



Do you need performance in extreme machining conditions?

Tooling is only a sliver of the pie when it comes to productivity. It doesn't matter what your tooling is capable of if your machine conditions restrict those capabilities. Our customer, who drills holes for machine gun bolt switches, utilizes a machine with oil coolant that creates more extreme drilling conditions than water-based coolant.

Because oil coolant doesn't dissipate heat fast enough, the customer's tooling only lasted for 160 holes per insert, and the tool experienced sporadic failure. They also needed to run a peck cycle for chip control.

The customer decided to test the **4TEX Indexable Carbide Drill** using the "P" geometry with AM480 coating designed specifically for wear-resistance in steel material applications. The 4TEX "P" geometry allowed for the speed and feed to be altered and accommodated the machine's oil coolant. The 4TEX penetration rate was able to decrease cycle time and also double the tool life to 320 holes per insert. The 4TEX geometry also improved chip formation and eliminated the peck cycle.

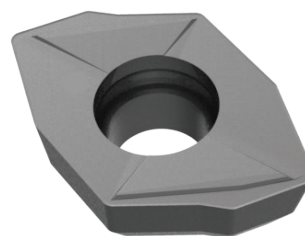
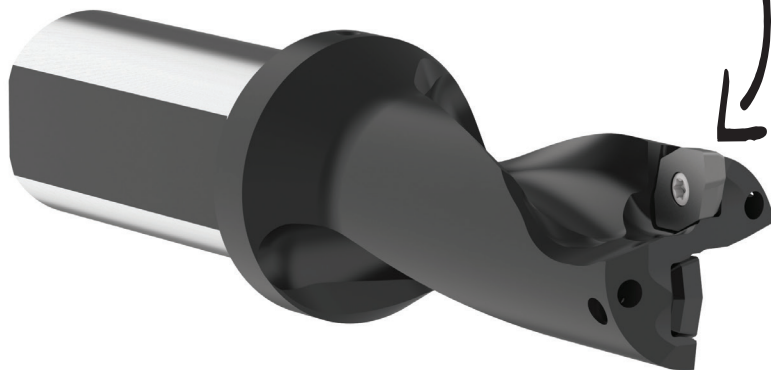
The 4TEX provided the stable and repeatable process the customer was looking for while increasing tool life by 100%. With all their objectives met, the customer was thrilled with the solution that optimized their machine's limitations. **Are you using the solution that best optimizes your machine's limitations?**



Product:	4TEX® Drill	Measure	Competitor IC Drill	4TEX® Drill
Objectives:	(1) Exceed 160 holes per insert (2) Eliminate peck cycle (3) Provide stable/repeatable process	RPM	2075	1223
Industry:	Firearms	Speed Rate	509 SFM	300 SFM
Part:	Machine gun bolt switch hole	Feed Rate	0.0015 IPR	0.003 IPR
Material:	4340 steel	Penetration Rate	3.11 IPM	3.67 IPM
Hole Ø:	0.937"	Peck Cycle	Yes	No
Hole Depth:	0.590"	Cycle Time	16 sec	9 sec
		Tool Life	160 holes per insert	320 holes per insert

- ▶ 4TEX Drill holder
2xD length
Item No. D20709371-100F
- ▶ 4TEX Drill inserts
P geometry (steel)
Item No. 4T-070305-P

100%
tool life increase



The 4-sided indexable inserts with wear-resistant coating provided:

- ✓ Increased tool life
- ✓ Decreased cycle time
- ✓ Worry-free machining