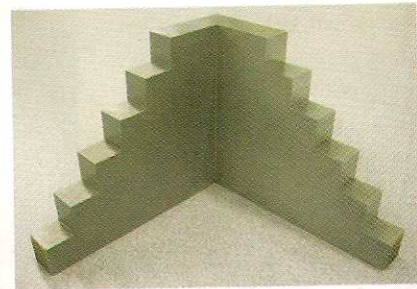
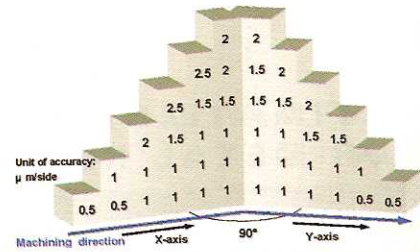


## BETTER STEPPED-PART MACHINING

**A new control technology** from Makino (Auburn Hills, MI) called SurfaceWizard reportedly provides exceptional surface quality in applications where the part has either a variable shape thickness or sudden changes in thickness, such as a stepped part. Stepped parts that are wire EDM'ed by conventional means often leave a witness line at the transition from one step thickness to the next. And such parts often have a taper with variations in straightness across the machined surface.

SurfaceWizard virtually eliminates witness lines and maintains part straightness to within 5 µm in one pass and to within 2.5 µm in two-pass machining, according to the company. The technology is for tool steels up to 4 inches thick, and will support 0.008-inch- and 0.010-inch-diameter wires with one- and two-pass conditions. And it's standard on all Makino SP and U Series wire EDMs equipped with the company's MGW-S5 control. —CK



## SECURE LOCKUP

**An enhanced version** of the Segen Quick Change cylinder locks from Tooling Technology (Fort Laramie, OH) incorporate an internal sensor that makes it easy to know that the mechanism has positively locked or unlocked, thereby improving safety, reliability, efficiency, and system effectiveness. Unlike plain-old nuts and bolts, it saves time by accurately and repeatedly locating and locking components into place without using tools.

Segen Quick Change devices consist of a steel cylinder lock and a corresponding knob. The cylinder lock, designed to receive and mate with a conical male knob, locates and positions the knob to within 0.0002 inch with a holding force of up to 25,000 lb/device. The cylinder locks stay mechanically locked until pneumatic pressure is applied, ensuring a secure, fail-safe hold. —CK

## ENDMILL COATING HANDLES HARDENED STEEL

**Moldmakers machining hardened steels** in the 48-65 Rockwell C range have some new tools to improve chip removal and reduce chatter in hardened steel. The standard (MSBH230) and long-neck (MRBH230) two-flute micro grain carbide ball endmills from NS Tool (Tokyo, Japan) are available in 0.05- to 3-mm radiuses, with a new premium Mugen coating that's hardened to 3600 HV and has a high oxidation temperature of 1300°C. The endmills have also been redesigned with a stronger, spiral shape to keep the tools sharper and reduce the machining load. They are available through Single Source Technologies (Auburn Hills, MI), the exclusive distributor for NS Tool in North America. —KD



## MIM'ED TUNNEL GATES

**Although tunnel gates** (aka submarine gates) are great for gating parts with high surface quality requirements, they're not the easiest type of component to manufacture and don't always work the way they should, according to the folks at Hasco (Arden, NC). However, they believe they've solved such problems with their new round (Z 1050) and square (Z 1060) gate inserts.

That's because they're molded from hardened steel—metal injection molded (MIM), that is. MIM makes it possible to repeatably produce these gate inserts to the specifications required for consistently generating the smooth demolding action needed by parts with demanding surface quality requirements.

Hasco's gate inserts are available from stock in various sizes with different gate diameters. Their banana-shaped gate geometry can be adjusted to specific part requirements for optimizing the separation point to improve the part's surface quality. They're standardized, so they can be affordable and quickly exchanged, if need be. And they're said to work well with all the most popular thermoplastics. —CK

