



PROFILES

CONSTRUCTION MATERIALS HAULER

Tri County Block & Brick counts on seven loads of sand and stone a day from a nearby quarry, but was losing trips because of inexact weight measurements in the loading area. TruckWeight's Smart Scale brought precision to the process.



TRICOUNTY BLOCK & BRICK

TruckWeight cements productivity gains for stone and sand hauler

How committed is Tri County Block & Brick to maximizing payload? To save 300 pounds, the company removed the landing gear legs from its 34-foot aluminum end-dump trailer.

"That's 300 more pounds of stone and sand per trip we can move from the quarry into our plant," says Mike Hitt, who maintains Tri County's fleet. "Multiply that by seven trips a day, times five days a week, times four weeks a month. We're serious about being 100-percent productive."

Based in Swanton, Ohio, Tri County makes concrete bricks and blocks for construction and landscape contractors. The more sand and stone it can haul into the facility using its six-axle tractor-trailer unit, the better the company can plan the output at the plant and satisfy customer demand.

The goal is to make seven trips a day from the quarry to the plant, Hitt says. Success hinges on loading fully and efficiently at the quarry.

"There's a scale on site and you can't leave if

your gross combination weight exceeds 80,000 pounds," Hitt says. "If you're overweight even by a little, you have to go back to the pile, dump stones, and get back in line behind 20 or 30 trucks to re-weigh. The extra time it takes can cost you a whole load that day."

Running underweight is no solution, either.

"We tried asking the loader to give us 24 tons of payload--78,000 pounds gross," Hitt says. "We could make our seven trips, but we were giving up almost a ton of possible payload each time."

Tri County found a different approach. The company installed Smart Scale, an onboard scale for trucks, tractors, and trailers with air suspensions. Made by TruckWeight Inc., it is the only wireless onboard scale for commercial vehicles. It uses radio frequency signals to transmit weight readings from sensors to a handheld display. The scale is accurate to within 150 pounds.

Payback has been quick. "We're within a few hundred pounds of 80,000 every time we line up

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BENEFITS

- Low-powered radio signals transmit weight information to a handheld reader up to 500 feet away
- Wireless feature means drivers can take a measurement in the truck cab, the loading area, or wherever it's convenient
- Accurate to within 0.3% of actual gross vehicle weight
- Reduce overweight violations and time spent redistributing loads
- Intrinsically safe
- Eliminate expense and downtime associated with a hardwired scale installation
- Suggested list price of \$550 US for each sensor and \$490 for the handheld



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to weigh before leaving the quarry," Hitt says. "We've increased our average payload per trip by almost a ton because we can quickly and easily check our weight right there at the loader."

TruckWeight introduced Smart Scale in 2005 following three years of product development and field trials. It includes a sensor with an integrated antenna, D.O.T. fittings for the vehicle's air line, and a wireless handheld receiver. The sensor measures temperature and pressure changes in the air suspension and relays the data to the handheld receiver using a low-powered radio transmitter. A small computer in the receiver interprets the information and provides an axle weight and gross vehicle weight measurement that's accurate to within 150 pounds. It produces readings once per minute, and every three seconds when the sensors detect the truck being loaded.

The wireless receiver has a range of 500 feet line-of-sight, allowing readings from the truck cab, loader, or almost anywhere it's safe and convenient.

Hitt installed and calibrated the sensors himself in less than an hour with no special skills or tools. Smart Scale's weatherproof, shock-

resistant, and non-corrosive housing requires no regular maintenance, and common AA batteries provide the power. The sensors are accurate in temperatures ranging from -40 F to 158 F.

"Because the quarry environment is so rough, I'm particular about how to position equipment on the truck or trailer," Hitt says. "Wires, cables, and electrical connections are potential points of failure. A wireless scale makes much more sense."

Onboard scales are gaining in popularity for two reasons, says Peter Panagapko, president of TruckWeight. "To protect infrastructure, jurisdictions are supplementing roadside scale

houses with portable scales they can put anywhere, even outside the gates of quarries, mills, and other job sites where truck operators may not have access to an on-site scale," he explains. "The second reason is the migration from mechanical suspensions to air-ride, especially in markets

like aggregates and asphalt, forest products, refuse, steel, agriculture, containerized freight, and liquid and dry bulk products."

To combat the high price and complexity associated with hardwired onboard scales, TruckWeight developed a wireless solution. The fast, simple, do-it-yourself installation lowers the cost of ownership and speeds up the return on investment. Smart Scale has a suggested list price of \$550 for each sensor and \$490 for the handheld receiver. You can equip a five-axle tractor-trailer combination for \$1,590.

Now, instead of hoping for seven trips each day, Tri County expects it.

The loader knows approximately how much material to put in the trailer, Hitt says, "but gut feel and bucket scales are nowhere near as accurate as the TruckWeight scale."

Hitt says Smart Scale has helped Tri County Block & Brick maximize payload and make loading more efficient.

"Now we can count on seven full loads a day coming into our plant," he says. "We're hauling more payload, making more trips, and we're more productive." ■

