

D&R Packaging develops high-accuracy filling station in three weeks with versatile Avery Weigh-Tronix weight indicator

D&R Packaging, based in Merriam, Kansas, designs and builds packaging solutions ranging from dry bulk and liquid filling stations to versatile labeling equipment. When a pharmaceutical company requested a two-head liquid filling station—and required it within three weeks of their order—D&R Packaging needed reliable weighing equipment to integrate into the station in a short period of time.

“The station we designed had two liquid filling systems incorporated in one machine,” said Clif Derks, one of D&R Packaging’s owners. “We needed to build the station with an integrated scale that communicated with a PLC in order to control the filling process.”

Having worked with Accurate Superior Scale in Kansas City, Missouri on past projects, Derks turned to this company once again for a suitable weighing solution for this filling station. Matt Henage, sales representative at Accurate Superior, recommended the Avery Weigh-Tronix E1070 indicator, which collects and communicates weight data. The E1070 indicator is equipped with three setpoint controls, making it an ideal solution for many automated mixing and blending operations.

“We’ve had good success with the E1070 indicator,” Henage said. “We recommended it for this particular filling station because of its communications capabilities.”

The E1070 indicator features built-in interfaces—including Ethernet 10/100, PROFIBUS® and DeviceNet™—to share data with a PLC that controls the filling process. The indicator comes standard with a NEMA 6/4X rated enclosure that ensures dependable operation in dusty or even wet environments, making the product well suited for sanitary pharmaceutical manufacturing areas.

Accurate Superior delivered the E1070 within a week of Derks’ request, allowing D&R Packaging to meet their three-week deadline. In addition, the equipment played a critical role in ensuring the accuracy of their solution.

“The filling process begins with the tank dispersing liquid at its full rate. The E1070’s first setpoint is configured to activate a relay in the PLC upon reaching a measurement slightly below the container’s desired weight,” Derks said.



TECHNICAL

E1070 Indicator

- Offers built-in interfaces: Ethernet 10/100, PROFIBUS® and DeviceNet™
- Equipped with three setpoint controls for automated mixing or blending operations
- Ensures easy readability with a bright LED display featuring 0.8" digits
- Features NEMA 6/4X rated enclosure to withstand dusty or wet environments
- Transmits weight data to peripheral printers and/or computers through dual communication ports

Continued...



“The PLC then commands a reduction in product flow, down to a slow trickle. The indicator’s second setpoint is configured for the final target weight, and the E1070 signals the PLC to halt product flow once the container has been filled to its proper amount.”

This design ensures highest accuracy filling and allowed D&R Packaging to develop a filling solution that far surpassed the customer’s expectations.

“The customer requested we design a system that provides an accuracy rate of +/- .25 percent when used to fill a 5,000 gram bottle,” Derks added. “Our system can fill containers within .5 gram of the target weight—an accuracy rate of +/- .1 percent.”

In addition, the station can be simply relocated from tank to tank. This ensures the pharmaceutical company can use the same dependable filling solution to accommodate a wide range of materials and recipes.

The filling station is now in use, and with a tight deadline met, both Derks and his customer were pleased with the solution.

“The E1070 indicator works very well, and it was delivered in a timely fashion,” Derks added.

To learn more about the E1070 indicator and Avery Weigh-Tronix’s batching Weigh Bars, visit www.wtxweb.com.

For more information on Accurate Superior Scales, please visit www accuratesuperiorscale.com.

Visit D&R Packaging online at www.dandrpackaging.com.