CASE STUDY. AccuPort 432®

PROJECT PROFILE: 6061 Aluminum Contract Job Shop

The end-user is machining clutch castings made from 6061 Aluminum, using a horizontal machining center with water soluble coolant.

REDUCED TOOL INVENTORY

+ CHALLENGE:

Previously the customer was using two tools to complete the operation: A Nachi drill was used to bring the hole to the required depth, running at the following parameters: 7056 RPM, 0.018 IPR, (0,46 mm/rev) which resulted in 127 IPM (3225 mm/min). The tool drilled a blind hole at a diameter of 0.6496" (16,5 mm), to a depth of 0.7" (17,8 mm). The tool had a cycle time of 5.33 seconds, and a tool life of 5000 holes. The second operation involved the use of a Walter port contour carbide tool to cut the port. The running parameters were: 3881 RPM, 0.012 IPR, (0,30 mm/rev) which resulted in 46.5 IPM (1182 mm/min). This tool had a cycle time of 5.13 seconds, and a tool life of 5000 holes. The customer wanted to eliminate the need for multiple tooling on one job. They contacted Allied after hearing about the success of our tooling in another department within their company.

+ OUR SOLUTION:

Allied recommended AccuPort 432®, insert item 4C10H-16.5 and holder 16149-08R0-20FM. The tooling ran at a speed of 8232 RPM, 0.012 IPR (0,30 mm/rev) which resulted in 98.8 IPM (2509 mm/min). The tool had a cycle time of 5.43 seconds, and a tool life of 5000 holes. The outcome met the customer's goals of finding a single tool to complete multiple operations in one application. As a result of this improvement, Allied Machine and AccuPort 432® provided a cost per hole of $0.14 as compared to the previous multiple-tool operation at a cost of $0.24 per hole.

+ PROJECT DATA:

AccuPort 432® eliminated the need for multiple tooling on one job, reducing inventory requirements. The decrease in the cost per hole allowed for a real dollar savings of over 41%.