CASE STUDY. ASC 320®

PROJECT PROFILE: **1045 Heavy Equipment Manufacturer**

The end-user is machining components made from 1045 steel, using a Okuma vertical machining center, with 1000 PSI, and thru tool water based coolant.

REDUCED CYCLE TIMES

+ CHALLENGE:

Previously the customer was using a conventional solid cobalt drill, running at the following parameters: 1000 RPM, 0.003 IPR, (0,08 mm/rev) which resulted in 3 IPM (76,2 mm/min). The tool drilled a through hole to a diameter of 0.238" (6,05 mm) and a thickness of 1.3 inches (33,02 mm). The tool had a cycle time of 26 seconds and a tool life of 48 holes.
The end-user wanted to reduce the cycle time without negatively affecting his cost per hole. Tool life was also an issue with them. Wisely, they called Allied Machine & Engineering Corp. to see if there was a better way.

+ OUR SOLUTION:

Allied recommended the ASC 320® Solid Carbide Drill, 390M06050A21M. The tool ran at a speed of 3000 RPM, 0.006 IPR (0,15 mm/rev) which resulted in 18 IPM (457,2 mm/min). ASC 320 delivered a cycle time of 4.3 seconds and a tool life of 2000 holes. The outcome met the customer's goals of reduced cycle times and improved tool life.

+ PROJECT DATA:

ASC 320® Solid Carbide Drill helped to reduce the machine run time resulting in the cost per hole dropping from $0.25 to $0.09, for a considerable cost savings of 63.54%. Cycle time was greatly reduced as well, from 26 seconds to just 4.3 seconds. The improvements in tool life were huge, as the competitive tool only obtained a dismal 2% of the tool life delivered by the ASC 320! This result reassured the customer that they had chosen wisely when they chose Allied.