



# Case Study

## CPT Provides Controls, Expertise for Unique Large-Scale Molding Project

The project features components from two existing structural foam injection molding machines and uses a mold weighing over 200 tons. It took over a year to design and build. And when Infiltrator Systems began constructing one of the largest low-pressure injection molding presses in the world, they called on Cincinnati Process Technologies (CPT) to develop the precision control system.



The custom press was designed specifically to produce large septic and potable water tanks – up to 1,787 gallons - at Infiltrator’s Winchester, Kentucky plant. Each polypropylene tank half measures up to 15 feet long and weighs in at an incredible 245 pounds. Infiltrator produces the tanks in halves that nest together to facilitate efficient shipping.

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“They (Infiltrator) did all the large mechanical assembly work,” explains CPT Engineering Manager Jim O’Byran. This included pairing up and reengineering the two platens so they work together. The real heavy lifting came when Franchino Mold and Engineering finished the 420,000 pound tank mold which had to be disassembled and shipped to Infiltrator’s facility on 15 trucks. The hybrid unit features 6,000 pounds of clamping force and is considered the largest press of its kind in the world by platen area.

Naturally a press of this magnitude requires a precision control system. The vintage 1990s hardware and software obviously weren’t going to cut it. CPT designed a control system around B&R’s Panel PC with 15” touchscreen, remote backplane and sliced-based IO. Due to machine size, four IO racks were configured with each located closest to their point of use which drastically reduced amount of wire and assembly time. CPT’s control system and software allows users to quickly set up and adjust molding parameters while enhanced diagnostics and process monitoring allow for easy troubleshooting of process and machine issues.



With well over 200 pounds of polypropylene to melt, a modified extruder and accumulator system was engineered. Bryan Coppes, Infiltrator’s vice president of engineering, said CPT was selected in part because a significant amount of custom hydraulics work was needed and “with CPT’s experience in hydraulics they were the perfect organization for the job.”

Coppes said the project gave them exactly what they wanted at a fraction of the cost of a new machine. The mammoth press can produce anything in Infiltrator’s tank line, and it’s been running smoothly since its spring 2014 debut. “The scale of the project is the most impressive part,” said Coppes, adding that “with the right team on your side you can get a machine as good as new.”

