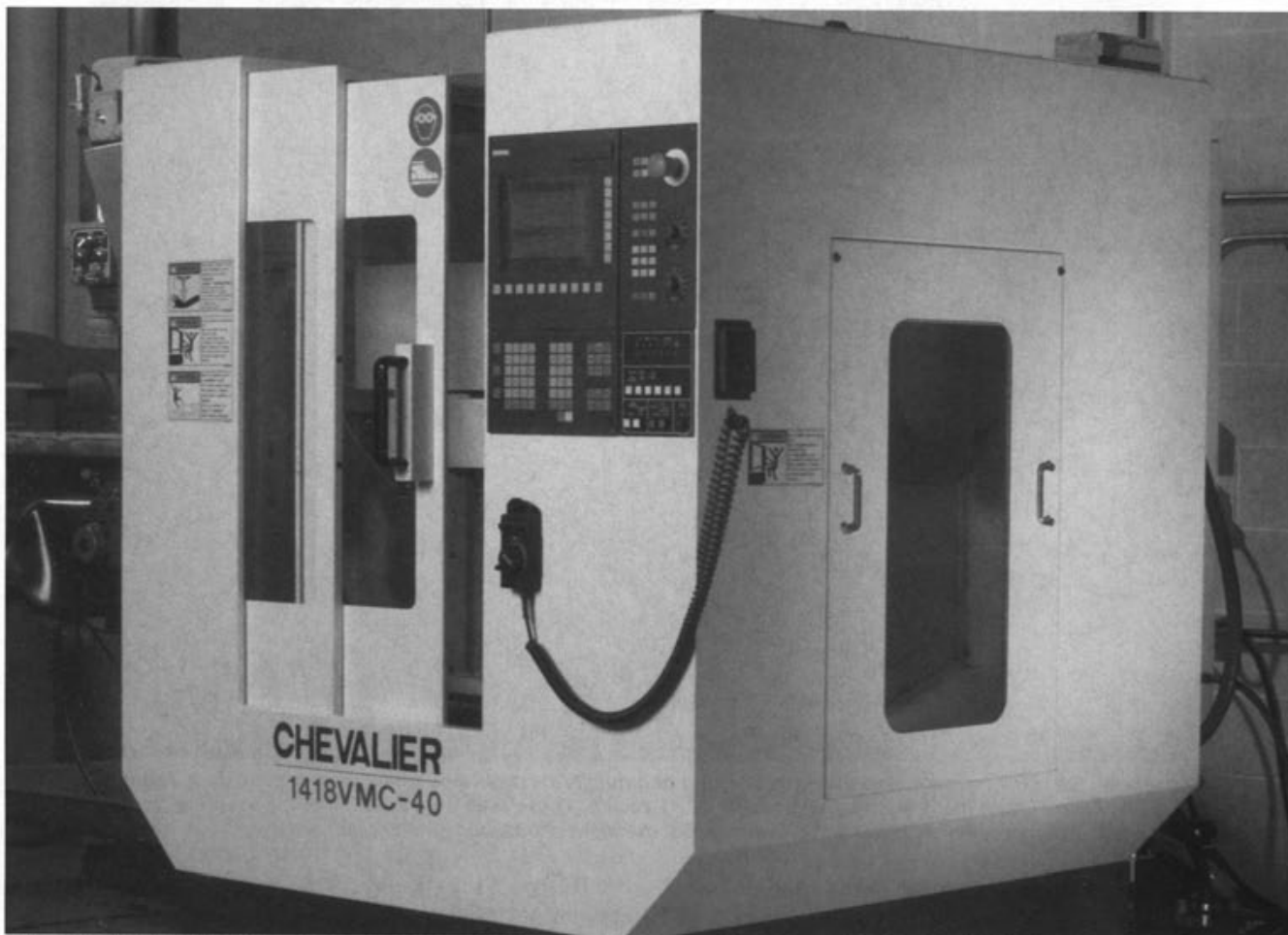


## Featured Products—



*Chevalier Model 1418 VMC, a versatile machine tool made expressly for small shops doing medium-to-large production runs of small parts. The system is equipped with a Siemens Sinumerik 802D controller.*

## New Small-Shop Duo

*Chevalier Uses Siemens Controls On Its New Small-Shop VMC.*

**C**hevalier (Santa Fe Springs, CA) is now offering up a new, affordably priced, flexible VMC (Vertical Machining Center) aimed at smaller shops doing high-volume production work. On board the compact Model 1418 machining center, Chevalier required an equally powerful, yet economical controller and selected the Sinumerik 802D from Siemens.

According to Chevalier's design team, the challenge was to find a control with many of the desired and necessary features, such as full CNC capability, conversational mode, G-code programmability, look-ahead, rotary axis spindle control, program simulation, graphic support, rotation/translation/scale & mirror frames, oscilloscope functionality, one-step access to tool data and a WYSIWYG (what you see is what you get) feature. This "wish list" was needed in a compact control at a very competitive price by the builder.

With an 8000-rpm spindle speed (10,000 rpm option) and rapid traverse, an 18" (X) x 14" (Y) x 15" (Z) work envelope, 331 lb. workpiece capacity, 1417 ipm XYZ rapids, rigid tapping, 12-station carousel ATC, rear exit chip auger and automatic chip flusher, plus  $\pm 0.0002$ " positioning accuracy and  $\pm 0.0001$ " repeatability on 30 or 40 taper tooling, the 1418 VMC required a controller with considerable power and flexibility.

### **Built For Smaller Shops**

The potential dilemma for Chevalier was apparent. This new machine had all the features needed for medium-to-high production runs of small parts at general contract machine shops, but the price point was critical, to keep the machine within the smaller shop's budget. With the Siemens control, Chevalier was able to contain manufacturing/building costs and produce this affordable VMC for the world market, according to company sources.



**Workshop Wire Cut & Machine owner Mike Meredith displays typical plastic parts produced at his shop.**

machines, where much of our plastics go. Our tool steel parts runs are used in molds, dies and special machinery. Often, we take jobs others can't handle and the machines we have in our shop are a key reason why."

### **Chevalier 1418**

In utilizing the Chevalier 1418 VMC, Meridith observes, "This machine has made a substantial impact on the work product at our shop, because it can do so much. The Siemens control is especially useful. It controls both axis and spindle movement on the machine. We use a PC and floppy disks for long-term data storage via the RS-232 port through a DNC cable. The control has ample storage with its 256 kB part program memory, which eliminates our needing to download the programs we use frequently. This keeps the PC available, instead of using the DNC program to download directly to the cut. With other controls we looked at, this function was not possible. Because of the variety in our work and our runs, the combination of features on the Chevalier 1418 VMC and Siemens Sinumerik 802D was a perfect fit for Workshop."

More specifically on the operator functioning with the controls, Meridith notes the set-up is easy and very user-friendly. "The graphic simulation is helpful in catching errors, as is the look-ahead feature. The controls also have direct menus for set-up to access the tool memory and machine offsets. This makes set-up far less complicated and reduces operator workload." Mike also observed the training and factory support on the Siemens controls to be first-rate. "They answer all our questions and solve problems quickly and competently." ■

Empirically, the first customers would tell the tale of this machine's success in the market.

### **New Machine At Work**

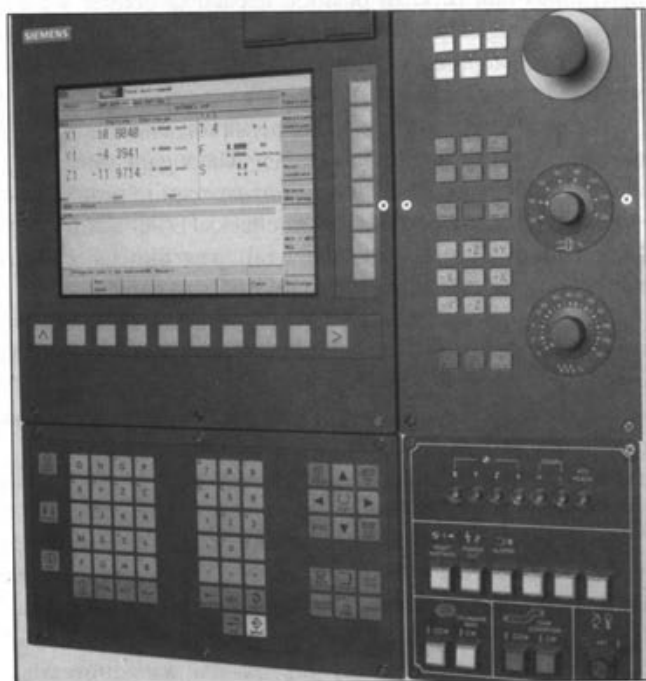
When Mike Meredith, owner of Workshop Wire Cut and Machine (Aurora, OH) saw the Chevalier 1418 VMC, the proverbial light bulb flashed for him. This 5-man, 3000-sq-ft shop had been focused on wire EDM, servicing mostly mold/die builders in the Cleveland area. Meridith had spent a dozen years in moldmaking and had a comfort zone in this market segment.

"As the market changed, however, we broadened our customer base and we knew diversity was our key to future success. So, we began offering general machining services, along with our wire EDM, so we could do prototype, short and long production runs for customers," says the owner of this shop, started in May, 2000.

Meridith continues, "We were prepared to offer wire EDM, CNC milling, manual milling, lathe work, grinding and EDM drilling, supported by our various machines, but something was needed to set us apart from the other shops."

Meridith's Workshop runs conventional tool steels, as well as more exotic alloys such as Hastelloy and Inconel, plus aluminum and various thermoplastics, superabrasive peek, PPS, Delrin, PVC, Nylon, Ultem and Radel. Many of the shop's customers are involved in the medical industry, plus the company services special machine builders and industrial pump manufacturers.

Meridith: "The parts we produce are used in various industries, including MRI (Magnetic Resonance Imaging)



**Close-up of Chevalier control panel, which is powered by the Siemens Sinumerik 802D compact CNC.**