



## CASE STUDY.

PROJECT PROFILE: **4140 Government Contractor**

# GEN3SYS<sup>®</sup>

The end-user is machining flange brackets made from 4140 using a horizontal turning center, with 750 PSI water soluble coolant.

### + CHALLENGE:

Previously the customer was using a TiN coated YG-1 spade drill running at the following parameters: 550 RPM, 0.008 IPR, (0,20 mm/rev) which resulted in 4.4 IPM (111,8 mm/min). The tool drilled a 0.83" (21 mm) diameter through hole to a depth of 0.75 inches (19 mm). The spade drill had a tool life of 1000 holes. The disappointing cycle time of 10.2 seconds per hole prompted the contractor to look for a faster tool, as they were required to speed up the operations.

The customer asked if Allied could meet that challenge.

### + OUR SOLUTION:

Allied recommended GEN3SYS<sup>®</sup> holder #60320S-100F with insert item #5C120H-21. The tooling ran at an increased speed of 1320 RPM, 0.011 IPR (0,28 mm/rev) which resulted in 14.52 IPM (368,8 mm/min). GEN3SYS<sup>®</sup> had an improved cycle time of 3 seconds per hole and a tool life of over 3500 holes.

### + PROJECT DATA:

Allied Machine made a significant difference for the customer as the outcome met their goals of speeding up the operations. The cycle times were cut by 73% over that of the competitive effort, while tool life increased by 3.5 times! GEN3SYS<sup>®</sup> High Penetration Drilling System became the clear tool of choice for the Government contractor.



*REDUCED  
CYCLE TIMES*