS NEEDED TO COMPLETE THE JOB



TOTAL REGRIND COST



TOOL CHANGE COST



TOTAL COST

