

Heavy Industrial Weighing



Heavy Industrial Weighing
for the Mining Industry

METTLER **TOLEDO**

Rugged Weighing Equipment for Mining Operations

All over the globe, mining operations place serious demands on their equipment. Challenging environments, massive loads, and around-the-clock operations require tools that are purpose-built to survive in this industry.

From initial extraction to final analysis and every step between, METTLER TOLEDO outfits mining organizations with the weighing and measurement systems they need.

Ruggedness

Built into every METTLER TOLEDO industrial scale, you'll find the superior strength and quality needed to provide reliable performance you can count on.



Innovation

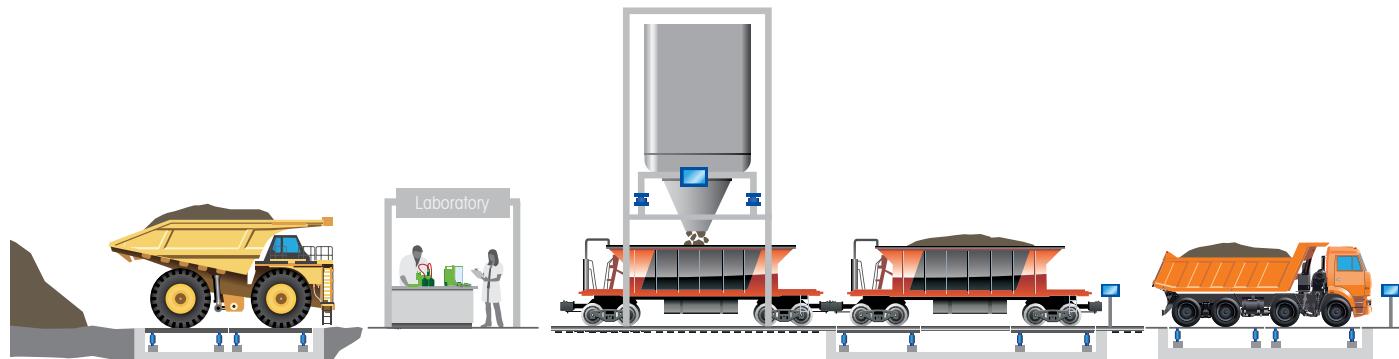
For decades, METTLER TOLEDO has been at the forefront of weighing technology and expertise, designing new products that solve problems.



Accuracy

A tough application no longer requires you to sacrifice precision—METTLER TOLEDO uses modern technology to make even the largest scales incredibly accurate.





Vehicle Scales

The heavy-duty scales offer legendary performance in a wide-range of configurations with exclusive POWERCELL® weighing technology.



Laboratory & Analytical Systems

Quality and precision come in any size or scope, with the wide-reaching METTLER TOLEDO product catalog.



Tank & Hopper Weighing

Incredibly smart designs allow these weighing and process control systems to incorporate seamlessly into any operation.



Services / Overhaul & Upgrades

Uptime, performance, compliance, and expertise are the pillars of METTLER TOLEDO global service advantage.



► www.mt.com/HeavyMining

Vehicle Scales

Reliability and Accuracy to depend on

Giant off-road haulers, road-going carriers, and railroad vessels all carry loads to be weighed. METTLER TOLEDO is the premier global manufacturer of complete vehicle weighing systems. These rugged scales are accompanied by expertise in project management, logistics, and installation to have your new scale operating quickly, and an unmatched service network providing complete ongoing support.

Built to last



These scales are engineered using a unique combination of computer-based simulations (FEA) and true physical lifecycle testing using specially-built testing machines.

POWERCELL® load cells



POWERCELL load cells from METTLER TOLEDO are designed specifically for vehicle weighing, with exclusive features to ensure superior reliability and accuracy.

Advanced technology



Experience the benefits of the latest weighing technology with intuitive interfaces, networking capabilities, and data management systems to effectively manage your operations.



Off-Road Vehicle Scales

Built for the largest haulers

METTLER TOLEDO provides scales to accommodate your largest excavation and transport vehicles. High-quality construction and heavy-duty components provide excellent reliability and longevity. Many customers are amazed that scales with extremely large capacities can still be incredibly accurate. That's just part of the POWERCELL® load cell technology advantage.



Scales for Road-Going Vehicles

Proven all over the Globe

Ruggedness, reliability, and consistent accuracy are the reasons you can find METTLER TOLEDO truck scales working in the most challenging environments on earth. From sweltering deserts to the Arctic Circle, these scales are built to handle the demand. Weighbridges are offered in a range of sizes and capacities, allowing you to measure yields, manage inventory, and process transactions day in and day out.

Steel deck truck scales



Steel deck truck scales offer heavy-duty treadplates and proven structural designs. With quick installation times, they provide immediate usability without the curing time required by concrete decks.

Concrete deck truck scales



The added mass of a concrete deck truck scale helps them perform well in mining applications. They are a popular choice for stationary scales built to last.

Portable truck scales



Find the features and quality of a METTLER TOLEDO vehicle scale, all in a design that can be repositioned and relocated as needs change. Portable truck scales are ideal for operations that want flexibility for the future, without compromising performance.

► www.mt.com/vehicle



Containerized truck scales



Your busiest excavation site could be on a different continent, or the opposite side of the world. Remote locations are the reality of the global mining industry, and METTLER TOLEDO is ready to outfit your site in any location. An entire truck scale can arrive in a single shipping container for convenient transportation and delivery.



POWERCELL® PDX® Load Cells

Load cells are the most critical component of a vehicle scale. The POWERCELL PDX system offers an unmatched level of advanced features, and is available in all vehicle scales, including off-road, on-road, and rail, as well as certain weigh module applications. They feature a long list of innovations:

- No junction boxes
- Proven lighting protection
- Predictive diagnostics for ultimate reliability
- 100% stainless steel
- Laser-welded enclosure
- Environmental protections with IP68/IP69K ratings
- Enhanced accuracy / digital compensation
- Designed and manufactured only by METTLER TOLEDO

► www.mt.com/powercell

Vehicle Scale Software

Bridging equipment and data

METTLER TOLEDO offers the innovative DataBridge™ family of vehicle scale management software to seamlessly integrate your scales and weighing data into your operation.

► www.mt.com/DataBridge



DataBridge SS



A fast, intuitive program for processing standard weight-based inventory and transactions. DataBridge SS is easy to learn and operate, and is an affordable way to modernize any scale-house.

DataBridge™ SS
Scale House Software

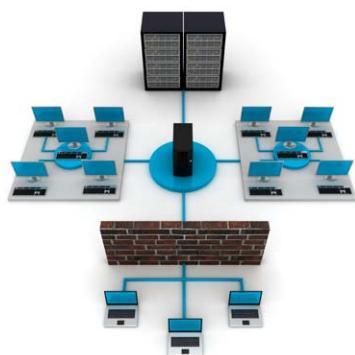
DataBridge MS



The powerful features in DataBridge MS allow management of multiple scales, attended or unattended, with increased data capture and analysis capabilities. This is the ready-to-deploy answer for medium-to-large sized operations.

DataBridge™ MS
Scale Management System

DataBridge ES



This enterprise-level package is built to address large and complex needs for organizations requiring a completely consultative approach. Consolidate data from various sites into a central database for advanced visibility and data management.

DataBridge™ ES
Scale Enterprise Solution

Vehicle Scale Accessories

Get more from your scale

Gain an edge in safety, throughput, and controls with quality accessories for your vehicle scales.

Scale terminals



From basic to advanced, METTLER TOLEDO offers a line of terminals to meet the needs of your scale and your operation.

Unattended terminals



Allow drivers to process automated transactions

Traffic controls



Controlled manually or fully automated, gates and lights can help your site run smoothly.

Remote displays



Keep drivers and loader operators informed with an easy-to-read remote weight display.

Side rails



Protect workers and equipment with sturdy guards that prevent accidents.

► www.mt.com/vehicle

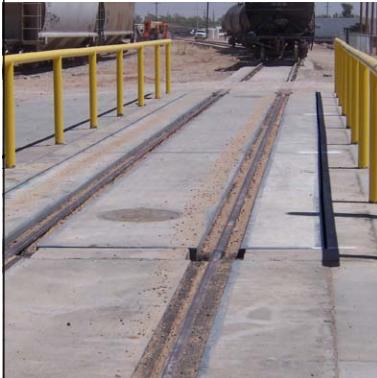
Rail Scales

Technology unmatched in the Industry

METTLER TOLEDO builds heavy-duty rail track weighing systems with industry-leading technology. Numerous sizes and configurations are available to match the size of your rail cars. Deck material can be steel or concrete, with optional styles designed to also weigh road-going trucks on the same scale.

In addition to traditional stationary weighing, coupled-in-motion (CIM) systems allow accurate weight measurement of in-motion trains for efficient weighing of individual rail cars and entire trains.

Static Weighing



Single and multiple-draft rail weighbridges can be built to weigh multiple lengths of uncoupled rail cars. Often used to control filling, METTLER TOLEDO accuracy and reliability keeps your operation running smoothly.

Unattended/Remote Systems



METTLER TOLEDO offers expertise in unattended systems for automated operation in remote locations. Allow the system to collect data for retrieval via remote login, or monitor the scale in real-time from anywhere in the world.

POWERCELL Load Cells



POWERCELL PDX load cells are available in capacities up to 90 tons, offering incredible reliability, premier weighing accuracy, lighting protection, and much more.



Dynamic Rail Weighing (CIM)

Weigh an entire train in just minutes with coupled-in-motion (CIM) weighing systems. Using intelligent sensors and a special controller, weight is measured for each individual axle group and rail car as it travels over the scale at speeds of 5-8 km/h (3-5 mph).

By eliminating the need to uncouple and position each rail car, sites using CIM systems can simultaneously increase speed and safety.



Tank, Vessel, Hopper, and Silo Weighing

With Modern Weigh Modules

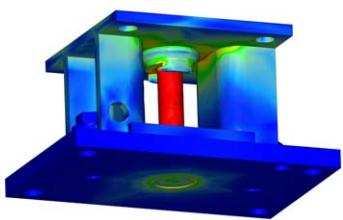
As mined material is moved into separators and other equipment, weight can be used to control processes and manage inventory. METTLER TOLEDO provides state of the art weigh module systems to incorporate into the structures of tanks, vessels, hoppers, and silos. From simple to complex, world-class weighing expertise ensures safety and quality results even in challenging mining applications.

Comprehensive Product Line



Compression weigh modules are available in capacities of 11 lb to 660k (5 kg to 300t). Mounting hardware is offered in zinc-plated carbon steel, 304 stainless steel, or 316 stainless steel to meet a wide range of environmental conditions. Tension Weigh Modules for suspended hoppers are available in capacities of 50 lb to 20k (50kg to 10t).

Designed for Safety, Fully Engineered



MultiMount™ and PinMount™ weigh modules are engineered using finite element analysis (FEA) and physical testing to verify results. These weigh modules will meet published load ratings in all force planes. These modules incorporate built-in lift-off protection and vertical down stops, providing protection from wind loads and other potentially damaging forces.



"Right the First Time" Installation



Both the MultiMount and PinMount weigh modules are shipped in the fully locked and aligned position to protect the load cell and ensure proper alignment during installation. This SafeLock™ feature also allows shipping and installation without the load cell installed, for additional protection.

Accurate Weighing Performance



MultiMount and PinMount weigh modules incorporate a self-aligning load suspension with 360 degree checking to ensure the utmost in repeatability and accuracy. In addition, the component load cells come with certified global metrologic approvals and hazardous area classifications.

Modern Weigh Modules

No Compromise on Safety – Right the First Time

Weighing Components

Modern Weigh Modules

Weigh modules can and should may include what you require. Weigh modules are, like many business needs, unique. That is why we offer a wide variety of components, quality, safety and regulatory compliance. It is important to understand the needs of your industry and your customers who may not understand how a scale will fit into their process. Weigh modules are designed for installation in response to a new generation of weigh modules. These weigh modules are designed for more, safety and ease of selection, installation and commissioning. Weigh modules are designed for you right the first time. This white paper explores the key features of modern weigh modules.

Conclusion

1. Introduction
2. Design Insights and Safety Requirements
3. Installation
4. Shipping and Installation Considerations
5. Summary

METTLER TOLEDO

Application and Integration Expertise

With over 250,000 weigh modules installed in the past ten years, METTLER TOLEDO can offer you the best advice to ensure proper weigh module integration and performance through local experts.

- Weigh Module Systems Handbook
- 2D drawings & 3D CAD models
- White papers
- Technical information

► www.mt.com/weighmodules

Service

A Partnership that Drives Success

Weighing equipment requires proper maintenance for optimal performance in demanding mining applications. From maximizing routine calibrations to overhauling aging equipment, METTLER TOLEDO Service matches the innovation in our advanced products with expertise in the field.

METTLER TOLEDO Service can maintain and repair all makes and models of industrial weighing equipment. High standards for factory training ensure that our service technicians are ready to respond.

When selecting a service provider, consider these key values:

Uptime



Profit from maximum uptime for your equipment and processes, receiving support whenever and wherever you need it.

Performance



Realize highly accurate and precise results from your processes by optimizing equipment performance in all environments.

Compliance



Gain peace of mind in complying with regulations and results that meet requirements every time.

Expertise



Ensure highest efficiency and expertise of your workforce through training and seminars tailored to your needs.

Upgrade Existing Vehicle Scales With a New Weighing System

Enjoy the reliability and accuracy of a new scale for a fraction of the cost. By upgrading the load cell system in an existing scale, you can modernize older equipment while utilizing the structurally-sound weighbridge and foundation you already have. It is a cost-effective way to extend the life of aging scales.

Special retrofit and conversion hardware allow many upgrade procedures to be completed in just one day.

An upgrade project typically consists of replacing the following components:

- Load cells
- Load cell mounting hardware
- Load cell cables
- Scale terminal (interface)

Additionally, assessment and adjustment is frequently performed on these systems:

- Checking/suspension components
- Scale accessories
- Data management



POWERCELL PDX load cell system upgrade kit

Access Information and Know-how On www.mt.com



Industrial Weighing YouTube Channel

► www.youtube.com/MTindustrial

Truck Scale Buying Guide

► www.mt.com/TruckScaleGuide

Raw Materials Resource Library

► www.mt.com/ind-raw-materials-library

White Paper: Modern Weigh Modules

► www.mt.com/ind-wp-weigh-module-design

Tank Weighing Handbook

► www.mt.com/ind-system-handbook

www.mt.com/HeavyMining

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