T-A PRO® DRILL

When time is money, you have a need for speed.

We all know that time is money, and streamlining manufacturing processes can directly effect the bottom line. Our customer was machining gas cylinders from EN24 high-strength steel for the heavy equipment industry.

Since their current process required a pilot drill, our customer started looking for a way to be more efficient with their resources. The customer decided to test Allied's **T-A Pro drill.** Using the "P" ISO-specific steel insert geometry—designed to provide increased penetration rates and tool life in steel applications—they were able to eliminate the need for a pilot drill. The customer ran 0.0039 IPR (0.10mm/rev) for the first 0.2362" (6mm) and then increased the feed rate to 0.0098 IPR (0.25mm/rev) allowing them to drill straight in while also increasing speed.

With the previous drill, the customer achieved 440 holes of tool life before needing to replace the insert, but with the T-A Pro "P" geometry's heat resistant coating, they achieved 585 holes of tool life before replacing the insert.

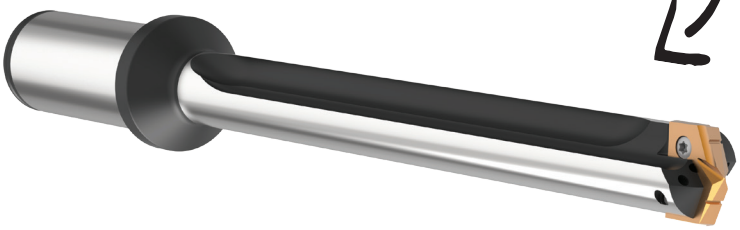
By removing the pilot drill and increasing tool life and speed, the switch to the T-A Pro drill was a no-brainer for the customer. If you are looking for a simpler way to get the job done, ***give us a call, and we will help you find the right solution.***

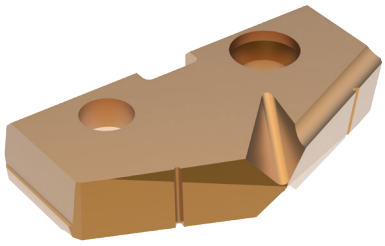
Product:	T-A Pro drill
Objective:	Reduce cost per hole
Industry:	Heavy equipment
Part:	Gas cylinders
Material:	EN24 high-strength steel
Hole Ø:	0.8543" *(21.7 mm)*
Hole Depth:	2.9803" *(75.7 mm) - drill* 3.0000" *(76.2 mm) - reach*

Measure	Competitor Drill	T-A Pro Drill
RPM	770	1025
Speed Rate	172 SFM *(52.43 M/min)*	229 SFM *(69.80 M/min)*
Feed Rate	0.0059 IPR *(0.15 mm/rev)*	0.0098 IPR *(0.25 mm/rev)*
Penetration Rate	4.54 IPM *(115.32 mm/min)*	10.05 IPM *(255.27 mm/min)*
Total Part Cycle Time	39.62 sec	17.92 sec
Tool Life	440 holes	585 holes
T-A Pro offered *51.48%* cost per hole savings over the competitor tooling.		

- T-A Pro holder
  Item No. HTA1C07-25FM
- T-A Pro insert
  P geometry (steel)
  Item No. TAP-21.70

54.77% cycle time decrease





The ISO-specific AM300 coated T-A Pro insert provided:

- ✓ Decreased cost per hole
- ✓ Decreased cycle time
- ✓ Increased tool life
- ✓ Increased penetration rate