

## CUSTOMIZED DEBURRING SYSTEM FOR POWDER METAL

### The Problem

This Abtex customer's desire for high productivity was being constrained by a need to deburr two very different surfaces of a single part. One was a turned edge and the other was counterbored.

### The Solution

After assessing the situation, Abtex engineers designed an automated solution that made quick work of the deburring task. They developed side-by-side deburring stations a short distance apart and mounted above an indexing belt. Each station contained a specific engineered abrasive nylon filament deburring brush.

### The Details

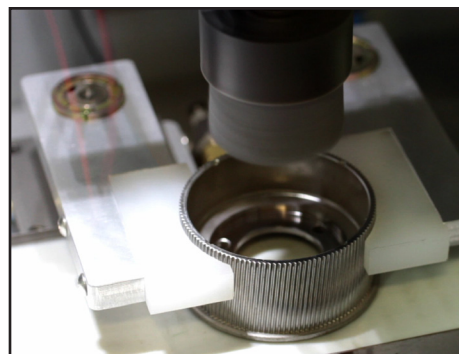
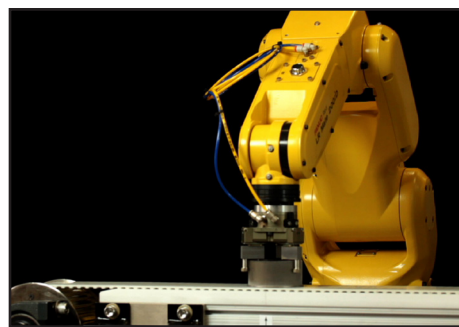
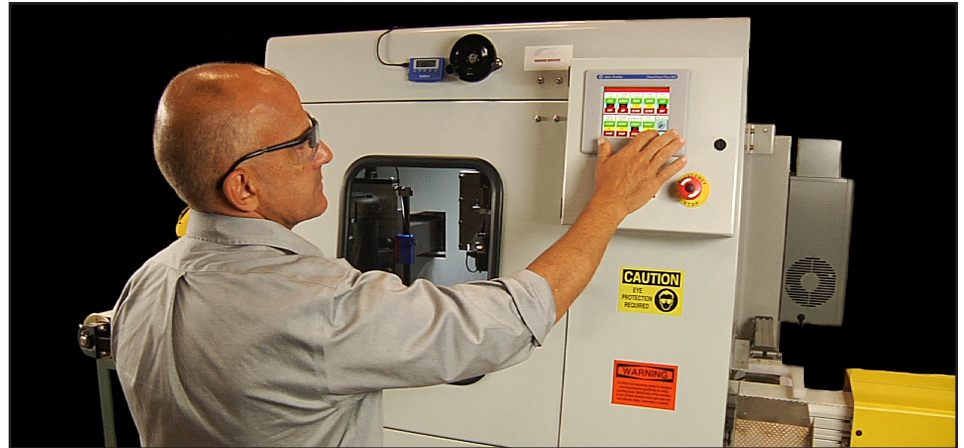
A robotic system pneumatically places the part on the indexing belt, and a six-inch abrasive nylon filament brush quickly deburrs the top surface.

The part then proceeds to the next station, a few inches away, where it is pneumatically clamped and its inner, counterbored surface is deburred by a similar, two-inch brush.

The entire process is operated using an Allen-Bradley touch-screen controller. Brush changes take only minutes.

### The Result

Because each piece is completely deburred in about **nine seconds**, this Abtex customer now benefits from dramatically increased productivity and efficiency.



### Major Components

**Base:** Powder-coated, welded tubular base and vertical support frames, machined to accept brush slide components. Includes guarded, OSHA-safe access doors.

#### Indexing (Industrial Duty)

**Conveyor:** 5" wide

**Brush Station 1:** TEFC motor mounted to precision ground, manually adjusted tool slide

**Brush Station 2:** TEFC motor mounted to pneumatically controlled "Auto-Drill"

#### Air Blow-off Station:

Exair Air Knife

**Controller:** Allen Bradley controller with Ethernet communication, touch-screen input and display. Relay contacts available for handshaking with upstream and downstream process machinery.