

CASE STUDY:

Air-Weigh and Aarcomm:

The Unique Partnership Revolutionizing Excavation

SOLUTION OVERVIEW:

Air-Weigh offers a complete vehicle weighing system that helps reduce costs, improve safety, and maximize profitability.

Aarcomm develops innovative and forward-thinking, rugged radio remote control solutions for industrial applications.

Together, these two technology companies offer something that no one else does.

Hydro-vacuum excavation is quickly becoming the preferred method for trenching and other types of industrial digging. The process is efficient, but there remain certain challenges to the industry in need of solutions, mainly around keeping hydrovac trucks within legal weight limits, as well as safety concerns.

Air-Weigh and Aarcomm, two technology companies dedicated to providing products and solutions to the transportation industry, saw an opportunity to join forces and integrate their products to better serve their hydrovac customers, keeping operators safe and trucks within the required weight limits. The result is something wholly unique in the world of hydro excavation, and it is only a matter of time before this new innovation becomes standard practice in the industry.

“It’s going to become a standard for the industry, not just a high-tech feature only a few can utilize,” says Cal Block of Foremost. “It’s an industry-leading initiative.”

Air-Weigh's Visionary Digital Scales

Air-Weigh began as a tiny startup in a garage in Eugene, Oregon. It was 1987, and though no one knew it then, the company would grow to become the leader in electronic, onboard digital scales for commercial motor vehicles.

"We consider ourselves a technology company first," says Michael Ferguson, Air-Weigh's National Accounts Manager. Indeed, their digital scales are used in over 100 OEMs' rolling stocks, a testament to their cutting-edge approach and focus on perpetual product development.

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Their onboard scales feature a dual-point calibration system, coupled with several unique proprietary technologies that allow customers to accurately know their specific suspension weights at the loading site.

Most motor carriers use Air-Weigh products to stay compliant with weight regulations and keep from damaging their vehicles and equipment with overloading. For hydrovacs, their LoadMaxx Straight Truck digital scale has become even more useful, as the operators can use it in real-time to track how quickly their trucks are filling up with slurry, a dirt-and-water byproduct of the hydro excavation process.

Using the LoadMaxx scale greatly improves loading efficiency when excavating, which has become critical as vac trucks have increased in popularity for urban and residential work.

It did present one practical challenge, though: operators were unable to monitor the scale while working the hydrovac. Even two-man teams were unable to load the truck with slurry effectively and gain the full benefit of the onboard scale.

Aarcomm: Driving Industrial Radio Remote Control Innovation

Founded in 2012, Aarcomm Systems is a relatively new company, but the founders are pioneers of wireless radio remote control systems. Named for one of the Founder's three children, Andrew, Adrienne, and Ryan, Aarcomm's technological expertise and forward-thinking company culture have propelled them to the vanguard of the industry in just a few short years.

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Operating from Coquitlam, British Columbia, Canada, Aarcomm was well-positioned to capitalize on the growing popularity of hydro excavation in Canada, as its pinpoint accuracy and control far exceeded the abilities of more traditional excavation methods, like a backhoe. The ability to heat the pressurized water improved efficiency even more, as the soil can often be frozen for much of the year in parts of Canada.

Utilizing high-tech and smart features like two programmable LCD screens, motion-sensing technology, and a unique dead-man's switch, Aarcomm's versatile and rugged Trident radio remote control system has increasingly become the go-to remote for hydrovac truck manufacturers and owners.

However, a persistent problem kept cropping up with Aarcomm's customers that was not addressed with their solution alone. “In this industry, inspectors are waiting at the dump sites to fine operators thousands of dollars,” says Doug Graham, Aarcomm's Vice President of Sales. “We needed a way for our customers to hit the exact legal weight limit as they're filling the truck with slurry.”

Foremost Vac Trucks: The Matchmaker

Foremost is a proven industry leader in the manufacture, repair, service, and maintenance of vacuum trucks and hydrovacs.

Based out of Alberta, Canada, they have been at the forefront of the hydro excavation transition, and as such, were perfectly situated to see the value of an integration between the Air-Weigh digital scale and the Aarcomm radio remote.

“One of our salesmen had seen the Air-Weigh scales in the field, and after some discussion here, we thought it might work well together with the Aarcomm remote,” says Cal Block, Electrical Foreman at Foremost. “We reached out to Aarcomm and encouraged them to get in touch with the Air-Weigh technical team to see about connecting the devices.”

“Foremost is an innovator in the space,” says Doug Graham. “They worked with us on our dead-man’s switch, replacing the trigger finger or foot pedal system.” Aarcomm took Cal’s advice and reached out to the engineering team at Air-Weigh to explore the prospect of an integration.

A Game-Changing Collaboration

It took the Aarcomm team a few weeks to write the integration software to connect to the Air-Weigh scale, but once development was complete, they both knew they had a winning combination on their hands.

“This combination is far more efficient for the drivers loading the trucks,” says Michael Ferguson. “It allows them to maximize each load and eliminate underloading, and it prevents fines from overloading.”

Foremost has begun including both devices in all their new hydrovac units, and the response has been overwhelmingly positive from their customers. The ability to see the Air-Weigh scale readout on the Aarcomm remote LCD screen as the hydro excavator runs is changing how teams operate in the field, and for the better.

A typical hydrovac pressurized water stream shoots from the nozzle at 3000 psi, more than enough to sever a limb, or worse.

The fine control and instantaneous data from the Air-Weigh/Aarcomm combination are making for a less intense work environment, where operators can simply remain stationary and direct the machinery, since they have all the information they need on the remote.

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