# Vehicle Scales



# VTS200 Steel Deck Truck Scale

Tested for Long Life
Proven Performance
Unequalled Reliability

# Performance through Innovation Keeps Your Business Running



# Orthotropic Steel Weighbridge Designed, Tested, and Built to Last

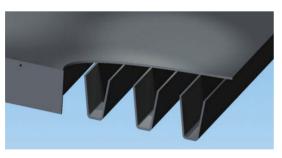
The cost of a weighbridge is a critical issue for today's customer, the VTS200 is designed to optimize the state-of-the-art orthotropic design to fulfill two important goals; to accurately weigh on-the-road trucks under medium to heavy traffic conditions and to reduce your long-term service and maintenance costs.





# **POWERCELL®** Load Cells

POWERCELL Load cells deliver the ultimate in Vehicle weighing with unequalled accuracy and reliability. The built-in microprocessor can compensate the outside change impact, such as temperature, non-linearity, hysteresis and creep. It improves the weighing performance and minimizes the repair cost due to unplanned downtime.



# Orthotropic design

Orthotropic ribs distribute concentrated loads more effectively to reduce stress on individual members which similar to those used on the Golden Gate Bridge and other heavily travelled highway bridges around the world.



# **Lightning Protection**

The specially designed Strike Shield lightning protection system helps prevent costly downtime by using multiple levels of protection to safeguard your entire scale system: Load cells, cables, and terminal. It is the only system that has been tested by thirdparty laboratories and withstood multiple lightning strikes.



# **Proven Performance**

High quality construction, excellent surface finish and life tested. Using the unique "Module masher" accelerated lifecycle test stand, every new design weighbridge module have to be tested at full design load. It is one way MT goes beyond the competition to ensure that you get the most reliable scale in the industry.

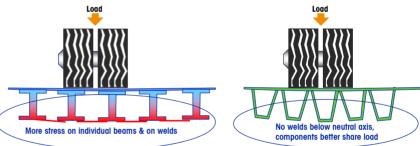


# **Rugged full-steel weighbridge** Long life through efficient design



# Orthotropic design

Model VTS200 handles the forces generated by normal truck traffic, distributing concentrated loads more effectively than standard I-beam deck structures. The robust orthotropic design is similar to those used on heavily travelled highway bridges around the world.





## **Quality construction**

High quality construction, excellent surface finish and life tested. Using the unique "Module masher" accelerated lifecycle test stand, every new design weighbridge module have to be tested at full design load. It is no way MT goes beyond the competition to ensure that you get the most reliable scale in the industry.



# Life Tested

METTLER TOLEDO is the only manufacturer that physically tests each weighbridge design to ensure the scale will last. Our VTS200 design is proven in our unique "Module Tester" that simulates 3.1 million cycles running at 28 t or 20 years use by running 250 fully loaded trucks per day across the scale.

Efficient steel use for long life – every kilogram of steel is efficiently used. The VTS200 uses the same orthotropic construction methods as employed on famous bridges such as the Golden Gate (us), Akashi-Kaikyo (jp), Great Belt (dk) or Humber (uk) bridges – your bridge is designed and manufactured to last.

**Durable Surface Finish** – Four-step finishing process protects the deck against the corrosion and contaminants that can shorten the life of a scale:

- 1. Abrasive blasting cleans all surfaces to prepare them for painting.
- 2. Baked on polyurethane coating is standard. Epoxy painting is another option.
- 3. Force cure the finish to create a consistent and protective coating
- 4. Galvanized end-plates as an option for highest environmental protection.

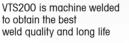


**Checking system designed for heavy trucks** – the mechanical restraints "checking" are in the foundation, not in the load cells – this eliminates extra wear and tear that can degrade a scale' s accuracy. **Hi-Strength modules** – because the VTS200 is efficiently designed, each module weighs less than 3 tons allowing you to move the scale to another site if you choose – no heavy cranes required.

VTS200 Containerized<sup>™</sup> scale can be shipped in a standard closed shipping container or can easily fit on the back of a standard flat-bed truck to reduce your shipping cost – no extra costs for wideload shipments.

VTS200 Is produced in the World's newest vehicle scale production facility







The steel in the VTS200 is shot blasted to create a clean painting surface



The VTS200 is painted and temperature cured to eliminate corrosion



Automatically welded – the ribs of the VTS200 are robotically submerged-arc welded in a continuous seam – to provide exceptional strength, torsional rigidity and structural integrity. The designers have eliminated welds in high stress areas – which could be prone to failue.

Excellent driving surface - the VTS200 deck is

covers.

covered with strong non-slip tread-plate for extra safety. The centre is closed and the driving surface is extrawide to reduce accidents – load cell access through lateral gap

drive on to the scale should it be mounted above the ground.

Low height - ensures drivers can easily

Simple Modularity – the VTS200 scale can be configured in many sizes up to 48 meters (157 ft) using standard components.

No "1" beams – Orthotropic ribs provide a superior structure and eliminate the potential multi-axis weaknesses of I-beam steel weighbridges.

Optional side rails – easy to install and maintain – steel ramps are also available

TOLEDO



Optional risers elevate the scale for more bottom clearance and easier cleaning



Optional access plates are recommend for below ground (pit) installations



The VTS200 fits easily into a standard sea container or on a flat bed truck



# **POWERCELL Load Cells** Protect Your Profits

POWERCELL® load cells protect your profits by ensuring that your vehicle scale weighs accurately day in and day out. This revolutionary technology cuts your operating costs by minimizing errors, reducing downtime, and simplifying service.

**Exceptional Reliability** 



Every minute of downtime can cost you money. POWERCELL<sup>®</sup> Load cells protect your vehicle scale against lightning, water damage, and other environmental forces that can affect weighing accuracy or shut down a weighing operation.

Highest Accuracy



Weighing errors result in revenue losses that eat into your profits. Using advanced digital technology, POWERCELL<sup>®</sup> Load cells deliver the weighing accuracy that your business needs for:

- Accurate billingInventory control
- Highway weight compliance

## **Simplified service**



Troubleshooting an analog scale can be a slow and costly process. POWERCELL<sup>®</sup> Load cells provide the predictive diagnostic tools you need to be proactive about vehicle scale maintenance. They replace timeconsuming troubleshooting and parts swapping with effective prevention.

# Choose between POWERCELL PDX or POWERCELL GDD load cells depending on your desired level of protection to failures.



#### **POWERCELL GDD**

- Certified lightning protection up to 29'000 ampers (lab tested)
- Junction box
- Improved Diagnostics



#### **POWERCELL PDX**

- Unequaled reliability
- Certified lightning protection up to 80'000 ampers
- No junction box design
- Highest weighing accuracy
- Advanced diagnostics
  - Approved for use in hazardous area
  - · Longest warranty

Failure Type	POWERCELL GDD <sup>®</sup>	POWERCELL PDX <sup>®</sup>
Risk of junction-Box Failure	Medium	None
Load cell failure due to Lightning	Low	Very Low
Load cell failure due to Moisture & Fatigue	Very Low	Very Low
Cable failure due to load cell rotation	Very Low	Very Low
Cable failure due to rodents	Very Low	Very Low

# METTLER TOLEDO Service Certified Accurate In Three Steps

A successful vehicle scale project doesn't end with selection of the best scale for your needs. Success is also defined by services that ensure a quality installation, effective integration, productive operations, accurate and certified weights, and dependable performance.



# Installation, Configuration, and Integration

Our project managers coordinate all the tasks, equipment, and contractors for an on-time, in-specification vehicle scale installation. Our service representatives make certain that your scale system is ready for production in a cost-effective and timely fashion.

Your Benefits:

- Scale foundation that withstands traffic and the environment
- Properly installed and precision-tuned vehicle scale
- Information technology that dependably meets requirements
- Trained operators for effective vehicle processing
- Reliable communications to peripherals and networks
- Knowledge of user maintenance procedures



# **Proactive Scale Maintenance**

A vehicle scale is a significant capital investment and its dependability is critical to maintaining productivity. METTLER TOLEDO service representative ensures the operational readiness of your scale with cost-effective, factory-specified scale maintenance.

Your Benefits:

- Prevention of weighing errors due to buildup of dirt and debris
- Proper adjustment and mechanical integrity of scale components
- Assurance of vehicle and operator safety
- Stable operation with proper grounding and lightning protection
- Higher return on investment through increased scale life and productivity
- Recertification of your scale in accordance with local regulations

Our service representatives are there at the right time, with the right parts, the right tools and the right skills to meet your needs.





# **VTS200**

- Economically shipped anywhere
- Easy to clean and maintain
- Efficient load cell access
- Non-slip driving surface
- Corrosion resistant components
- Load cells report weighing errors
- Integrated suspension system
- Unparalleled accuracy
- Long service life

Feature	Specification	
Weighbridge type	Multi-Module	
Standard module sizes	4, 5 and 6 meters (13, 16.4, 19.7 ft)	
Construction	Orthotropic steel	
	- continuous welded ribs	
Deck Thickness	30 cm, 40 cm Installed (12, 16 in)	
Deck Type	Treadplate	
Protection	Baked, Acrylic Polyurethane RAL7038(standard);	
	High build epoxy with aluminum powder	
	RAL9007(advanced)	
Scale Width (Standard)	3.4m(11ft), 3m(9.84ft), 2.98m(9.78ft)	
Scale Width for shipping	2.10m (6.9ff)	
Scale Length	4 to 48m (13 to 157.5ft)	
Scale Weight	530 kg per linear meter (356lb per ff)	
Lightning Protection (tested)	Lightning technologies tested –	
	29000A(POWERCELL GDD <sup>®</sup> )	
	80 000 A (POWERCELL PDX <sup>®</sup> )	
Weighing components	17-4 Stainless	
Load cells	Hi-Performance POWERCELL PDX <sup>®</sup> or POWERCELL GDD <sup>®</sup>	
Load cell protection class	IP68, IP69k; NEMA 6p	
Approval EC/94/EEC	Certicate T2206 or T2391	
Capacity 16/18/24m	50/60/80t (100 k, 130 k, 170 klb)	
nMax	3000, 4000 or 6000	
Rated axle load	28t dual tandem axle (DTA) (60klb)	
Minimum axle spacing	1.2 m for 28† DTA (4 ft for 60 klb)	
Foundation types	Above ground, shallow or deep pit	
Operating temperature	-40° to 55° (-40°F, 131°F)	
Temperature EC/94/EEC	-10° to +40° (4° F to 104° F)	

#### Standard features and Options

	Standard	Option
Treadplate driving surface	×	-
Top access to cells	×	-
POWERCELL PDX® or POWERCELL GDD®	×	-
Lightning protection	×	-
Longitudinal and lateral checking	×	-
Man-hole covers	-	×
POWERCELL <sup>®</sup> terminal	-	×
Risers to raise scale	-	×
Side rails	-	×
Extended warranty	-	×
Ramps	-	×

# www.mt.com

For more information

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Quality certificate ISO9001 Environment certificate ISO14001 Internet: http://www.mt.com Worldwide service

Subject to technical changes 44099255 Printed in P.R. China 2016/12

**METTLER TOLEDO** Service