



Blade Rings: Revolution Drill®

The customer manufactures blade rings made from 410 Stainless Steel for the power generation industry. They are using a horizontal machining center with flood coolant.

Unsatisfied with this process, the customer asked Allied Machine for a solution to reduce cycle time and decrease the overall production cost.

The **Revolution Drill®** significantly decreased production time by eliminating the two additional boring passes.



		Measure	Competitor Drill	Revolution Drill®
Product:	Revolution Drill®	RPM	550	1200
Objectives:	(1) Decrease cycle time (2) Decrease cost per hole	Feed Rate	0.0035 IPR (0.089 mm/rev)	0.003 IPR (0.076 mm/rev)
Industry:	Renewable energy/wind	Penetration Rate	1.9 IPM (48.26 mm/min)	4.3 IPM (109.22 mm/min)
Part:	Blade rings	Cycle Time	3 min 40 sec	2 min
Material:	410 stainless steel	Tool Life	15 holes	30 holes
Hole Ø:	2.00" (50.8 mm)	The Revolution Drill offered 67.09% cost per hole savings over the competitor tooling.		
Hole Depth:	7.00" (177.8 mm)			



► Revolution Drill®
Holder: R36X35-150L
Inserts: OP-05T308-H

2x the tool life

The Revolution Drill® provided:

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

Copyright © 2021 Allied Machine and Engineering Corp.- All rights reserved.