



Pipe Flanges: Revolution Drill®

The customer produces pipe flanges from 316 stainless steel using a Toshiba horizontal boring mill with 600 PSI (41.369 bar) water soluble through tool coolant.

The customer could not afford the lengthy cycle time, so they asked Allied for a solution

The **Revolution Drill®** successfully reduced the costly cycle time.



Product: Revolution Drill® Objectives: (1) Decrease cycle time (2) Decrease cost Industry: General machining Part: Pipe flanges Material: 316 stainless steel Hole Ø: 1.875" (47.625 mm) Hole Depth: 4.0" (101.600 mm)	Measure	Competitor Tooling	Revolution Drill®
	RPM	100	1000
	Feed Rate	0.010 IPR (0.254 mm/rev)	0.004 IPR (0.102 mm/rev)
	Penetration Rate	1.0 IPM (25.4 mm/min)	4 IPM (101.6 mm/min)
	Cycle Time	4 min	1 min
	Tool Life	10 holes	144 holes
	The Revolution Drill offered 81.02% cost per hole savings over the competitor tooling.		



► Revolution Drill
Holder: **R34X22-150L**
Inserts: **OP-05T308-H**

15x tool life increase

The Revolution Drill® provided:

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

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