

Cylindrical Engraving With Rotary Engraving Systems

By Natalie Whitehouse

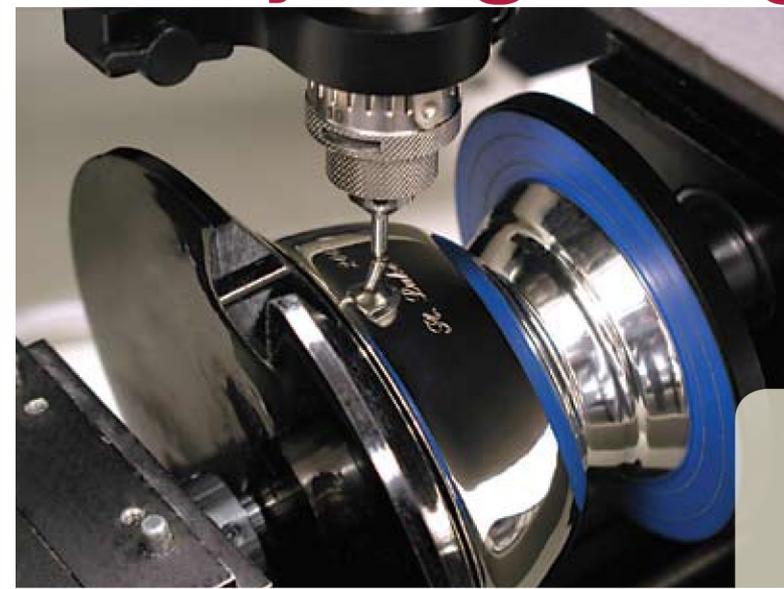


Figure 1

In the past, engraving a cup, bowl, glass, or other circular item involved a lot of skill, patience and time to engrave.

Fortunately, with cylindrical engraving capabilities found on modern systems, it is very quick and easy to engrave many curved and round objects, including those made of metal or glass. For this article, we'll show three examples of cylindrical items that can be engraved easily with a rotary engraver.

Editor's Note: This is the most recent installment of our new A&E How-To's. Suppliers, if you'd like to submit a How-To for A&E, please contact steve@nbm.com to discuss the details.

All three of these examples were done with the Vision Max Pro engraver. The Max Pro allows for engraving of round or curved—as well as flat, deep, or odd-shaped items—in one compact, easy-to-use machine, and can engrave a wide range of materials such as plastic, brass, coated and non-coated metals, pewter, glass and more.

Each Max Pro system includes the integrated Vision Series 3 high-speed electronics with a hand-held pendant, as well as the Vision-Pro software package. In addition, the Max Pro system includes a removable 8" x 12" flat engraving table, a self-centering vise with tilt, and a self-contained, recirculating water pump for glass engraving. All of these tools were used in creating the samples shown here.

EXAMPLE 1: TROPHY CUP

For our first example, we used a diamond drag adapter to engrave a silver-plated trophy cup. This bowl, from Marco Awards Group, measures 4" in diameter and is 2 1/2" tall (see Figure 1). We mounted the cup in the cylindrical vise using the flat stop and the tapered cone provided with the machine. Using the hand-held pendant, we selected the cylindrical mode, and entered the diameter of the bowl. (Since this object has a tapered surface, we entered the



Figure 2



Figure 3



Figure 4

diameter at the center of the area where the engraving was to be placed.)

Vision's Auto Laser Layout feature, which sends the engraving area and position directly to the software without the operator having to measure it, was used to ensure the correct placement of the text. This feature allows the user to run the job above the object to be engraved with the red-dot laser pointer so you can see a visual representation on the object before actually engraving it. This helps eliminate the possibility of ruining an expensive item.

The adjustable tilt feature of the vise enabled us to engrave the tapered section of the bowl much more easily (see Figure 1). Using the Vision Pro software, we used the standard rotary driver, which allowed us to design and set up the job from a standard, horizontal viewpoint on-screen, and the machine automatically rotated the engraving on the item.

Once the job was sent from the computer to the engraver, we used the handheld pendant to run the job. The automatic surface-sensing feature on the Max Pro allowed for consistent engraving throughout the job. A typical bowl this size takes approximately 2-3 minutes to engrave (see Figures 1 & 2).

EXAMPLE 2: CHAMPAGNE FLUTE

For this example, the tool used to engrave was a .010" rotating diamond with a burnishing adaptor. We mounted the flute in the vise using the flat stop and the tapered cone, as in the trophy cup example above.

The adjustable tilt feature of the vise enabled us to engrave the tapered section of the glass shown here (see Figure 3).

In the Vision Pro software, we used the standard rotary driver. When sending the job to the controller, we activated the self-circulating water system in the machine. The constant presence of water on the glass improves the quality of the engraving and helps prevent fracture. Here, we set the surface so the burnishing adaptor could maintain just the right amount of pressure on the glass. A glass this size will typically take about 1-2 minutes to engrave.

EXAMPLE 3: NICKEL RINGS

For our final example, we show a project we engraved for Gibson Bagpipes of Ohio (see Figure 4). Nickel rings like these are used in the handcrafted production of these instruments. For this project, our applications engineer created a unique design in Vision Pro software for two different sizes of rings. The rings were held in the rotary vise to engrave the sides, and were held in the Universal Pin Fixture to engrave the top. We also used the automatic surface-sensing feature with a non-rotating diamond to complete the engraving.

For the first ring, measuring 1.75" in diameter, a Celtic pattern was engraved around the side, and a dragon pattern was engraved on the top. The dragons were engraved with a .010" cutter, and the cross-hatch pattern was diamond dragged. The side took approximately 3 1/2 minutes to engrave, and the flat section on the top took approximately 18 minutes.

A taller ring was engraved with a similar dragon pattern. It was diamond-dragged and took about 7 minutes to complete. The long cylinder was diamond dragged (3 minutes) and engraved (4 minutes) around the diameter for comparison.

CONCLUSION

A flexible rotary engraver—combined with the tools and features available in the latest engraving software—can complete cylindrical engraving projects in just minutes, offering thousands of options for awards, gifts, and much more. Exploring these possibilities can provide you with new and profitable opportunities for your business.

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