Load Cell-Based WIM Systems

Load Cell-Based WIM systems are based on load cell technology (strain gauge).

As a vehicle passes over the scale, the system records the weight measured by each platform and adds them together to obtain the axle weight. The scale is placed in the travel lane perpendicular to the direction of traffic.

Load cell type WIM scales are regularly used in weigh station ramp presorting systems, for data collection for transportation planning, industrial applications, and more. Installed across the U.S. and around the world, METTLER TOLEDO’s fixed facility weigh station solutions and virtual weigh station solutions continue to prove their operational reliability and accuracy in high volume applications.

METTLER TOLEDO’s load cell-based WIM solutions:
- Use the most accurate vehicle weighing technology available today.
- Measure vehicle speed, thereby eliminating the need for axle sensors.
- Measure individual wheel loads and detect wheel load imbalances.
- Provide individual wheel load data for enforcement purposes.

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Other WIM Solutions

METTLER TOLEDO also provides WIM solutions for other vehicle weighing applications such as border crossings, toll roads & bridges, seaports, and trucking terminals.

Project Management Support

METTLER TOLEDO’s comprehensive project management and after-sales support, our WIM systems offer the reliability, accuracy, cost effectiveness and ease of use for which METTLER TOLEDO’s weighing solutions have long been known.

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**Fixed Facility WIM System Benefits**

- Statewide data network.
- Ability to network multiple facilities into one operation with other commercial vehicle enforcement systems.
- Ability to combine the weighing and enforcement functions into one automatic operation.
- Required because of the system’s fully automated operation.
- Minimal operator intervention is required because of the system's fully automatic operation.
- Designed to comply with ASTM 1318-02 requirements.
- Rugged construction ensures reliable operation and long life.
- Flexible and durable sensor technology minimizes maintenance and system downtime.
- The WIM scale and controller system directs suspected overweight vehicles to the static scale, and peripheral equipment such as over height detectors, directional signals, variable message signs, AVI interface, and vehicle classification equipment.

**Mainline WIM and AVI**

- Rugged, all-weather, stainless steel, hermetically sealed load cells provide extreme duty weighbridge construction designed for high traffic loads and harsh conditions.
- Dual scale technology for vehicle classification, monthly reports, and summary violation reports. A single screen reporting of static and WIM data.
- Software ensures optimum image capture, rejects weights below limit, and highlights any weight violations.
- Provides instant information for mobile enforcement officers.
- System can store vehicle traffic data, which can be used for traffic and enforcement planning.
- Provides real-time traffic and enforcement data, which can be used for traffic and enforcement planning.
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**Virtual WIM System Benefits**

- Accurate, reliable, and efficient WIM enforcement at a fraction of the cost of a fixed facility weigh station.
- Provides instant information for mobile enforcement officers to stop vehicles most likely to be in violation of weight limits.
- Designed for rugged construction and storage in the most extreme environments. 
- System can store vehicle traffic data, which can be used for traffic and enforcement planning.
- Provides real-time traffic and enforcement data, which can be used for traffic and enforcement planning.
- Provides instant information for mobile enforcement officers to stop vehicles most likely to be in violation of weight limits.

**Virtual WIM System Solutions**

-METTLER TOLEDO’s unattended virtual weigh station solutions includes a WIM and video capture system, which provides real-time, reliable weighing and video capture at speeds up to 70 mph. The virtual system captures weight, speed, vehicle class, and provides remote communication to a patrol vehicle, weigh station or traffic control center.

**Virtual Weigh Station Solutions**

- Cost effective and flexible. METTLER TOLEDO’s virtual weigh station solutions provide a single, easy-to-use, multi-application solution that maybe deployed to any location that may be closed or limited access.

**Static Scale at Operator Station**

- Robust, easy-to-read control terminal.
- Maintenance, easy maintenance.
- Interface to AVI, cameras, dimensioning, and other peripheral equipment.
- Multiple reporting options including vehicle type, weight, size, and other violation notification.
- Simple, one-touch control of traffic signs.
- Multiple reporting options including vehicle type, weight, class, and other violation notification.
- Simple, one-touch control of traffic signs.
- Multiple reporting options including vehicle type, weight, size, and other violation notification.
- Detailed image and graphics panel for operator control and identification of vehicle location.
- Operator Interface (including graphics panel for operator control and identification of vehicle location).
- Instant weight, size, and other violation notification.
- Single screen reporting of static and WIM data.
- Multi-server setup for multiple operator stations.
- Advanced video system for real-time enforcement.
- Provides instant information for mobile enforcement officers.

**Mainline WIM**

- Mainline WIM and AVI
- Ramp WIM
- Static Scale
- Video Capture System
- Bypass Route WIM
- Virtual WIM Scale
- Ramp WIM
- Static Scale

**Fixed Facility WIM System Benefits**

- Safe, efficient, and accurate weighing of thousands of vehicles per day with legal-for-trade accuracies.
- Minimal operator intervention is required because of the system's fully automatic operation.
- Able to network multiple facilities into a statewide data network.

**Fixed Facility Weigh Station Solutions**

- For fixed facility weigh stations, METTLER TOLEDO provides Weigh-in-Motion (WIM) systems, static scales, and peripheral equipment such as over height detectors,irectional signals, variable message signs, AVI interface, and vehicle classification equipment.

**Ramp WIM**

- Ramp WIM
- Static Scale
- Mainline WIM
- Ramp WIM
- Static Scale