



By Alan Richter, Editor

## THIS MONTH

Cutting Tool Engineering covers:

- A tool clamp that permits optimal coolant delivery on Swiss-style machines; and
- An industrial-grade, wearable computing device.

## HERE COME THE COOL JETS

Applying high-pressure coolant when Swiss-style turning is effective at clearing chips to prevent them from welding to the workpiece or wrapping around the cutting tool. However, steering the coolant as close as possible to the cutting edge is tricky.

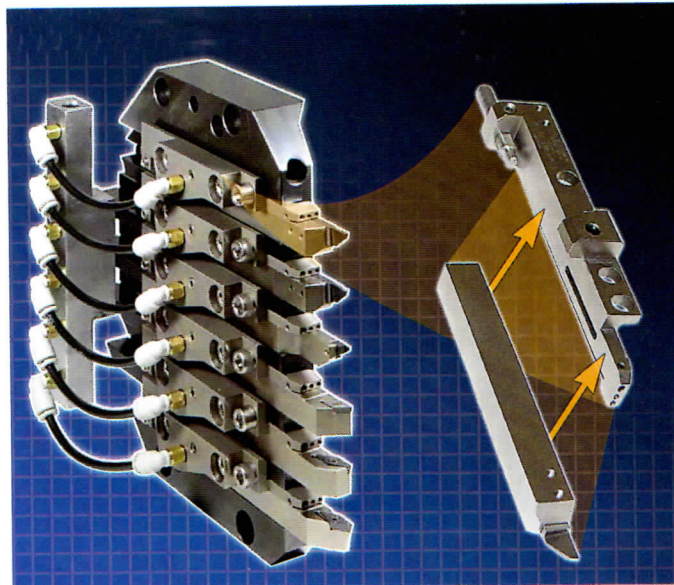
To remedy the situation while not pigeonholing the end user into one brand of cutting tool, Genieve Swiss Industries Inc. offers the Multidec-Lube through-coolant tool clamp from Utilis AG, Müllheim, Switzerland. The patented system incorporates a coolant or oil delivery passage in the tool clamp to ensure a repeatable jet flow within a few millimeters of the tool/workpiece interface even after multiple tool changes, setups or teardowns, according to GenSwiss. It replaces the original gang slide tool clamps that come with a machine, allowing use of conventional, non-through-coolant, square-shank toolholders as if they were through-coolant holders because the coolant travels through the Multidec-Lube clamp.

“Most Swiss turning centers have four to eight turning stations, and you can equip each one of those with one of these clamps and permanently run high-pressure lines,” said Scott Laprade, marketing manager for GenSwiss, noting the system didn’t leak when tested at 2,000 psi. “I don’t know anyone run-

ning anything higher.”

He added that an adjustable stop provides quick-change capability by enabling users to position a tool in the exact same location after an insert change.

Compared to manually bending and positioning coolant nozzles, the tool-clamp system drastically reduces setup time, according to Laprade. At the company’s machine shop, it took at least a couple hours to accurately position multiple nozzles on a manifold setup for a Swiss-style machine, he said. “With



With GenSwiss’ Multidec-Lube tool clamp system, a square-shank, Swiss-style toolholder installs against the Multidec clamping wedge.

these it takes a few minutes.”

Although suitable for virtually all turning applications, on rare occasions, such as profiling a unique radius with a special tool, a fine-tuned manually adjustable nozzle might work better on one station, Laprade acknowledged. But the Multidec-Lube clamps would still be more effective than coolant nozzles for the remaining stations, he added.

Because of the large number of Citizen machines in use that employ ½” square-shank stick tools for turning,

such as the A20, L20, K16 and M16 models, GenSwiss began by offering tool clamp systems for them, and plans to introduce ones for other makes and models throughout the year.

For more information about Genieve Swiss Industries Inc., Westfield, Mass., call (888) 244-1404 or visit [www.genswiss.com](http://www.genswiss.com).

## GLASSES THAT ‘SEE’ INSIDE MACHINES

Looking to blend safety, style and functionality, XOEye Technologies developed XOne, an industrial-grade wearable computing device in eyewear form that captures and streams high-fidelity audio and video. This enables first-person point-of-view (POV) workplace collaboration in real time, according to the company.

The device is equipped with an 8-megapixel camera, microphones and speakers for two-way audio communication and a suite of sensors, including a gyroscope and accelerometer for data measurement. The camera has options to record locally, stream live and capture still photos for data logging.

The device is made with safety-grade optical material, and prescription lenses are available. “We’re developing this eyewear to be ANSI Z87.1-certified, which is the standard for general-safety optical material,” said Anthony Blanco, chief business development officer for XOEye. “We’re looking develop a piece of equipment employees would have to wear anyway for their own safety.”

In addition to the hardware, the technology “stack” includes XOLinux firmware as the operating system and the company’s Vision Runtime and

(continued on page 87)

