



CASE STUDY.

PROJECT PROFILE:

Revolution Drill[®] H13 Die Shop

The end-user is machining a steel part made from H13 using a horizontal Okuma L106 lathe with 200 PSI internal coolant.

+ CHALLENGE:

Previously the customer was using Sandvik indexable drill with two inserts. This operation ran at the following parameters: 900 RPM, 0.002 IPR, (0,05 mm/rev) which resulted in 1.8 IPM (45,72 mm/min). The completed through-hole has a diameter of 1.96" (50 mm) and a thickness of 5.9" (150 mm). The tools had an overall cycle time of 3 minutes and 17 seconds per hole and a tool life of 6 holes. Pecking was required, which lengthened the operation.

The customer was unhappy with the long cycle times and short tool life. They asked if Allied could provide a better solution.

+ OUR SOLUTION:

Allied recommended the Revolution Drill R34X35-40M using DP-05T308-H inserts. The tooling ran at a speed of 1000 RPM, 0.004 IPR (0,10 mm/rev) which resulted in 4.00 IPM (101,6 mm/min). The Revolution Drill delivered a cycle time of just 1 minute and 28 seconds as compared to the 3 minutes, 17 seconds required by the Sandvik drill. The inserts had a tool life of 15 holes. The outcome met the customer's goals of reduced cycle times and improved tool life.

+ PROJECT DATA:

The Revolution Drill showed exceptionally good chip formation and drilled a hole, without requiring time consuming peck cycles. This provided the end-user with a significant 55% savings in process and throughput time while delivering nearly 3X the tool life.



REDUCED CYCLE TIMES