



**COGSDILL TOOL**

*products, inc.*

# APPLICATION *news*

DATE October 3, 2003

NUMBER CAN5-03

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## Internal and External Burnishing Exceeds Finish Requirements

**Roll-a-Finish® Tool and CX® Machine achieve better than required surface finishes on computer printer components**

A MANUFACTURER OF COMPUTER PRINTERS applied Cogsdill roller burnishing tools and machines to achieve finish requirements on both internal and external surfaces:

1. A nylon slide bushing was causing scratches on the surface of a printer shaft and would not slide freely across the surface of the rod. The I.D. of the bushing was burnished with a **Cogsdill Roll-a-Finish Tool**. Due to the ultra-smooth finish obtained by burnishing, the slide bushing slid freely across the rod surface and was scratch-free.
2. The customer also wanted a super-low surface finish (2 microinch Ra or better) on the printer shaft. We recommended a **Cogsdill CX-1T External Roller Burnishing Machine** equipped with an interference through-feed sub-assembly suitable for sizing and finishing shafts such as this one. After the first pass, the finish was very good but not quite up to the demanding specification. A second pass through the CX-1T produced a surface finish that was reported as shiny beyond belief!



Roll-a-Finish® Tool



CX-1T Machine

— Refer to machining data on reverse side —

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### **Machining data for application 1**

**Machine type:** Speed lathe

**Tool type:** R-250 Roll-A-Finish

**Component:** Slide bushing

**Material type:** Nylon

**Spindle speed:** 1000 RPM

**Feed rate:** .012 IPR (.31 mm/rev.)

**Cycle time:** 5 to 7 seconds

**Coolant:** WD-40

**Finish required:** Under 12 microinches (0.3 micrometer) Ra

**Finish achieved:** 8-10

### **Machining data for application 2**

**Machine type:** CX-1T-A

**Component:** Printer shaft

**Material type:** Stainless steel

**Spindle speed:** 1200 RPM

**Feed rate:** .094 IPR (2.39 mm/rev.)

**Cycle time:** 8 to 10 seconds

**Coolant:** Thin spindle oil

**Size required:** .250 in. +.000 –.001 (6.35 mm +.000 —.025)

**Size achieved:** .2495 in. (6.34 mm)

**Finish required:** 2 microinches (0.05 micrometer) Ra or better

**Finish achieved:** As required

Cogsdill Tool Products offers the **widest array of standard tooling** and the **broadest range of solutions** for burnishing:

- Standard Roll-a-Finish tools for IDs and ODs.
- Special designs for tapers, faces and contours.
- Single-roll and diamond tools for ODs, large IDs, faces, tapers, contours, and irregular surfaces.
- CX external burnishing machines for shafts or cylindrical surfaces of any length.

Parts are sized, finished, and work-hardened in seconds! Refer to our catalog no. 500, Burnishing Tools and Machines, for more information.