



## Pipe Flanges: Revolution Drill®

The customer produces pipe flanges from 316 stainless steel using a Toshiba horizontal boring mill with 600 PSI 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.



<b>Product:</b> Revolution Drill® <b>Objectives:</b> (1) Decrease cycle time (2) Decrease cost <b>Industry:</b> General machining <b>Part:</b> Pipe flanges <b>Material:</b> 316 stainless steel <b>Hole Ø:</b> 1.875" <b>Hole Depth:</b> 4.0"	Measure	Competitor Tooling	Revolution Drill®
	RPM	100	1000
	Feed Rate	0.010 IPR	0.004 IPR
	Penetration Rate	1.0 IPM	4 IPM
	Cycle Time	4 min	1 min
	Tool Life	10 holes	144 holes
	Cost per hole	\$13.59	\$2.58



► 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