Avery Weigh-Tronix

BridgeMont Concrete Deck Motor Truck Scale

BridgeMont Concrete Deck– Performance and Affordability

For two decades Weigh-Tronix has built premium truck scales that have become the performance benchmark for ruggedness and performance in heavy use applications. Now Weigh-Tronix has introduced a new class of truck scale, the BridgeMont. It is a scale for the majority of users, the people who require a scale they can count on, day in and day out.

BridgeMont designers asked new questions: How do you reduce the cost of truck scale ownership?

As they began the development of the new BridgeMont truck scale, Weigh-Tronix designers recognized that their strength was building truck scales with long service life. Now they needed to ask "How do we build the same quality into a scale for general use? How do we provide the product that gives long years of service without over building? What design choices do we make that will reduce the cost of truck scale ownership?"

Structural integrity, the biggest variable in cost of ownership.

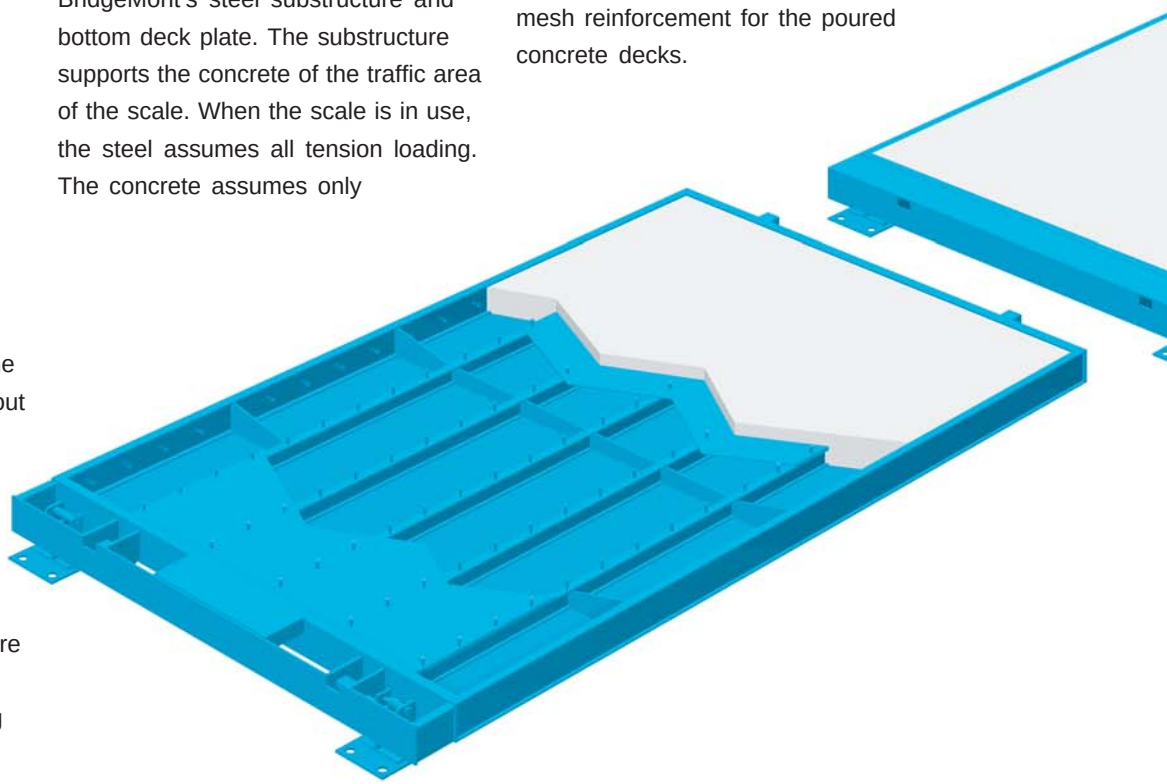
Weigh-Tronix designers employed a technology called Finite Element Analysis (FEA) to the design of the BridgeMont to substantially reduce the cost of our standard truck scale without sacrificing structural integrity.

Weigh-Tronix engineers created computer generated models of each proposed design for the new BridgeMont Truck Scale. The FEA technology permitted them to measure critical stress factors on virtually every component of the scale, testing the new designs under worst case conditions. They could test the performance of the deck when it is improperly loaded, checking for potential damage and premature wear.

As a result they developed a new configuration for the deck that reduced the weight of the deck but maintained the strength. The FEA technology let designers model and pretest multiple designs, letting them make the most efficient use of structural steel and concrete.

The weighing surface of the BridgeMont Concrete Deck is a 5-inch concrete deck supported by BridgeMont's steel substructure and bottom deck plate. The substructure supports the concrete of the traffic area of the scale. When the scale is in use, the steel assumes all tension loading. The concrete assumes only compression load as it is meant to do. Shear studs in the deck plate bond the concrete to the steel elements providing a composite structure.

One of the unique choices designers made for the concrete version of the BridgeMont Truck Scale was to specify fiber mesh concrete for the deck. Fiber mesh concrete blends virgin polypropylene fiber with the concrete to strengthen the concrete, making it resistant to cracking and damage from temperature changes. BridgeMont Concrete Truck Scales with fiber mesh concrete have no need for rebar or wire mesh reinforcement for the poured concrete decks.



BridgeMont preserves the best elements of proven Weigh-Tronix design

BridgeMont installs anywhere. Depending on your state regulations, space requirements and environmental conditions, you can use it as a pit type scale, place it on a concrete slab, or simply set it on concrete piers.

BridgeMont employs Weigh-Tronix exclusive Easi-Post or traditional link suspension. Both systems incude dependable self-contained checking and allow the decks to be self-centering. They compensate for expansion and contraction of the deck due to temperature changes and eliminate the effects of torque and side loading.

The heart of the BridgeMont Steel Truck Scale is the Weigh Bar® weight sensor. Weigh-Tronix machines Weigh Bars from high quality aircraft alloy steel bar stock. Each Weigh Bar goes through a three-step process of heat treating, quenching and then tempering. The process has two benefits. First, it increases the weight sensor's resistance to corrosion. Secondly, it enhances the performance of the Weigh Bar; ensuring its high degree of repeatability by minimizing hysteresis. The Weigh Bar has proven to be the most dependable and long lasting electronic weight sensor in the industry.

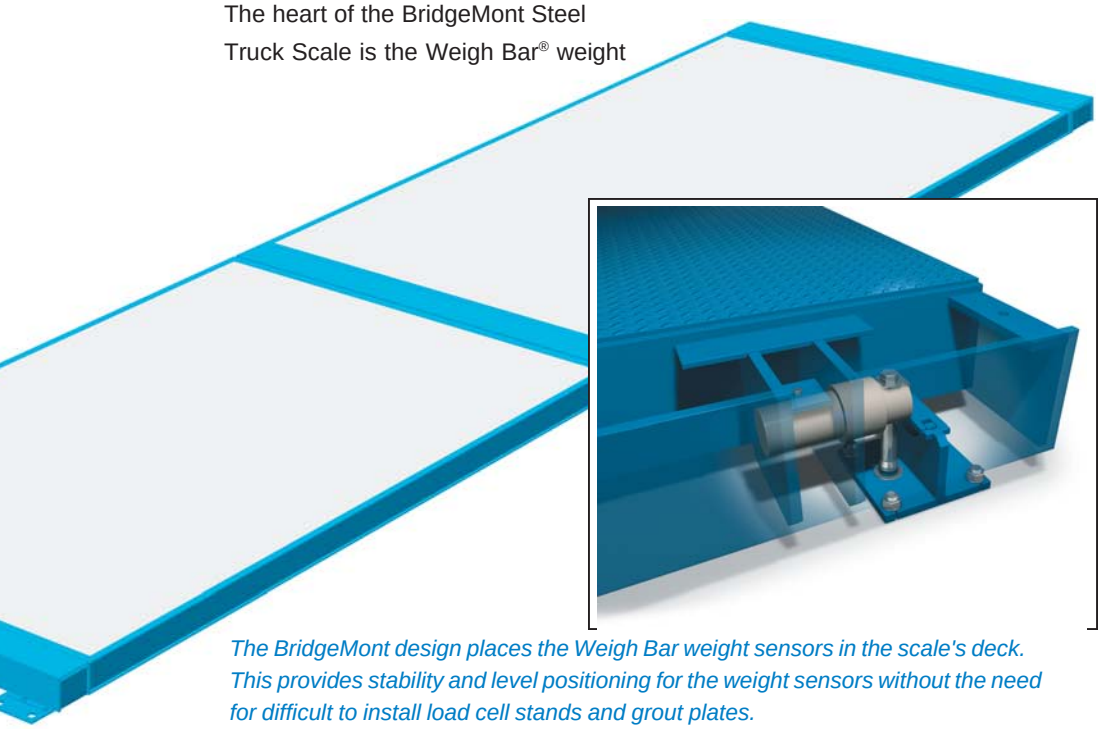
Simplified installation cuts cost

Another significant choice that Weigh-Tronix designers made was to simplify the installation of the BridgeMont. The traditional truck scale installation uses grout plates as bases for the stands that hold the load cells. The grout plates require precise positioning and must be perfectly level because they ensure that all the load cells are level. Anchor bolts, positioned in the foundation to tight tolerances, secure each grout plate.

In contrast, the BridgeMont positions its Weigh Bars in the deck sections instead of on stands which need to be perfectly level. This design eliminates the need for grout plates. Installers simply drill and insert anchor bolts at the time of installation. This saves hours of highly skilled, precision foundation preparation.

BridgeMont's 20 and 23 foot deck sections are longer than the industry standard. Therefore, the BridgeMont truck scale will often have one less deck section than a competitive scale of the same length. This results in a three-time savings. One less deck section saves the cost of load cells, cable and junction boxes. One less deck section speeds the installation process and simplifies calibration. One less deck eliminates one pier, lowering the cost of the foundation.

In addition, each deck section arrives with Weigh Bars already mounted in the deck. The cables are hard wired to the Weigh Bars (No connectors to corrode or fail from dampness). Protective conduit for the wiring and junction boxes are already in place.



The BridgeMont design places the Weigh Bar weight sensors in the scale's deck. This provides stability and level positioning for the weight sensors without the need for difficult to install load cell stands and grout plates.

BridgeMont Truck Scales– Another example of a better way from Weigh-Tronix

BridgeMont Truck Scales capitalize on the strengths of a Weigh-Tronix twenty-five year tradition of building premium truck scales. In addition they offer the unbeatable combination of structural integrity and cost effectiveness. Count on Weigh-Tronix to find the better way.

Options and accessories

Guide rails

Guard posts

Manhole rings and covers

Indicators

Remote displays

Pre-Fab foundations

Hazardous area systems

Multi-platform systems for axle weighing

Grain dump modules

PDOX Waste Management System

PDOX Special Applications Management Systems

Printers

Truck Weigh™ Software

Traxle™ - total truck and axle weights

Specifications

Model#	Size	Modules	Weigh Bars	Capacity (tons) Gross
BMC 1010	10' x 10'	1	4	40
BMC 1210	12' x 10'	1	4	40
BMC 2010	20' 8" x 10'	1	4	40
BMC 2410	24' x 10'	1	4	40
BMC 3010	29' 7" x 10'	2	6	80
BMC 3510	34' 11" x 10'	2	6	80
BMC 4010	40' 3" x 10'	2	6	80
BMC 4710	46' 11" x 10'	2	6	80
BMC 6010	59' 11" x 10'	3	8	100
BMC 7010	69' 11" x 10'	3	8	100
BMC 8010	79' 6" x 10'	4	10	100
BMC 9310	92' 10" x 10'	4	10	100
BMC 10010	99' 1" x 10'	5	12	100
BMC 11610	115' 9" x 10'	5	12	100
BMC 1011	10' x 11'	1	4	40
BMC 1211	12' x 11'	1	4	40
BMC 2011	20' 8" x 11'	1	4	40
BMC 2411	24' x 11'	1	4	40
BMC 3011	29' 7" x 11'	2	6	80
BMC 3511	34' 11" x 11'	2	6	80
BMC 4011	40' 3" x 11'	2	6	80
BMC 4711	46' 11" x 11'	2	6	80
BMC 6011	59' 11" x 11'	3	8	100
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BMC 10011	99' 1" x 11'	5	12	100
BMC 11611	115' 9" x 11'	5	12	100

Dual tandem axle capacity: 80,000 lb

"r" factor rating: 2.35

Concentrated load capacity (CLC): 40 ton

Surge voltage protection: Standard equipment

Junction boxes: NEMA 4 stainless steel

Operating environment:
Outdoor weather proof
Temperature: -30° to 130°F

Approvals: NTEP, Cert. of Conf. #97-074

Warranty: 5 years - Weigh Bars
10 years - Weighbridge

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