

Scrap weighing made easy and efficient

"I love being a garbage man," said Denny Pool, owner of SP Industries in Hopkins, Michigan. SP Industries supplies waste management equipment for businesses in food scrap industry as well as other waste industries. Since joining SP Industries in 1983, Pool has seen a great amount of growth in this part of the waste industry.

"Food scrap has become a big market because of the rising price of corn," Pool said. "Now many of these contractors are buying food waste from these scrap generators or providers."

With the industry becoming increasingly competitive, some businesses have decided to buy scrap materials directly from various providers. This process requires an efficient method of weighing scrap materials. Of the several scales tested for this task, one scale system, used in conjunction with equipment from SP Industries, stood out among the rest.

"We tried platform scales, but they constantly got dirty and generally didn't work well," Pool said. "We also thought of trying a paddle system with a load cell, but that would not take very much abuse—which is a concern in our industry. After some research, we decided to try the Avery Weigh-Tronix Forklift Scale system, and it has worked extremely well."

This scale system includes an Avery Weigh-Tronix Forklift Scale with SimulCast™ WI-130 indicator, which transfers data to the elite series Avery Weigh-Tronix Model E1070 indicator with multi-formatable communications. The E1070 is designed to support multiple communications formats and communicates with a PLC to deliver a robust weighing solution. The system was the brainchild of Patrick DiCianni, president of Allied Measurement in Crestwood, Illinois.

"We incorporated the Avery Weigh-Tronix forklift scale into the lift forks of an extended height dumper (EHD) by SP Industries," DiCianni said. When this combination was paired with the E1070 Indicator, a robust, efficient weighing solution was discovered. "First, a tote full of food by-product and scrap is placed onto the forklift scale," DiCianni continued. "The EHD then rotates 135 degrees and releases the materials. The Avery Weigh-Tronix E1070 allows us to record the weight of the full tote on the way up, and also to record the weight of the empty tote on the way down. The indicator then reports this information to a PLC, which calculates the net weight."

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TECHNICAL

Forklift Scale

- Lifts, weighs, and records data for a selected load in a single operation
- Installs easily on forklift trucks or a vehicle's onboard forklift mechanism
- Operates in harsh industrial environments
- Delivers accurate readings – even when fork positions change – with Weigh Bar® weight sensors and out-of-level compensation
- Available in a wide range of heavy duty carriage widths for ITA class II and class III cleat type forklift trucks

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TECHNICAL

E1070 Indicator

- Provides both data management and process control in one device
- Features built-in interfaces, including Ethernet 10/100, PROFIBUS® and DeviceNet™
- Connects easily to remote displays, printers, PLCs and computers
- Offers a bright 0.8" digit LED display
- Designed for advanced data collection applications; capable of displaying the number of pieces weighed, average piece weight, gross, net and tare

"So many manufacturers have tried to do this in many different ways, but the forklift scale made more sense," DiCianni added. "It's very simple and works flawlessly."

The Avery Weigh-Tronix forklift scale features patented Weigh Bar® weight sensors for reliable, repeatable results. In addition, the scale's out-of-level compensation ensures that readings remain accurate, even when a fork changes positions. The E1070 provides process control and data management with flexible connectivity options and built-in network interfaces. In addition, the E1070 has a NEMA 6/4X rated enclosure to offer a robust solution for wet, dusty or otherwise hazardous environments.

This system also offers a simple solution for both scrap food providers and purchasers, who pick up the scrap materials once the containers are filled. Employees dropping off scrap food materials simply punch a number into the PLC describing which area or department they represent, and the scale automatically raises the container of materials, weighs it and dumps the materials—hands-off, quickly and safely. This way, materials are both weighed and documented; allowing companies to determine which of their departments produce the most scrap waste—information which is important in facilitating lean manufacturing. In addition, the E1070 is configured so that it sends out an advance warning to scrap purchasers when their containers are almost filled.

"This allows us to have a hands-off type of system," Pool said. "An advance warning is automatically sent to let our customers know that someone needs to come and switch out the container." Pool said the system can be configured to define "nearly full" in different terms, sending a warning when a container is 75% to 90% full, depending on the application. "It's an adjustable type of system, which is nice," Pool added. "Some applications may take two days to have a client's truck service the account, and others it may take two hours. We just started using this scale system in early 2006, and it's working out very well."

SP Industries can mount the forklift scale onto any of several fork attachments, which are constructed to withstand varying weights ranging from 1,000 to 10,000 lbs. In addition, this system allows the company to dump materials from nearly any range required—from 3 to 29 ft. high.

"That's the nice thing about this system—the flexibility," Pool said. "We try to keep it broad enough fit into different categories but fine-tuned to each particular application."