## **Torque Converter Spacers: Revolution Drill®**

The customer makes spacers for torque converters made from 1045 using a CNC lathe IKEGAI-Fx 25N with external coolant.

Because the Kennametal tool was expensive and had lengthy lead times, the customer asked Allied for a solution that would also improve cycle times and lower the cost per hole.

The **Revolution Drill**® met the customer's needs and provided twice as many drilled holes in half the time.



Product: Revolution Drill®

Objectives: (1) Decrease cycle time

(2) Decrease cost

Industry: Automotive

Part: Torque converter spacers

Material: 1045

Hole Ø: 1.9" (48.26 mm)
Hole Depth: 3" (76.2 mm)

Measure	Competitor Tooling	Revolution Drill®
RPM	500	900
Feed Rate	0.003 IPR (0.076 mm/rev)	0.0035 IPR (0.089 mm/rev)
Penetration Rate	1.5 IPM (38.1 mm/min)	3.15 IPM (80.01 mm/min)
Cycle Time	2 min	1 min
Tool Life	300 holes	600 holes
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The Revolution Drill offered 54.21% cost per hole savings over the competitor tooling.

