



## Military Components: Opening Drill®

The customer manufactures components for the military industry. The contractor was tasked with drilling and boring large holes into 4150 steel (30 Rc) using a Mazak slant bed lathe with soluble coolant.

The customer needed a new solution that would increase the drilling speed of these large holes.

The solution of the **T-A GEN2** and the **Opening Drill®** successfully increased the speed of the hole making process. The solution also decreased cycle time for the customer.



	Measure	Competitor Drill	T-A GEN2	Opening Drill
<b>Product:</b> Opening Drill® & T-A GEN2				
<b>Objective:</b> Increase speed	RPM	100	170	700
<b>Industry:</b> Military/defense				
<b>Part:</b> Military components	Feed Rate	0.005 IPR (0.127 mm/rev)	0.008 IPR (0.203 mm/rev)	0.004 IPR (0.102 mm/rev)
<b>Material:</b> 4150 steel				
<b>Hole Ø:</b> 5.625" (142.875 mm)	Penetration Rate	0.5 IPM (12.7 mm/min)	1.3 IPM (33.020 mm/min)	2.8 IPM (71.12 mm/min)
<b>Hole Depth:</b> 10.00" (254 mm)	Cycle Time	1 hr 26 min	10 min 27 sec	



▶ Opening Drill Holder: **OP4-1L-SS2.0**  
Inserts: **OP-05T308-H**

▶ T-A GEN2 Insert: **457H-0400**



88% cycle time decrease

The Opening Drill provided:

- ✓ Decreased cycle time
- ✓ Decreased costs
- ✓ Increased speed

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