



CASE STUDY. **AccuPort 432[®]**

PROJECT PROFILE: **6061 Aluminum-Castings Job Shop**

The end-user is machining Polaris Case Covers made from 6061 Aluminum, using a horizontal machining center with 1000 PSI water soluble coolant.

+ CHALLENGE:

Previously the customer was using two tools to complete the operation: A solid carbide drill and a brazed port tool. The solid carbide ran at the following parameters: 1800 RPM, 0.0084 IPR, (0,21 mm/rev) which resulted in 15.1 IPM (384,1 mm/min). The brazed port tool ran at 5004 RPM, 0.010 IPR (0,25 mm/rev) which resulted in 50.0 IPM (1271 mm/min). The tools combined to drill a blind hole at a diameter of 0.6496" (16,5 mm), to a depth of 2.1" (53,3 mm), with an overall cycle time of 26.9 seconds, and a tool life of 4000 holes. The customer wanted to reduce the tooling costs for this job, which was high due to using multiple tooling. They contacted Allied, offering the challenge to make things better for them.

+ OUR SOLUTION:

Allied recommended AccuPort 432[®], insert item 4C10H-16.5 and holder 16149-06R-C5A. The tooling ran at 7063 RPM, 0.012 IPR (0,30 mm/rev) which resulted in 84.8 IPM (2154 mm/min). The AccuPort 432[®] had a cycle time of 9.5 seconds, finishing the drill and form in just one step.

+ PROJECT DATA:

This reduction in tooling requirements as well as the reduction in cycle time was significant. Allied Machine and AccuPort 432[®] provided a cost per hole of \$0.206 as compared to the previous multiple-tool operation cost of \$0.525 per hole, for a savings of 60.85%!



*REDUCED COST
OF PRODUCTION*