



## Valve Actuator Bodies: Revolution Drill®

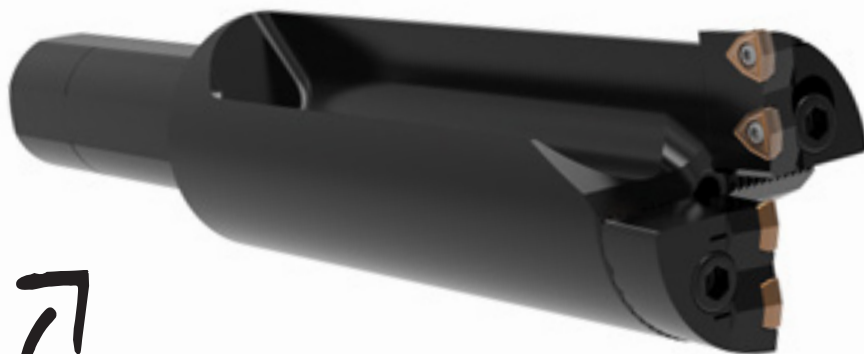
The customer manufactures valve actuator bodies for the aerospace industry. The parts are made from 316 stainless steel. They use a low thrust Mori Seiki machining center with 20 HP using water soluble coolant. Previously, the customer used a series of spade drills that failed due to Z axis overload. They then tried an Iscar plunge mill.

Looking for improvements, the customer needed to reduce the plunge mill's high cost per hole.

The **Revolution Drill®** accomplished the customer's needs by speeding up the process and reducing the overall cost of drilling.



		Measure	Competitor Plunge Mill	Revolution Drill®
<b>Product:</b>	Revolution Drill®	RPM	800	1000
<b>Objective:</b>	Decrease cost per hole	Feed Rate	0.001 IPR (0.025 mm/rev) down 0.005 IPR (0.127 mm/rev) circular	0.005 IPR (0.127 mm/rev)
<b>Industry:</b>	Aerospace	Penetration Rate	0.8 IPM (20.32 mm/min)	5.0 IPM (127 mm/min)
<b>Part:</b>	Valve actuator bodies	Cycle Time	15 min	2 min 24 sec
<b>Material:</b>	316 Stainless steel	Tool Life	8 holes	30 holes
<b>Hole Ø:</b>	2.5" (63.5 mm)	The Revolution Drill offered <b>82.51%</b> cost per hole savings over the competitor tooling.		
<b>Hole Depth:</b>	12" (304.8 mm)			



► Revolution Drill  
Holder: R42X35-150L  
Inserts: OP-05T308-H

84% cycle time decrease

### The Revolution Drill® provided:

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

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