

Lean and Clean at Clean Machine

During a 1994 visit to Mazak's Florence, KY, plant, Ken Curry and Mark Jones, owners of Clean Machine (Salt Lake City, UT), came to realize multi-tasking production and flexible material-handling automation were their future. With their eyes opened as to how high technology and automation could significantly reduce setup times and make their entire operation more efficient, they began by purchasing a multi-tasking CNC turning center with a Y axis and an automatic bar feeder. "While a significant investment, it taught us a big lesson about productivity", says Curry. "We feed a bar in one end and take out a fully finished part on the other."

From then on, productivity has become the company's mantra. Even though Clean Machine is a job shop with numerous medium- and low-volume jobs, the company has regularly invested in automation and multi-tasking. In 1996, the company installed their first modularly designed Palletech Manufacturing Cell, consisting of an FH-580/40 horizontal machining center, six pallets and two opposed loading stations. This cell was expanded three times with the addition of two more horizontal machining centers and a five-axis vertical machining center. After three expansions, this unique Palletech cell consisted of three horizontal machining centers (the FH-580 and two FH-5800s), a five-axis vertical (Variaxis 630/5X), 30 pallets, and four loading stations that runs 24 hours a day, six days a week.

In 2004, they established a new Palletech system consisting of a five-axis vertical machining center (Variaxis 730/5X) with 32 pallets and two loading stations. Clean Machine's existing Variaxis 630/5X from their other system was relocated and integrated into this system. Given the two Variaxis machines are different in spindle taper (the 630 is 40 taper while the 730 is 50 taper), the common table size in these machines allows great flexibility in five-axis machining work and automating process flow.

According to Curry, customers see his flexible manufacturing concept and assume Clean Machine runs large lots, but "the reality is that we can run low volumes of a wide variety of four- or five-axis jobs and be very competitive. Our people are loading jobs on the pallets while others are being machined. We're able to schedule a week or more in advance and still make changes quickly."