



! In Their Own Words.

“Buying Datron machines was, without doubt, the most important cost saving decision that I’ve been involved with at Oppenheimer. The service and support is superior to any company that we deal with. Before, we were engraving buttons one-at-a-time at over 1 minute per button. Now, we engrave a sheet of 54 buttons in 12 minutes and cut them into individual parts without taking them off the machine. This saves 40 minutes in engraving time, plus the extra steps of moving them, scheduling them and set up.”

Ned Wandall — Oppenheimer

About Oppenheimer Precision Products: Makers of illuminated cockpit displays for aircraft, ships, and ground vehicles. “If it flies, swims, or crawls, we have panels for it,” is the company’s slogan.

Why High-Speed?

There’s a trend toward miniaturization in manufacturing and as sizes get smaller, microtooling are required to yield detailed parts. But, you can’t just use small tools with conventional machines, since their slower spindle speeds result in unfavorable feed rates and costly tool breakage. Here’s why. While large tools are resilient to chips that might accumulate in the chip room, small tools are fragile. High-speed spindles that run at 45,000+ RPM are needed to evacuate chips, reduce force and minimize breakage.

Plus, since 60% of the heat is inside the chip, this evacuation actually provides for a cooler and cleaner cut.

DATRON Dynamics is a distributor for DATRON Electronics Makers of the awe-inspiring 60,000 RPM CNC Machine Centers 454 Route 13 • Milford, New Hampshire 03055 • USA t 888.262.2833 • f 603.672.8067 • www.datrondynamics.com © 2003. All rights reserved.

Dropping the “Smart Bomb”!

The proliferation of the word “smart” in describing products has become almost laughable. In the consumer packaged goods arena alone, there’s a plethora of products claiming to be “smart” ... right down to a popcorn called “Smartfood”. But, in those instances, the manufacturer is generally indicating that it is the “user” or the “consumer” that is “smart” for choosing a healthy alternative to other junk foods.

But what happens when we’re talking about the milling of extruded aluminum rather than the consumption of extruded cheese puffs? Within our machining industry, the term “smart” veers away from describing the user and is most often an adjective used to describe the equipment. And let’s face it, any product in “our world” that carries this label, carries with it the weight of our collective expectations. After all, it’s been thirty years since the movie 2001: A Space Odyssey and you’d think that a “smart machine” like Hal would be almost commonplace.

Well, Artificial Intelligence (AI) has yet to be perfected, but in the meantime, Datron Dynamics would like to announce our unique capabilities and stake a claim on the tagline “Smart CNC Machines”.

Datron machining centers feature a Z-Correction Probe that recognizes irregular work-piece surfaces and compensates for them dynamically. It checks to see which stock is on the bed and whether it’s a sufficient size for the current job — and then, adjusts the program for the stock that’s there. It’s pneumatically retractable, extends only when needed, requires no tool changes, has no cable to get in the way, and can’t be damaged by accidentally turning on the spindle (which may happen with after-market, add-on probes). Our probe locates parts and material irregularities in the X, Y, and Z co-ordinates, finds centers of holes and bosses, pre-measures blanks before the machining starts, compensates for material variations, feeds data into ISO 9000 information chain for quality control, and even allows for the reverse engineering of many parts. Plus, a 4th axis provides the flexibility to machine round stock or engrave on round work-pieces. A 5th axis is used to independently rotate the 4th axis so machining at an angle on a round part is easily accomplished.



That said, we’re confident that even the biggest “stickler” will not take offense when we drop the “smart bomb” and proudly display our new tagline “Smart CNC Machines”.

Note: Our unique probe is only one of the many advanced features that make our machines “smart” — stay tuned for more in the next issue of RPM.