



CASE STUDY.

PROJECT PROFILE:

Revolution Drill[®] 1045 Automotive

The end-user is machining spacers for torque converters made from 1045 using a CNC Lathe IKEGAI-Fx 25N, with external coolant.

+ CHALLENGE:

Previously the customer was using a Kennametal special diameter IC drill, running at the following parameters: 500 RPM, 0.003 IPR, (0,08 mm/rev) which resulted in 1.5 IPM (38,1 mm/min). The tool drilled a 1.9" (48,3 mm) diameter through-hole to a depth of 3 inches (76,2 mm). The tool had a cycle time of 120 seconds and a tool life of 300 holes. Allied was called in because the Kennametal tool was expensive, and had long lead times. The customer's goal was to improve cycle times and lower the cost per hole.

+ OUR SOLUTION:

Allied recommended its stocked Revolution Drill[®] using insert item OP-05T308-H and holder R34X22-150L. The tooling ran at a speed of 900 RPM, 0.0035 IPR (0,09 mm/rev) which resulted in 3.15 IPM (80 mm/min). The tool had a cycle time of 60 seconds and a tool life of 600 holes. The outcome met the customer's goals of improved cycle times as well as a lower cost per hole.

+ PROJECT DATA:

Allied Machine made a significant difference for the customer. Amazingly, the Revolution Drill[®] was able to provide twice as many drilled holes in half the time. This accomplishment helped to reduce the cost per hole from \$2.14 to \$0.98, for a considerable cost savings of 54.38%.



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