



Die Slide: Revolution Drill®

The customer produces die slides made from 4130 Forging (390-450 Bhn) using a 30 HP CAT50 horizontal boring mill with 1000 PSI (68.948 bar) water soluble coolant.

The customer needed to improve this process. They specifically requested the Revolution Drill because they liked the diameter adjustability and the fact that every drill utilizes the same inserts.

The **Revolution Drill®** provided excellent chip control, and the surface finish was within a 32 RMS with a hole tolerance of .002" (0.051 mm). This was exactly what the customer needed from this process.



		Measure	Competitor Drill	Revolution Drill®
Product:	Revolution Drill®	RPM	525	900
Objective:	Improve process	Feed Rate	0.002 IPR (0.051 mm/rev)	0.003 IPR (0.076 mm/rev)
Industry:	Aerospace	Penetration Rate	1.05 IPM (26.670 mm/min)	3 IPM (76.2 mm/min)
Part:	Die slide	Cycle Time	10 min 29 sec	3 min 40 sec
Material:	4130 forging, 390-450 Bhn	Tool Life	2 holes	8 holes
Hole Ø:	2.56" (65.024 mm)	The Revolution Drill offered 83.33% cost per hole savings over the competitor tooling.		
Hole Depth:	11.00" (279.4 mm)			



► Revolution Drill®
Holder: R42X35-150L

65% cycle time decrease

The Revolution Drill® provided:

- ✓ Decreased cost per hole
- ✓ Decreased cycle time
- ✓ Increased tool life
- ✓ Excellent chip control

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