

Meet the Haas TM-2 CNC Mill

Back in the spring, the Engineering Department took delivery of a new and amazing piece of equipment: The TM-2 CNC Toolroom Mill, made by Haas Automation Inc. of Oxnard, California.

CNC is short for “Computer Numerical Control,” which means that the machine is controlled by a program on a computer rather than being manually operated by a machinist. A CNC mill operates with an extremely high degree of precision and, even more importantly, repeatability. It will make identical parts every time.

It also operates much faster than a human machinist can—typically, about four times as fast. And it can machine radiuses, circles, and curves that would be extremely difficult if not impossible to execute manually.

So, what will the Haas TM-2 be used for, and why do we need it?

The Engineering Department will use it to make parts for our production machinery, such as die presses, sealers, and vacuum formers. They’ll also

use it to make production tooling and molds, and to modify existing tooling and molds.



The Research and Development Department will use the Haas for prototyping, new product development, and incorporating improvements in existing products.

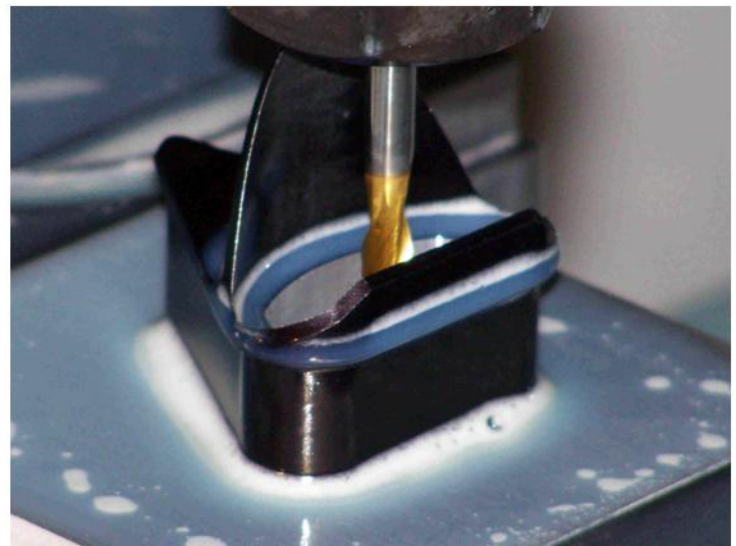
Engineering’s **John Line** is currently trained to program the TM-2, and **Rob**

Tagg and **Eric Wagner** are scheduled to learn the system in the future. The TM-2 is now operating from a program called MasterCAM® X2

Level 1, which John attended school in Horsham, PA (north of Philadelphia) for three days to learn. This program runs the TM-2 in two dimensions (X and Y axis), but we will soon be upgrading to Level 3 software, which works in all three dimensions and can machine any contour imaginable.

Although the TM-2 is an expensive piece of equipment, its *return on investment* will make it an extremely valuable asset. Jobs that we used to have to farm out to local machine shops can now be done in-house cheaper and faster. For example, one recent mold modification job would have cost us \$500 in shop fees and required a two-week turnaround. John and the TM-2 performed the task in-house at a small fraction of that cost—and did it in less than one day!

You often hear that such-and-such modern convenience will “pay for itself,” but it looks as though the Haas TM-2 will actually *do* that!



Left: *Cliff Metger, Director of Engineering, checks out the Haas TM-2. Right:* *Close look at a milling job in progress. This particular piece of work saved the company about \$500 in shop fees and two weeks in turnaround time.*