



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®
Product:	Revolution Drill®	RPM	800	1000
Objective:	Decrease cost per hole	Feed Rate	0.001 IPR down 0.005 IPR circular	0.005 IPR
Industry:	Aerospace	Penetration Rate	0.8 IPM	5.0 IPM
Part:	Valve actuator bodies	Cycle Time	15 min	2 min 24 sec
Material:	316 Stainless steel	Tool Life	8 holes	30 holes
Hole Ø:	2.5"	Cost per hole	\$21.21	\$3.71
Hole Depth:	12"			



► 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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