



Consistency is Key.

Our customer, who manufactures heat exchangers for the aerospace industry, was concerned about reaching the desired tool life on a consistent basis in order to be able to leave the machine and trust it will complete a part. Each part has 734 holes to be drilled at 0.750" (19.05 mm) deep, and their current tooling had an inconsistent tool life.



Knowing there had to be better options out there, the customer tested the **Superion Solid Carbide Drill** with HPS geometry and helical flutes that are ideal for drilling harder steels, high temp alloys, and stainless steel. Using the HPS geometry—designed to improve chip formation and reduce bell-mouth for longer drill depths—the customer gained consistent tool life.

In addition to achieving consistent tool life, the Superion drill also dramatically decreased the total part cycle time from over 6 hours to just under an hour at 46 minutes—an almost 90% decrease. The tool life paired with the decreased cycle time led to huge cost per hole savings of 56%.

Overall, the customer was won over by the large decrease in cycle time while maintaining a consistent tool life. **Call us to help you find the right tool for the job.**

		Measure	Competitor Drill	Superion Drill
Product:	Superion HPS Solid Carbide	RPM	5856	10,404
Objective:	Gain consistent tool life	Speed Rate	197 SFM (60.046 M/min)	350 SFM (106.68 M/min)
Industry:	Aerospace	Feed Rate	0.0029 IPR (0.074 mm/rev)	0.003 IPR (0.076 mm/rev)
Part:	Heat exchanger	Penetration Rate	16.98 IPM (431.292 mm/min)	31.21 IPM (792.734 mm/min)
Material:	347 Stainless steel	Total Part Cycle Time	6 hrs 16 mins	46 mins
Hole Ø:	0.1285" (3.264 mm)	Consistent Tool Life	No	Yes
Hole Depth:	0.750" (19.05 mm)	Superion offered 56.76% cost per hole savings over the competitor tooling.		

▶ Superion Solid Carbide Drill
HPS Geometry with Helical Flutes
Item No. 201007-12

87.77%
decrease in total
part cycle time



The Superion Solid Carbide Drill with HPS geometry and helical flutes provided:

- ✓ Consistent tool life
- ✓ Decreased cycle time
- ✓ Decreased cost per hole

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