

# The **SURVIVOR**<sup>®</sup> Advantage



**RICE LAKE**<sup>®</sup>  
WEIGHING SYSTEMS

800-472-6703

[www.ricelake.com](http://www.ricelake.com)

# The **SURVIVOR**® Advantage

## High-Quality Features for a Better Truck Scale

For many businesses, a truck scale is a cash register. Products and materials are weighed and their price is then determined based on their weight. A reliable truck scale is essential to business success; if it ever stops working, so does the rest of your business. When you invest in a truck scale, you should trust that it will perform reliably for at least a generation, if not longer.

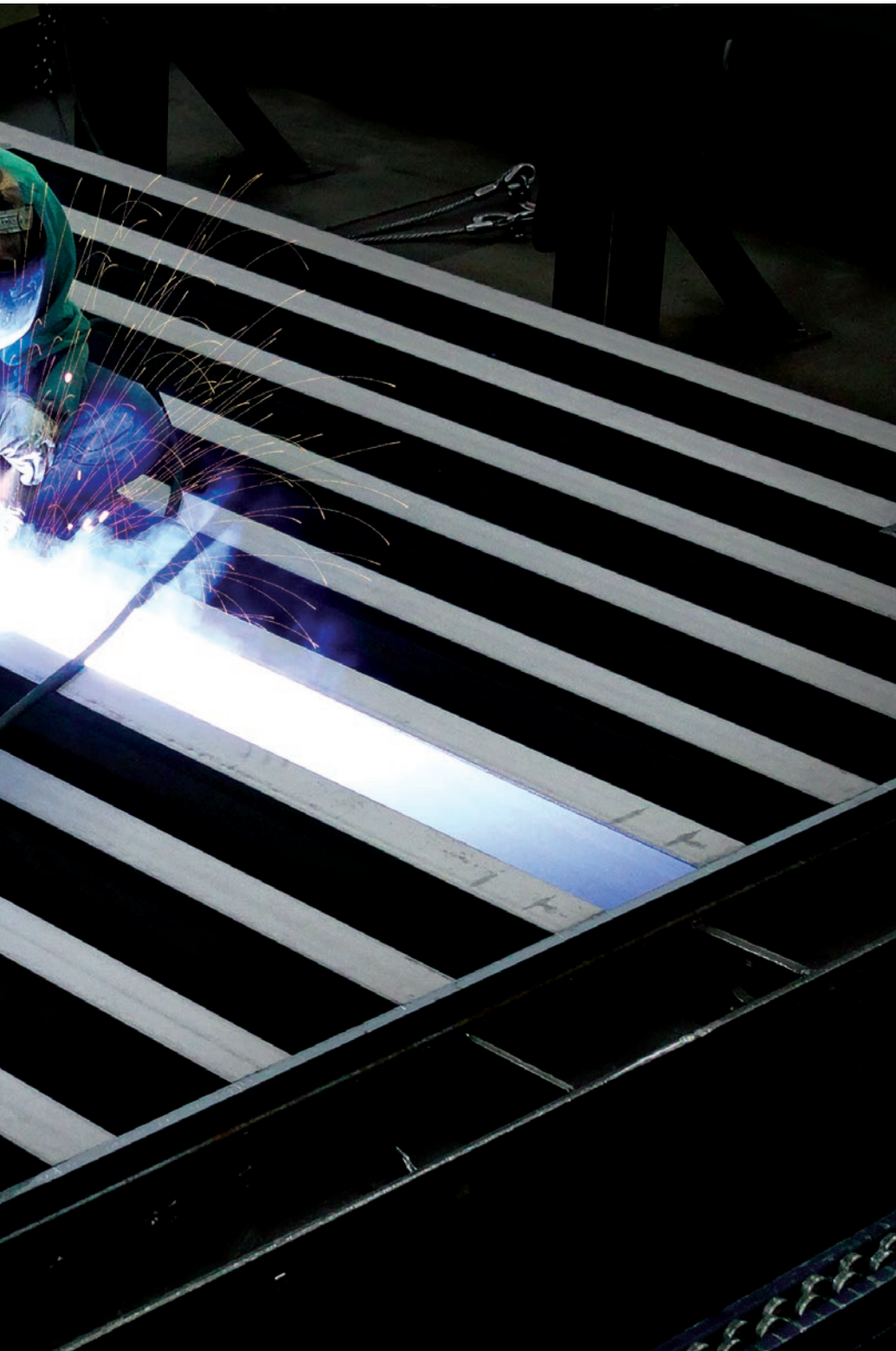
With so many truck scale options available, choosing the best scale for your application can seem overwhelming. Learning about truck scale design features and manufacturing processes will help you choose the best long-term option, resulting in the lowest total cost of ownership over the expected life span of the scale. The anticipated life span of a truck scale is based on how many weighing cycles it is expected to handle before fatigue causes it to no longer reliably provide accurate weighments.

Rice Lake Weighing Systems' SURVIVOR® truck scales are designed and manufactured with several features that set them apart from competitive models. These features mean SURVIVOR truck scales can handle a minimum 250 weighments every day and still last 25 years or more.

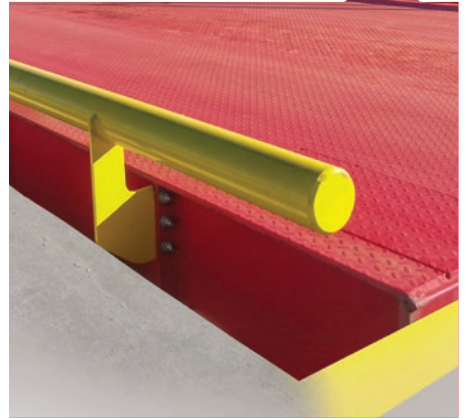
## Expert Manufacturing

A truck scale's strength and reliability are about more than just design. A high-quality truck scale must also be manufactured by specially trained welders and fabricators who use cutting-edge techniques. Each SURVIVOR truck scale is manufactured by highly skilled individuals who complete a comprehensive 480-hour, 12-week fabrication training program before they begin working on SURVIVOR truck scales. This training program is required for all SURVIVOR fabricators regardless of their previous experience. This ensures your SURVIVOR truck scale is manufactured by only the best fabricators, creating the highest quality truck scales at all four of Rice Lake Weighing Systems' North American manufacturing facilities.





### DESIGN



### INSTALLATION



### MAINTENANCE



# Designed for Durability

## Quality Starts with Design

Making the Toughest Truck Scales on Earth® begins with design. Rice Lake's engineering team uses Finite Element Analysis (FEA) technology to identify key stress points on truck scales to design scales with superior structural integrity, which delivers greater durability for your investment.

### Open Bottom Design

Weighbridge structural integrity is the most important factor in the purchase of any truck scale.

SURVIVOR truck scales have additional structural steel I-beams to eliminate the need for a bottom support deck plate. This gives every SURVIVOR scale an open bottom design, preventing rust by allowing any condensation caused by natural changes in temperature to drip to the foundation and evaporate, so moisture is not trapped in the weighbridge.

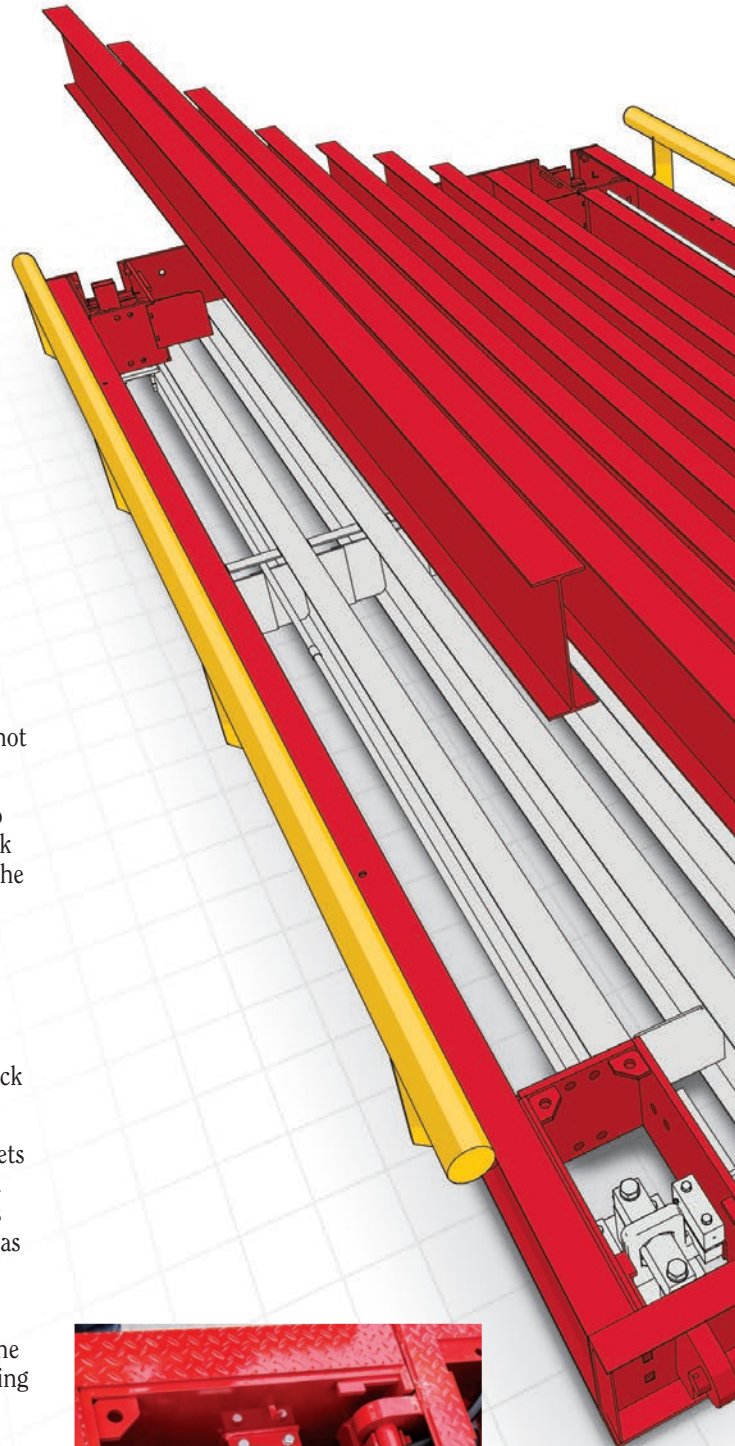
Using both top and bottom deck plates in place of additional I-beams is meant to provide scale durability at a lower cost. However, combining top and bottom deck plates traps condensation, leading to rust and corrosion, ultimately shortening the scale's lifespan.

### Secure Load Cell Housing

As vehicles enter and exit a truck scale, force can cause stress fractures in the deck area surrounding the load cell pockets.

SURVIVOR truck scales are designed with integrated load cell pockets. The pockets are designed to fit between the longitudinal steel I-beams, securely housing load cells and electronics. By integrating load cell pockets, I-beams can extend across the full length of the weighbridge module and provide support to high stress areas of the scale, improving its structural integrity and helping ensure consistently accurate weighments.

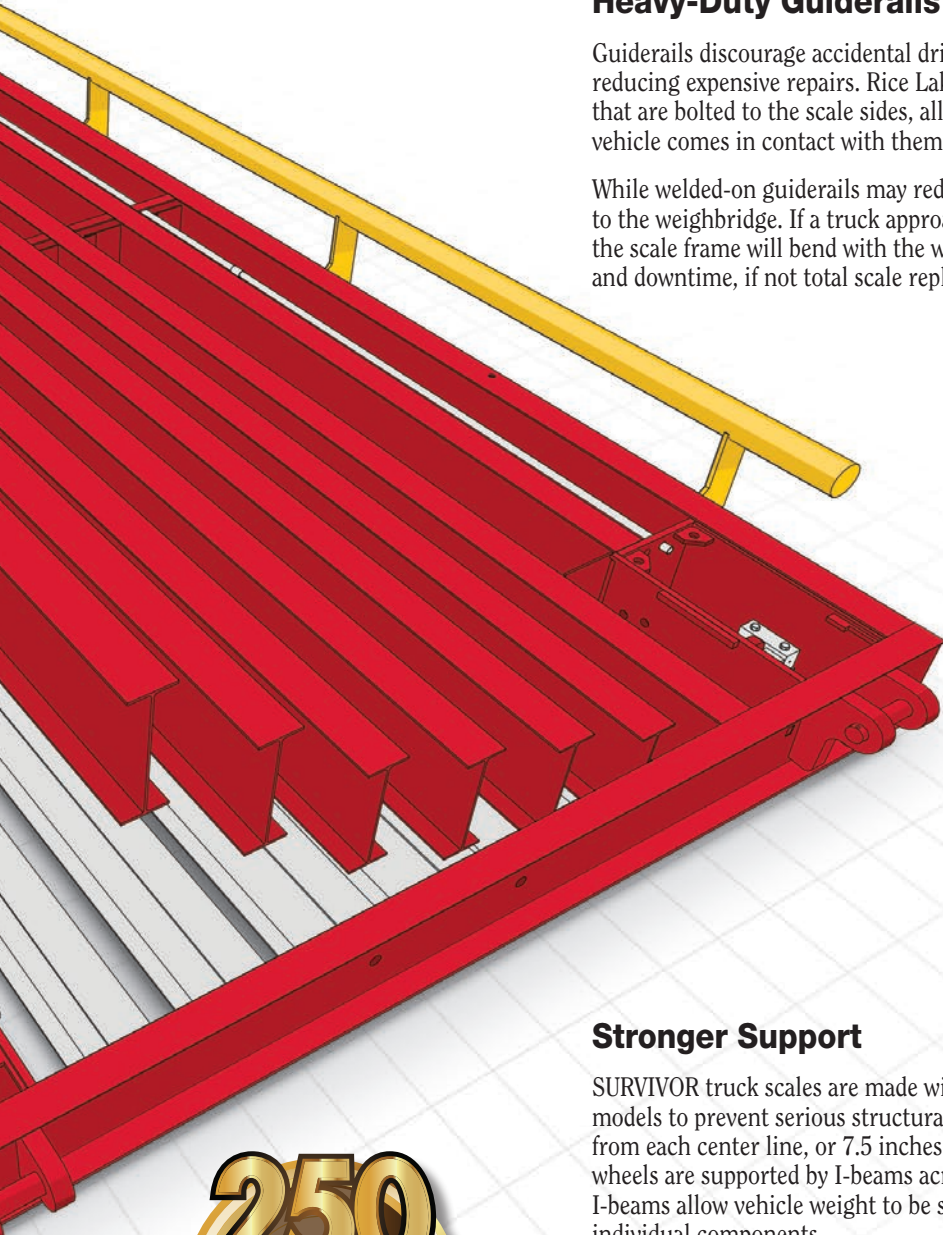
Some truck scales have load cell pockets that are either bolted or welded on to the ends of the modules. Over time, the repeated stress of vehicles entering and exiting the scale can cause these attached pockets to bend away from the module. This leads to irreparable damage to the load cell suspension systems and inaccurate vehicle weighments.



## Heavy-Duty Guiderails

Guiderails discourage accidental drive-offs and minimize damage to vehicle wheels, reducing expensive repairs. Rice Lake has designed single-pipe and double-pipe guiderails that are bolted to the scale sides, allowing them to break away from the module if a vehicle comes in contact with them.

While welded-on guiderails may reduce production costs, they can actually cause damage to the weighbridge. If a truck approaches the scale too quickly and strikes the guiderails, the scale frame will bend with the welded-on rails. Damage like this leads to costly repairs and downtime, if not total scale replacement.



## Stronger Support

SURVIVOR truck scales are made with more longitudinal steel I-beams than competitive models to prevent serious structural fatigue. I-beams are spaced no farther than 11.5 inches from each center line, or 7.5 inches from one flange edge to the next. This ensures vehicle wheels are supported by I-beams across the entire width of the weighbridge. The additional I-beams allow vehicle weight to be supported by a greater area, putting less stress on individual components.

Using smaller I-beams, C-channels, bent sheet metal or even placing beams farther apart can reduce the initial cost of the truck scale; however, these designs do not offer as much support and can bow or dimple.



## A Thorough Finishing Process

The finishing process for Rice Lake's SURVIVOR truck scales helps defend against rust and corrosion.

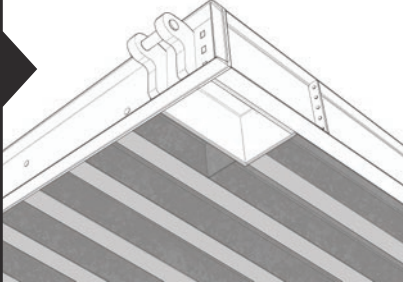
Before production begins, an abrasive blast cleaning removes mill scale, oil and other residue steel comes in contact with before reaching Rice Lake's manufacturing facilities. This process ensures consistent, long-lasting welds.

Saw lubricants, welding smoke and welding residue adhere to steel throughout the manufacturing process. Rice Lake uses a thorough cleaning process after scale components have been welded together to ensure proper paint adhesion.

Once the fabricated scale has been thoroughly cleaned, SURVIVOR truck scales have two finishing options: a high solids urethane finish or a powder coat paint finish.

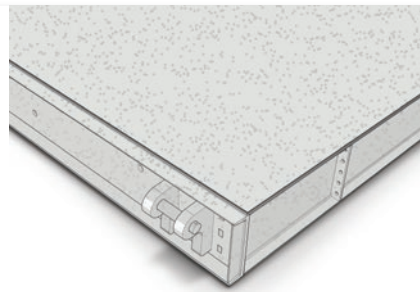


**High Solids Urethane**



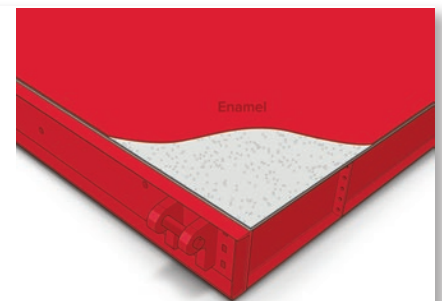
**Undercoating**

First, all non-visible scale surfaces first receive an abrasion-resistant, asphalt-emulsion undercoating to prevent rust caused by condensation or standing water.



**High Solids Primer**

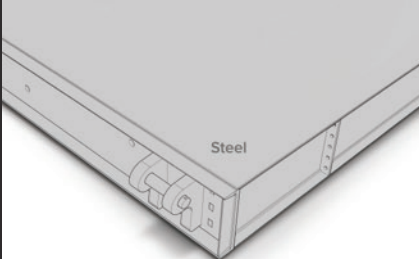
After undercoating is applied, all visible or exposed scale surfaces receive a coat of high solids urethane primer.



**High Solids Liquid Paint**

Finally, the specialized high solids urethane finish coat provides lasting durability and chemical resistance.

**Powder Coat Finishing**



**Static Charge**

Powder coating uses a fine powder mixture of resin and pigment particles to create a thick, uniform finish. An electrostatic charge holds the powder in place as it is applied to the entire scale surface.



**Application**

Powder coated scales receive a protective black undercoat and SURVIVOR red top coat. After powder is applied, the scale is moved to a curing oven where the powder paint melts, fusing to the truck scale surface.



**Curing**

Powder coating is extremely resistant to chipping, scratching and wearing. This high-quality finish keeps the scale safe from rust and corrosion-causing elements in all weather conditions.



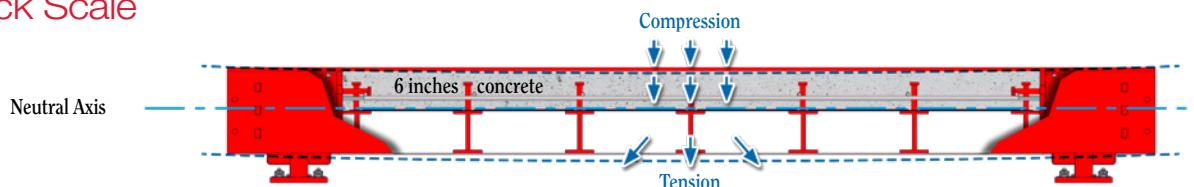
### A Stronger Concrete Deck

The neutral axis on a truck scale is the point where no compression or tension occurs when a vehicle is on the weighbridge. In a concrete deck truck scale, this represents the point where concrete shifts from expected compression to damaging tension.

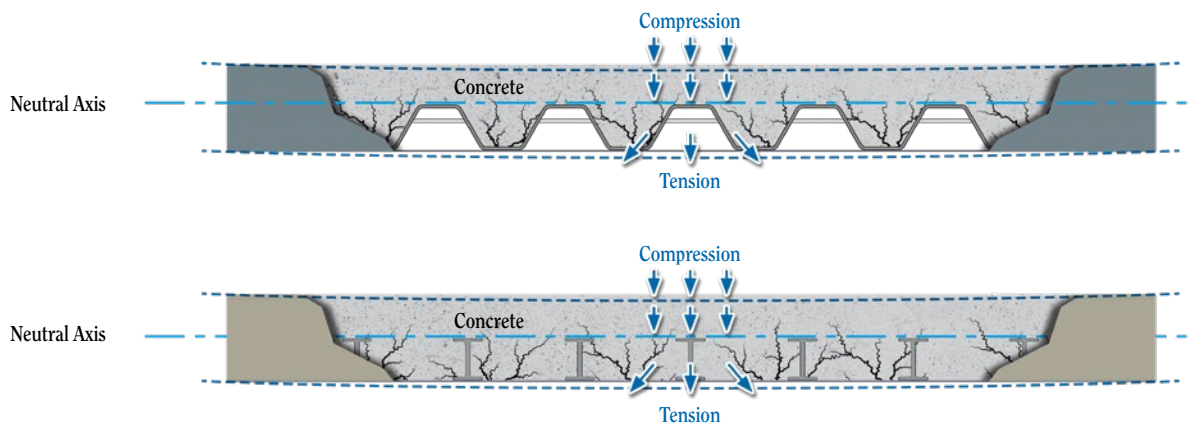
To prevent concrete deck weighbridge fatigue, SURVIVOR truck scales have a six-inch concrete deck that sits above the neutral axis. The design incorporates galvanized steel sheets with I-beams to ensure concrete stays above the neutral axis. The six-inch concrete deck is supported by a six-inch steel I-beam substructure, providing added strength to the entire module. The concrete is also poured on-site to prevent damage during shipping.

If a concrete deck truck scale is manufactured with less steel and a 10- or 12-inch concrete deck, cracks can form in the concrete after only a short amount of time. When a vehicle drives onto the scale, force compresses the concrete. As concrete above the truck scale's neutral axis is compressed, concrete below the neutral axis is forced to expand to release tension, creating cracks.

SURVIVOR Truck Scale



Other Truck Scale Brands



# Installation

## Simplified Installation

Time is critical when a truck scale is the cash register for your business. SURVIVOR truck scales are easy to install so you can start using it sooner. Truck scale modules are loaded in a specific order for shipping so when they arrive for installation, they are easily placed in the correct order.

## Self-Seating P-Brackets

SURVIVOR truck scales are made with self-seating P-brackets for easy module connection. The P-bracket design eliminates the use of bolts, making installation simpler and faster. Support pins in the P-brackets are inserted into pin receivers of the adjoining module, forming a secure connection. This boltless connection between modules also helps maintain alignment by allowing for thermal expansion and contraction throughout changing seasons.

## Time-Saving Hardware Configurations

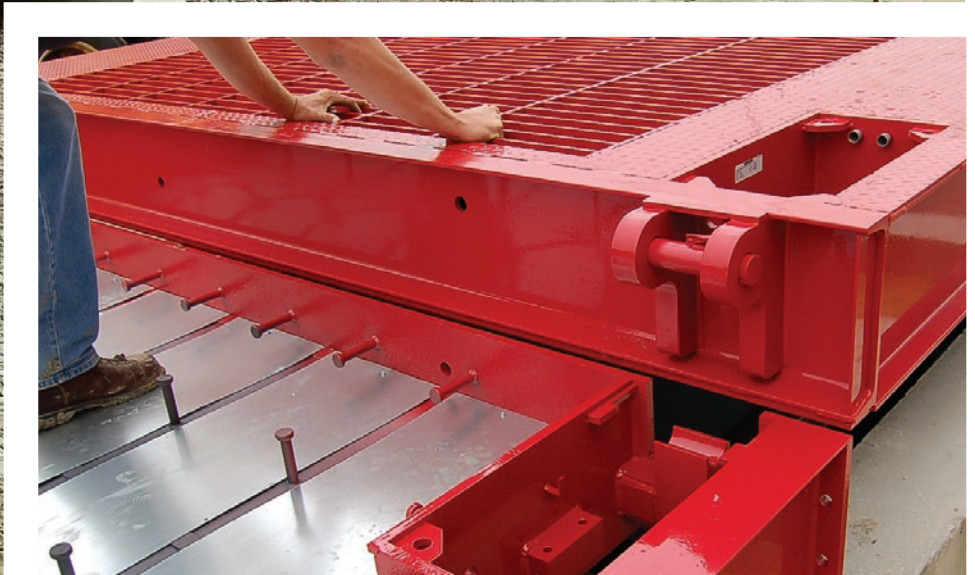
To eliminate the time needed to sort hardware before installation, each SURVIVOR load cell mount is shipped with pre-sorted and packaged assembly hardware. Load cell mounts can be ordered and shipped pre-suspended in the load cell pockets with the flex conduit for load cell wiring also in place. These time-saving benefits allow a certified truck scale technician to install a SURVIVOR in less time, meaning the truck scale is ready for use sooner.

## Custom Designs for Unique Applications

Rice Lake can quickly and cost-effectively provide custom SURVIVOR truck scale solutions for unique applications. Custom solutions are engineered to fit existing pit foundations or space limitations. SURVIVOR truck scales can also have custom capacities, custom paint colors or be constructed of galvanized steel for highly corrosive environments. Every custom SURVIVOR truck scale is designed and tested by a specialized team of heavy capacity engineers, ensuring custom SURVIVOR scales are the same high quality as standard models.







# Maintenance

## Made to Minimize Downtime

If the truck scale design leads to lengthy repairs or frequent adjustments, maintenance costs become a significant part of truck scale ownership. These repair costs are not typically considered at the time of purchase and can actually lead to higher total cost of ownership throughout the truck scale's life. SURVIVOR truck scales are designed to prevent excessive downtime. Qualified truck scale distributors and service technicians handle every SURVIVOR installation and any maintenance to ensure the truck scale is always working properly.

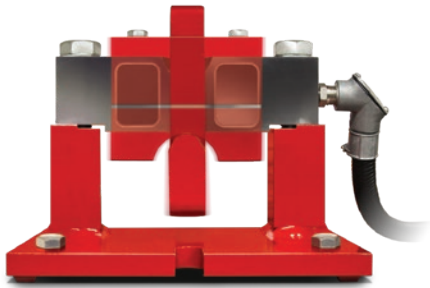
### **Boltless Top-Access Covers**

SURVIVOR truck scales have boltless top-access covers to protect electronics. This allows load cells and electronic components to be accessed from the top of the scale deck for convenient maintenance. Boltless top-access covers also eliminate the time-consuming work of removing bolts that have been frozen or rusted in place. A pry bar or screwdriver is the only equipment necessary to open the heavy-duty access covers, optimizing routine maintenance and cleaning.

### **Steel Conduit**

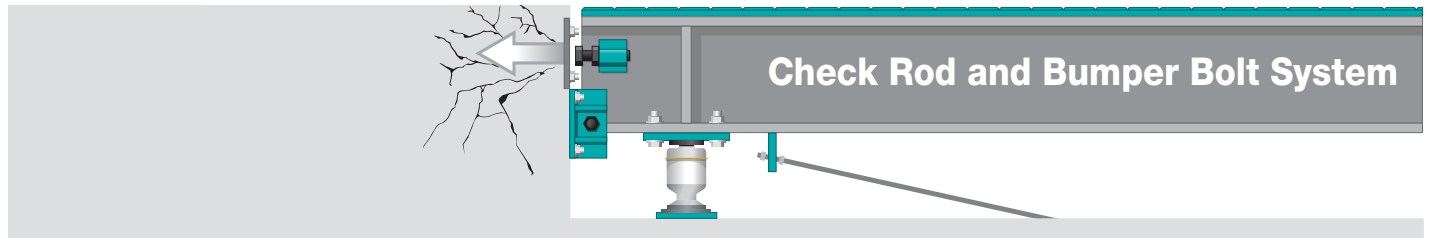
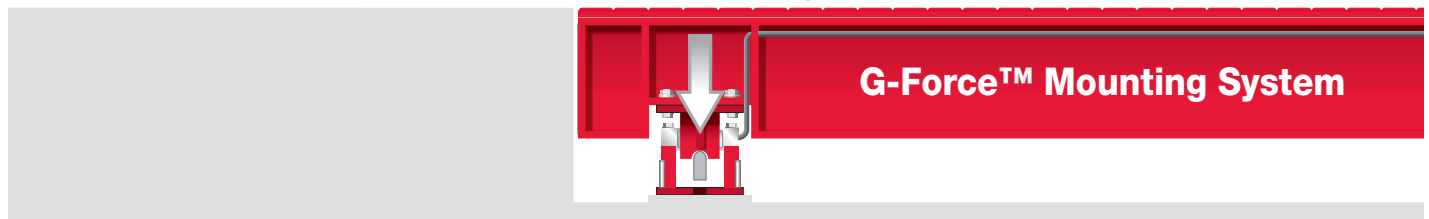
Inadequate load cell cable protection such as sheathed cables outside of the scale can result in frequent, often non-warranted repairs. SURVIVOR truck scales include built-in conduits and easily installed flex conduits to completely protect load cell cables. The steel conduit protects the cable from damage caused by rodents, prevents crushing and seals out harsh weather elements.





## G-Force™ Mounting System

Rice Lake's G-Force mounting system eliminates the need for check rods and bumper bolts. The G-Force system uses 100% of the gravitational force of the truck-loading action against itself, eliminating excess movement. The self-centering action of the G-Force system prevents binding while protecting load cells from dangerous side load shocks when trucks start and stop moving. The G-Force mounting system eliminates the costly maintenance and foundation repairs of check rods and bumper bolts.

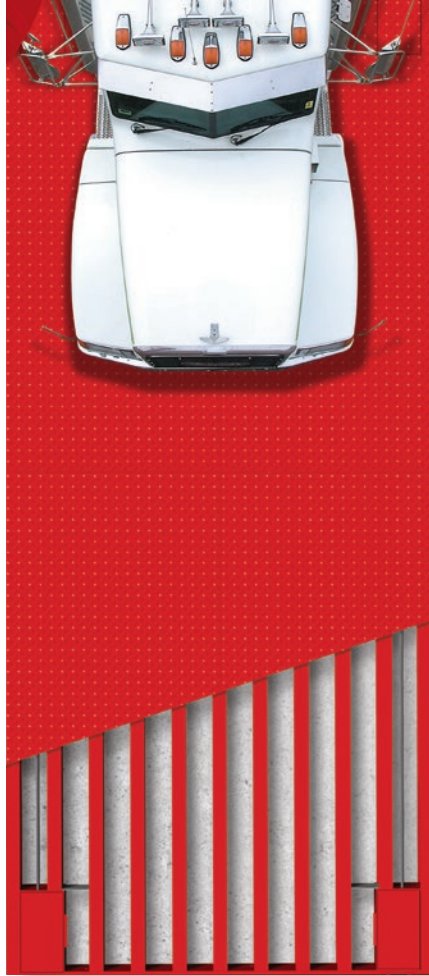


## Backed by Dealer and Factory Support

SURVIVOR truck scales are sold and serviced by a trusted, certified dealer network, backed by the largest industrial scale manufacturer in North America. Along with a large network of dedicated dealers, Rice Lake is committed to giving you the very best in service, selection and speed.

Rice Lake Weighing Systems has been manufacturing and distributing weight-related products and solutions since 1946. Industry experience combines with a customer-focused approach to ensure you receive the right solution for your unique application.

To learn more about the toughest truck scales on Earth, visit [www.ricelake.com/SURVIVOR](http://www.ricelake.com/SURVIVOR) or contact your Rice Lake Weighing Systems SURVIVOR truck scale dealer.



**RICE LAKE**<sup>®</sup>  
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230 W. Coleman St., Rice Lake, WI 54868 • USA  
TEL: 715-234-9171 • FAX: 715-234-6967 • [www.ricelake.com](http://www.ricelake.com)

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