

Injection Molder Returns to Hydraulics

■ After six years of buying only all-electric injection machines, why would a molder switch back to hydraulic presses? Tri-Tech Tool & Design of South Bound Brook, N.J., a mold maker and custom molder of complex, close-tolerance components for medical, cosmetics, and packaging components, had not bought a hydraulic injection machine since 1997. So it was somewhat of a surprise to the firm's managers last year when they found hydraulic presses to be the best match to their technical requirements, budget, and floor-space constraints.

The firm, founded in 1980 by brothers Art and Bill Weber, has 20 presses of 22 to 165 tons in plants in South Bound Brook and nearby Middlesex, N.J. Fourteen of those machines are hydraulic, but the last six the firm had bought were all-electric Roboshot machines from Milacron Inc., Batavia, Ohio. Tri-Tech had been swept up by the enthusiasm for all-electric technology in the late 1990s and found the machines very much to their liking. "We were getting good production out of our machines and figured that from then on we'd be moving increasingly to all-electric machines," says president Art Weber.

A tight fit

Late last year, 250 sq ft of floor space in a "clean" medical molding area became available at the main plant when several aging 15- to 22-ton hydraulic presses were pulled out of service. Tri-Tech was considering replacing them with a single larger electric machine but equipment options were limited by tight production space and a tight budget. "We knew we could run more of our larger molds in a larger press, but we had a space only 25 ft long. So machine length made a big difference," says Jason Weber, v.p. of production. The company eyed several all-electric machines of more than 100 tons but the space was too short for a press of that size, and also provided no room for auxiliary equipment. The Webers then looked at several smaller electric presses, but

they didn't have shot volumes large enough for their needs.

The company then reconsidered hydraulic models and found issues confronting them there. "Many of the sub-50 ton hydraulics were still too big to fit in the space, and too few could be installed to meet our production requirements," says Jason Weber. And there was the need for molding precision, which the Webers feared they might have to sacrifice if they moved back to hydraulics.

A timely redesign

Engineering v.p. Bill Weber contacted Boy Machines in Exton, Pa., which had been their primary machine supplier in the pre-electric days. Tri-Tech found that Boy's updated Procan CT two-platen line was able to meet their space, performance, and price criteria. Last year, Boy redesigned the Procan CT presses, starting with the 30-ton Boy 30A model. The

redesigned machine is much shorter than before. "An older model of this machine would not have fit," says Art Weber. Tri-Tech also found the price favorable. An all-electric of the same clamp tonnage would have cost almost twice as much.

The new line features Boy's top-of-the-line Procan CT color touchscreen control. "Though the electric machines

provide more accurate position control than a hydraulic, we found that the Boy machine's controls could handle 95% of our jobs well," says Art Weber. He adds that the 30-ton Boy has a robust shot capacity—half that of

Tri-Tech's 110-ton electric machine. And tiebar spacing in the revamped unit is as large as that of Boy's older 50-tonner.

Tri-Tech bought six Boy 30-tonners, which fit into the available space. The Webers are satisfied with the results: "Part quality is comparable to what we achieve on our all-electrics," says Art Weber. —Mikell Knights



Redesigned hydraulic presses from Boy Machines fit the particular needs of Tri-Tech Tool & Design, which had been buying only electric models. Left to right: Art, Jason, and Bill Weber and Skip Selander, quality manager.

