

# Industrial Weighing



## Heavy Industrial Weighing Solutions for the Mining Industry

**METTLER TOLEDO**

# Solutions for Your Mining Operation

## Ruggedness, Productivity and Reliability

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. This brochure details the industrial weighing solutions available to ensure success at your mining operation.

► [www.mt.com/HeavyMining](http://www.mt.com/HeavyMining)

From initial extraction to final analysis, METTLER TOLEDO weighing equipment provides mining organizations with the durability, productivity and accuracy they need.

### Section 1 - 4

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#### Vehicle Scales (Page 4-7)

Heavy-duty vehicle scales including truck, rail and combination scales offer reliable performance in a wide-range of configurations.

2

#### Smart Technology (Page 8-11)

Learn how mining operations around the world are operating at peak performance with smart POWERCELL® load cell technology.

3

#### Tank and Hopper Weighing (Page 12-13)

Smart designs enable seamless integration of tank and hopper weighing solutions with their complementary process control systems.

4

#### Service Offering (Page 14-15)

Implementing a regular maintenance routine helps operations avoid unplanned downtime and lost profits. Discover our tiered service offering.



#### Ruggedness

Superior strength and quality is built into every METTLER TOLEDO industrial scale so that you can ensure operational uptime and make the most of your equipment investment.



#### Productivity

METTLER TOLEDO weighing equipment maximizes productivity through smart, systematic design, starting with our risk-based equipment selection process to meet your unique requirements.



#### Reliability

Your operation requires weighing results you can trust to drive key business decisions and keep things running smoothly. METTLER TOLEDO scales give you peace of mind throughout your process.

## Vehicle Scales

### Designed to Fit Your Application

Giant off-road haulers, road-going carriers and railroad vessels all carry loads to be weighed. METTLER TOLEDO is a premier global manufacturer of complete vehicle weighing systems designed to weigh those loads accurately and reliably. Weighbridges are offered in a range of sizes and capacities, allowing you to measure production yield, manage inventory, and process transactions day in and day out.

► [www.mt.com/vehicle](http://www.mt.com/vehicle)



#### Traditional Truck Scales

Our truck scales offer proven structural design and quick installation times. With two options, steel deck and concrete deck, we'll help you find the right fit for your operation.



#### Off-road vehicle scales

METTLER TOLEDO provides scales to accommodate your largest excavation and transport vehicles.



#### Portable truck scales

Portable truck scales are ideal for operations that want flexibility for the future without compromising on performance.



#### Containerized truck scales

Your busiest excavation site could be on another continent. An entire truck scale can arrive in a single shipping container for convenient transportation and delivery.

#### Video: Lifecycle testing

See the module masher in action!

► [www.mt.com/veh-masher](http://www.mt.com/veh-masher)



### Engineered to Perform

METTLER TOLEDO vehicle scales are engineered using a unique combination of computer-based simulations and true physical lifecycle testing using machines designed specifically for this purpose.

#### 1. Design

Through more than 20 years of CAD modeling, we have refined our designs to offer the best weighbridges available. Our engineers continue to innovate and build on the success

#### 2. Analysis

Finite-element analysis (FEA) explores how a weighbridge performs under various loading conditions. Analysis of all areas of the weighbridge informs design improvements.

#### 3. Lifecycle Testing

METTLER TOLEDO is the only manufacturer that performs true lifecycle testing on all weighbridge models. Our unique Module Masher applies 20 years of traffic in 6 to 8 weeks.

# Reliable Rail Scales for Your Big Jobs

**METTLER TOLEDO builds heavy-duty rail weighing systems with industry-leading technology. Various sizes and configurations are available to match your rail cars, and deck material can be steel or concrete. Certain design options also weigh road-going trucks.**

In addition to traditional stationary weighing, coupled-in-motion (CIM) systems allow accurate weight measurement of in-motion trains. This allows efficient weighing of both individual 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.



### Dynamic rail weighing

METTLER TOLEDO's coupled-in-motion (CIM) rail scales facilitate safe and accurate weighing of entire trains at speeds up to 10 km/hour (6 mph). By eliminating the need to uncouple and position each rail car, sites using CIM systems can simultaneously increase speed and safety.



### Check this out!

Industrial Weighing YouTube Channel  
[www.youtube.com/MTIndustrial](https://www.youtube.com/MTIndustrial)



## Bring New Life to Existing Equipment with an Upgrade

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 an aging scale.

[www.mt.com/POWERCELL](http://www.mt.com/POWERCELL)

A variety of load cell upgrade kits are available to fit your operational needs and bring new life to your existing assets.



## Smart Technology

### Improved Performance with POWERCELL

METTLER TOLEDO's POWERCELL® PDX® load cells offer highly advanced features. These smart load cells deliver a long list of benefits, including:



- Better reliability with a junction-box-free design (figure 1)
- Proven lightning protection for higher uptime
- Condition monitoring for peace of mind
- 100% stainless steel for long life and durability
- Laser-welded enclosure to prevent ingress
- Environmental protection with IP68/IP69K ratings
- Enhanced accuracy and digital compensation
- Ensured METTLER TOLEDO quality

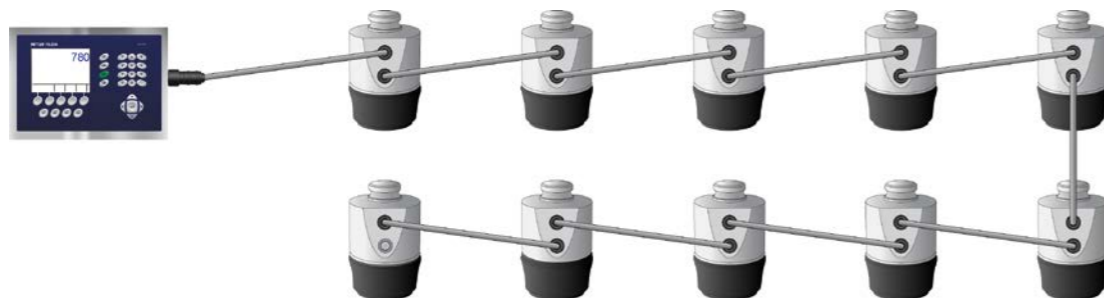


Figure 1: Daisy chain design of POWERCELL® PDX® systems



#### Real Performance Data

We analyzed data from 200+ mining operations around the globe. Our findings showed that, on average, owners of analog truck scales replaced 5X more load cells than owners of POWERCELL® truck scales over the life of the equipment. With POWERCELL®, you can benefit from increased uptime and productivity. Read the whole report at

► [www.mt.com/veh-technology-report](http://www.mt.com/veh-technology-report)



Fewer shutdowns



Fewer service calls



Higher productivity

# Transaction Management Solutions Seamless Data Integration

Paper-based transactions are slow and prone to human errors. Our transaction management solutions enable you to seamlessly gather data and promote efficient traffic flow so you can focus on other tasks.



### Traffic control solutions

Peripherals such as scale indicators, remote displays, traffic lights, side rails and more can assist in expediting traffic flow and even improve driver safety. These simple-to-implement solutions can boost productivity at your scale.



### DataBridge™ management software

Innovative DataBridge™ vehicle scale management software enables you to eliminate manual errors in transaction management. You can be confident in your data collection processes and gain true operational visibility.



## Automate Your Operation Faster Processing at the Scale

Pair DataBridge transaction management software with the IND9U Unattended Terminal for easy and effective data integration.

► [www.mt.com/databridge](http://www.mt.com/databridge)



**Automate the scalehouse**  
Contactless transaction solutions  
► [www.mt.com/automate-scalehouse](http://www.mt.com/automate-scalehouse)



## Tank and Hopper Weighing

### Robust and Reliable Solutions

As mined material is moved into separators and other equipment, weight can be used to control processes and manage inventory. METTLER TOLEDO provides weigh module systems that are incorporated into the structures of tanks, vessels, hoppers and silos to ensure safety, accuracy and reliability in even the most challenging mining application.

► [www.mt.com/WeighModules](http://www.mt.com/WeighModules)

#### Comprehensive product line

MultiMount™, PinMount™ and PowerMount™ weigh modules are engineered using finite element analysis (FEA) and physical testing to verify results. They are available in capacities of 11 lb to 660,000 lb (5 kg to 300 t) to meet published load ratings in all force planes. These modules also incorporate built-in lift-off protection and vertical down stops for protection from wind loads and other potentially damaging forces.



MultiMount™



PinMount™



PowerMount™

#### Proven Expertise

Handbooks, White Papers and more.

► [www.mt.com/ind-library](http://www.mt.com/ind-library)



#### Installation Made Easy

Safe and Accurate Weigh Modules

#### Right-the-first-time installation

Our MultiMount™, PinMount™ and PowerMount™ weigh modules are shipped fully locked and aligned 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™, PinMount™ and PowerMount™ incorporate a self-aligning load suspension with 360-degree checking to ensure the utmost repeatability and accuracy. Additionally, component load cells come with certified global metrological and hazardous area approvals.

# Service Offerings

## A Trusted Partnership that Drives Success

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

[www.mt.com/service](http://www.mt.com/service)



### Uptime

Receive support wherever and whenever you need it to ensure maximum uptime for your equipment and processes.



### 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 producing results that meet the necessary requirements every time.



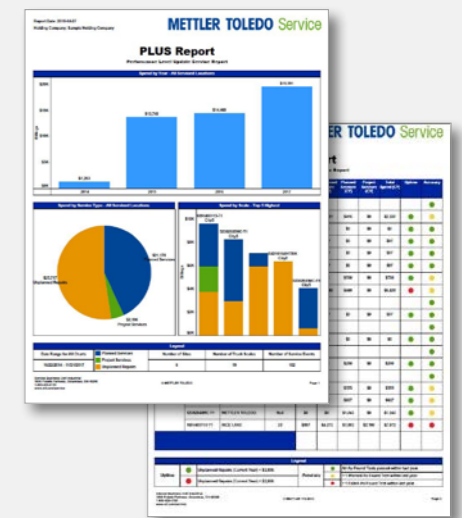
### Expertise

Utilize our expertise with customized training and seminars to help your workforce achieve high efficiency and productivity in everyday operation.



### Ask about the PLUS Report...

Ask your local MT Sales Representative about the PLUS Report. This report utilizes real data to provide you insights into your operation, or operations similar to yours, helping you make informed and impactful decisions for the future of your operation.





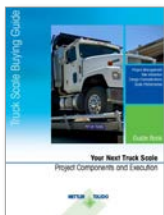
## Discover Additional Resources



### Industrial Weighing YouTube Channel

METTLER TOLEDO's Industrial Solutions YouTube Channel is dedicated entirely to helping you maximize yield and improve your weighing process.

► [www.youtube.com/MTIndustrial](http://www.youtube.com/MTIndustrial)



### Truck Scale Buying Guide

This comprehensive guide has everything you need to know when designing your next weighbridge.

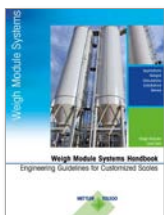
► [www.mt.com/TruckScaleGuide](http://www.mt.com/TruckScaleGuide)



### Raw Materials Resource Library

Discover in-depth white papers, guides, brochures and more to help you streamline your weighing operation

► [www.mt.com/ind-raw-materials-library](http://www.mt.com/ind-raw-materials-library)



### Tank Weighing Handbook

This handbook offers more than 150 fact-filled pages to help you create an ideal weighing and inventory control system.

► [www.mt.com/ind-system-handbook](http://www.mt.com/ind-system-handbook)

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

For more information

#### METTLER TOLEDO Group

Industrial Division

Local contact: [www.mt.com/contacts](http://www.mt.com/contacts)



Subject to technical changes

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