Freight Solutions

Profitable Pallet Logistics
## Solutions for Freight and LTL

METTLER TOLEDO

Efficient Freight Handling
Quick, Accurate and Paper-Free

Processing freight can be time consuming and involve many steps. Robust floor and forklift scales integrated with automatic pallet dimensioners speed up and simplify the process. Capture weight, dimensions and ID in seconds for invoicing, pricing and planning.
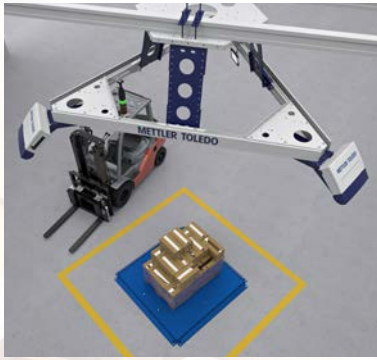
Accurate Measurement of Any Pallet

- TLD870 Static Dimensioning
- TLD970 Dynamic Dimensioning

Weigh on the Move with Robust Forklift Scales

- VFS120/TLF820 Forklift Scales

Complete Pallet Data Capture

- Static and Dynamic DWS Combinations
- OCTO DataCapture Software
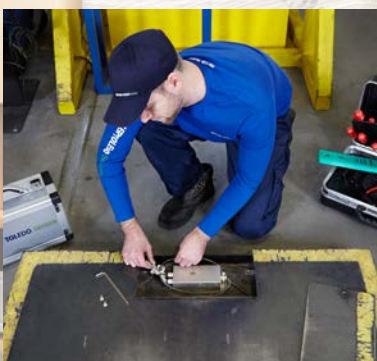
Ensure Uptime with Expert Service and Maintenance

- Service Solutions Across the Value Chain
- Smart, Proactive Service for System Uptime

Full Range of Versatile Floor Scales

- PFA584(x)
- BFA231/BFA236
- PTA455/PTA459(x)
- PJA434/PJA439

TLD870 – Static Pallet Dimensioning
Simple, Fast, Accurate

Freight companies need to measure pallets quickly for revenue recovery, costing, invoicing and load planning. The TLD870 speeds up the measuring process and keeps operations running smoothly.

▶ **www.mt.com/TLD870**

OCTO ImageCapture™ takes a picture of each shipment for proof of condition, content and measurement using a legal-for-trade system.
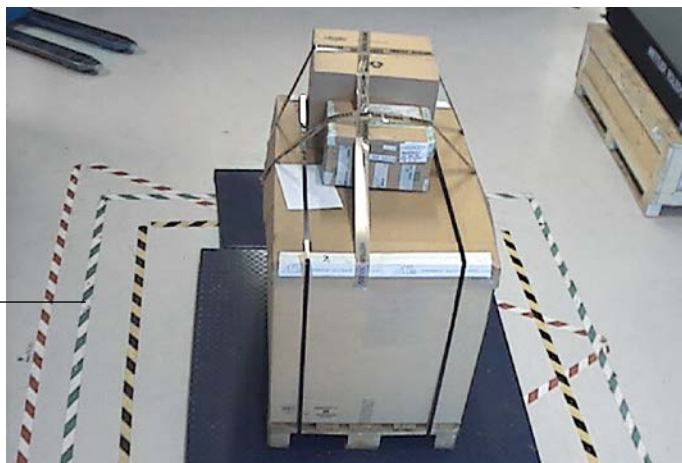
Fastest Measurement
Quick measuring time allows you to measure more pallets more efficiently. Recover revenue on up to 240 pallets an hour without impeding operations or missing cut-off times.

Easily Measure Any Pallet
Some pallet wrappings cause problems for dimensioners. The TLD870 gives an accurate reading on 99 percent of surface types for easy, efficient revenue recovery.

High Uptime, Low-Cost Service
For revenue recovery you can rely on, choose a pallet dimensioner that is designed for tough, industrial environments with no need for regular replacement of wear parts.
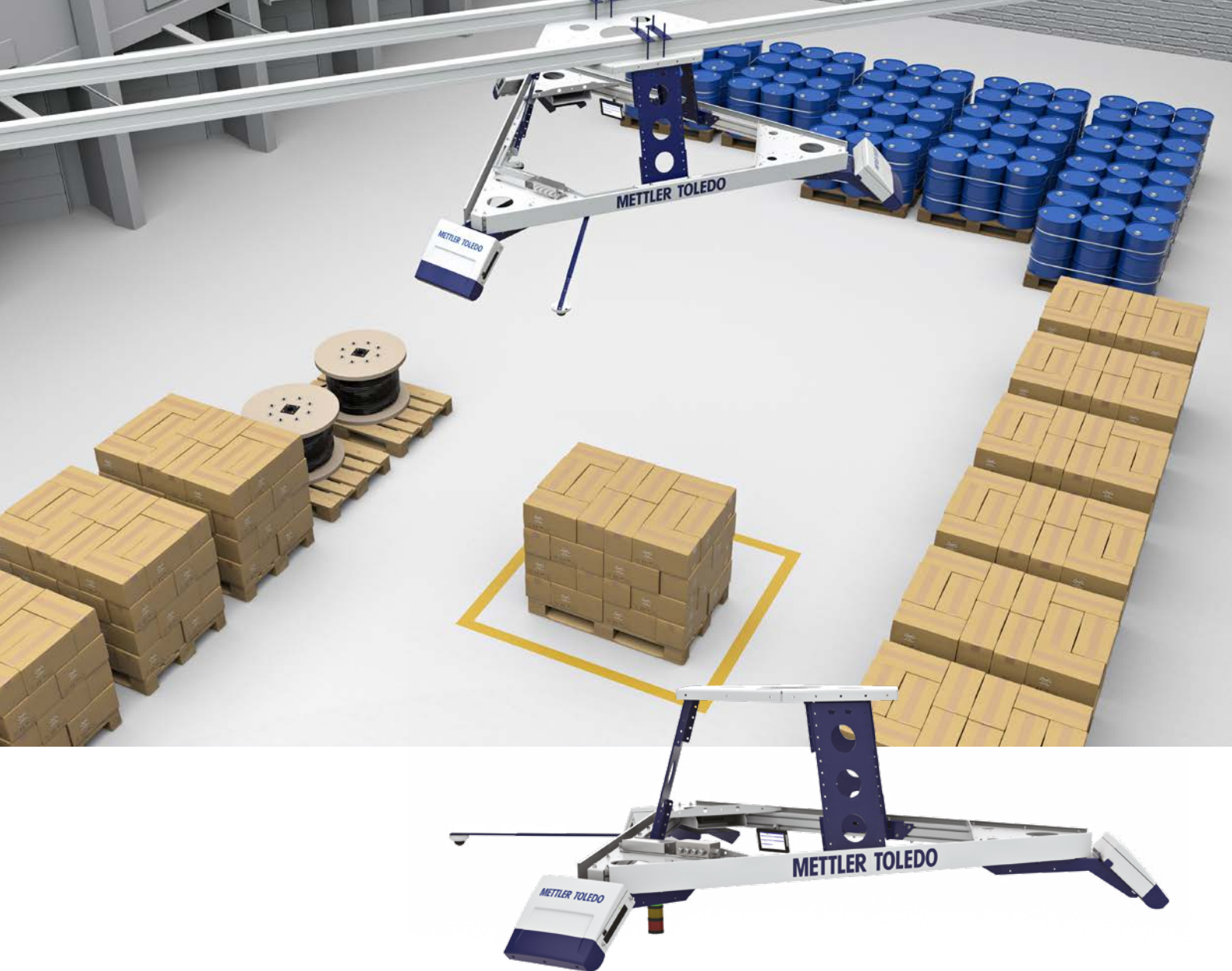
Fast, Efficient and Hassle Free
TLD870 Pallet Dimensioner

The TLD870 captures dimensions of any pallet in a matter of seconds. Combine it with floor or forklift scales to form a complete pallet dimensioning, weighing and scanning solution.

|	
Dimensioner Accuracy (LxWxH)	± 10 x 10 x 10 mm
Dimensioning Range (LxWxH)	Min. object size: 200 x 200 x 100 mm Max. object size: 2500 x 2500 x 2600 mm
Object Throughput	Approx. 240 per hour
Measurement Time	2 seconds
Object Shape	Any shape
Surface Characteristics	Most surfaces
Orientation	Most stable side down
Legal for Trade Approvals	NTEP, MID and MC
More Information	www.mt.com/TLD870

TLD970 – Dynamic Pallet Dimensioning
Non-Stop, In-Motion Measuring

To keep efficiency at its peak, you need a pallet dimensioner that doesn't put restrictions on your operation. The TLD970 measures trucks traveling at speed, requiring no slow-down or careful positioning of the truck. This solution integrates so seamlessly into operations you won't even know it's there.
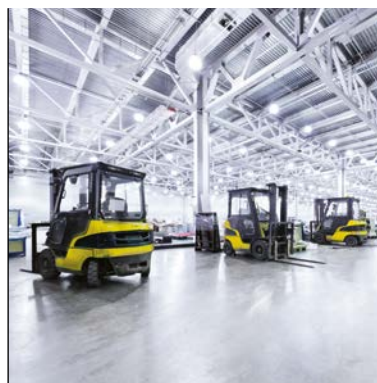
▶ **www.mt.com/TLD970**

The smart, patented design of the TLD970 takes full advantage of METTLER TOLEDO's best-in-class dimensioning technology to record all data needed for in-motion pallet measurement.
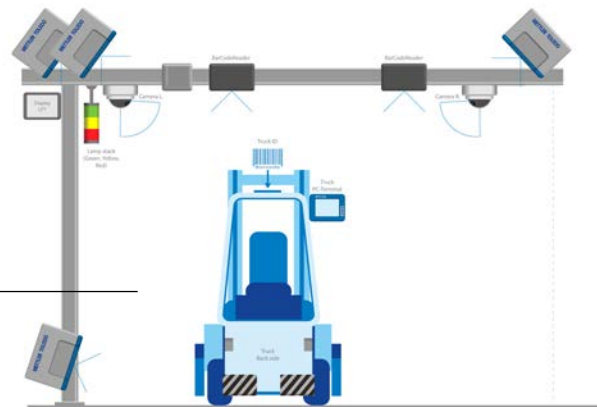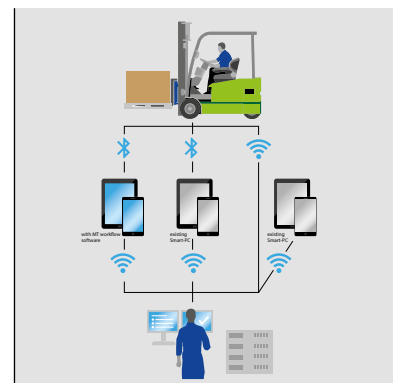
**Improve Efficiency
By up to 70%**
Measure up to 720 pallets
an hour in a fully automatic, non-stop process.

**No Slow Down,
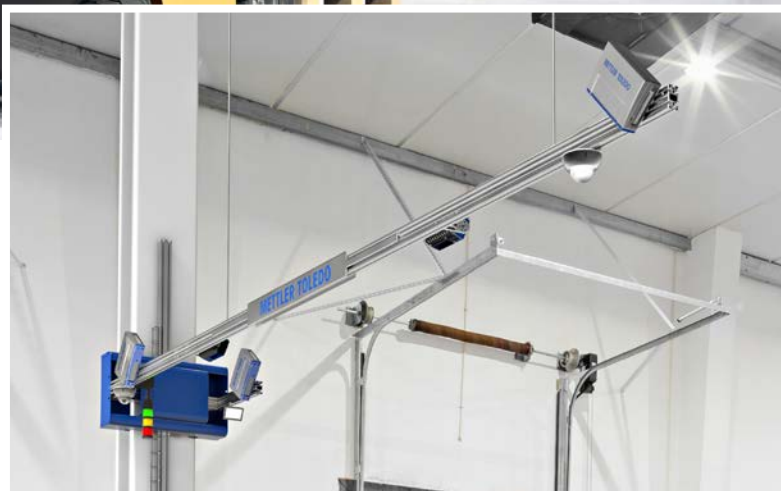No Measuring Restrictions**
Simply drive through and measure without thinking about forklift speed or position.

One Efficient Process
Combine dimensions, weight, pallet ID and image for a complete data profile on every piece of freight you handle.

Automatically Measure Any Pallet
No Restrictions

Achieve high accuracy on almost any pallet passed through with a forklift truck.

Dimensioner Accuracy (LxWxH)	± 20 x 20 x 10 mm (NTEP and MID Approved)
Dimensioning Range	Min. object size: ± 200 x 200 x 100 mm Max. object size: 168 x 96 x 102 in (NTEP) Max. object size: 2500 x 2500 x 2600 mm (MID)
Pallet Throughput	720 pallets an hour
Measurement Time	Under 1 second
Speed	Legal for trade measurements of pallets on forklift trucks traveling up to 10 MPH (NTEP) or 15 KM/H (MID)
Object Shape	Any shape
Surface Characteristics	Most surfaces
Orientation	Multi-directional scans with pallet positioned on forklift truck
More Information	**www.mt.com/TLD970**

Note: The TLD970 is currently only available in select markets. Inquire with your local representative about availability in your area.

TLF820/VFS120 Forklift Scales
Unbeatably Robust

Designed for tough industrial environments, METTLER TOLEDO forklift scales set the standard for reliability, safety and accuracy in heavy-use applications. Whether your business is freight logistics, shipping or warehousing, on-board weighing can significantly speed up your processes.

▶ **www.mt.com/forkliftscales**

Cut maintenance costs in half with a forklift scale that requires no shimming and infrequent calibration thanks to patented three-point suspension.

Easy, Seamless Integration
Weight data is transmitted seamlessly from an embedded smart PC. Preconfigured workflows offer step-by-step guidance, reducing effort and humanerror.

Long Life, Doesn't Break Down
The heavy-use scale carriage enables you to keep working when other scales break down. Minimal maintenance and a long lifespan ensure low cost of ownership.

Reduce Risk of Accidents
The scale has a high-visibility window, making it easy for the forklift operator to see loads, position forks for lifting and avoid accidents.

Onboard Pallet Weighing
VFS120/TLF820 Forklift Scales

Our forklift scales can be installed on any Class II or III forklift truck and are an ISO-approved accessory compatible with any other ISO-approved accessories.

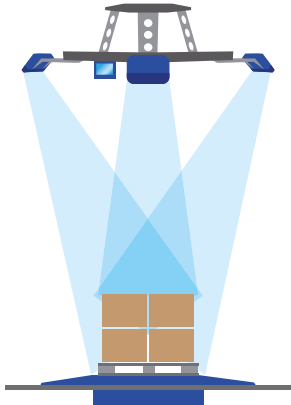|	**VFS120** – Basic Connectivity	**TLF820** – Advanced Connectivity
Description	Forklift weighing for simple applications with limited data integration.	Forklift weighing with advanced connectivity and data integration.
Data Interface	IND236 for forklifts	Smart PC
Data Interface Connection	Cable	Bluetooth
Data Transmission	Bluetooth (optional)	Bluetooth, WiFi
Data Management Requirements		
Simple Weighing with Manual Processing	•	
Automatic Data Transfer to Third Party Devices		•
Fully Integrated Data Management via Smart PC		•
Full Operator Guidance Displayed on Smart PC		•
Onboard Data Merging		•
Technical Specifications		
Capacity	1,500 / 2,000 / 3,000 / 5,000 kg 3,000 / 5,000 / 7,500 / 10,000 lbs	
Resolution	1,000 ~ 1,500e	
Stable Weighing Time	1 – 2 seconds	
Angular Compensation Range	Pitch ±5°, Roll ±3°	
Overload	Safe overload: 150% / limited overload: 300%	
Capacity Loss	~15% of forklift capacity	
IP Protection	IP65 for electric parts	
More Information	www.mt.com/VFS120	www.mt.com/TLF820

Smart Integrated Solutions
Maximize Operational Efficiency

Dimensioning is only one part of the puzzle. A fully integrated dimensioning, weighing and scanning solution for pallets will help you take your efficiency to the next level. There isn't a one-size-fits-all solution when it comes to pallet data capture. Your weighing and dimensioning requirements depend on volumes, processes and measurement time windows. Understanding the different solutions that are available will help you determine what is best for your operation.

▶ **www.mt.com/freight-solutions**

	Static Dimensioning with a Floor Scale	Static Dimensioning with a Forklift Scale
Throughput	Up to 180 pallets per hour	Up to 240 pallets per hour
Description	Dimensioning and data merging are automatic. Pallet must be placed on the scale and barcode scanned manually.	Weighing, dimensioning and data merging are automatic. Pallet must be placed under the dimensioner manually.
Configuration	Add dimensioning to your choice of floor scale and hand-held barcode reader.	Add dimensioning to your choice of forklift scale, programmed to your workflow and ID method.
Pallet Processing Time	60 – 90 seconds	40 – 60 seconds
Typical Application	Low-mid volume, non-time-critical operations	Mid-volume, time critical operations

Learn More, Visit our Website

For more information on creating your own seamlessly integrated solution, visit:

▸ **www.mt.com/freight-integration**

In-Motion Dimensioning and Weighing

	Up to 720 pallets per hour
	Fully automatic. Drive-through solution that automatically captures and merges weight, dimensions and ID.
	Dynamic dimensioning is combined with forklift weighing. Data management is optional.
	20 seconds
	High-volume, time-critical operations

Make the Most of Your Data

Regardless of the solution, there are a number of features that help you to make the most of your data...

Data Management

Sophisticated data management software merges, stores and transfers data from different components. Statistical data can be used for planning, trend analysis and operational optimization.

System Health Data

Remote system monitoring keeps an eye on the performance and health of your system, helping you to plan for maintenance, service and eventual replacement in advance to keep operations running at peak efficiency.

Image Capture

Take a picture of each pallet as it is measured for customer claims, communication, proof of measurement and to justify non-stackable surcharges.

Providing Service Solutions
Across Your Value Chain

We provide you with a tailor-made service solutions based on our four values: Uptime, Performance, Compliance and Expertise. This helps you to maintain efficient operations, deliver high quality data and and ensure that your investment continues to pay off over time.

▸ **www.mt.com/service**

Cargo Limited

Cargo Limited
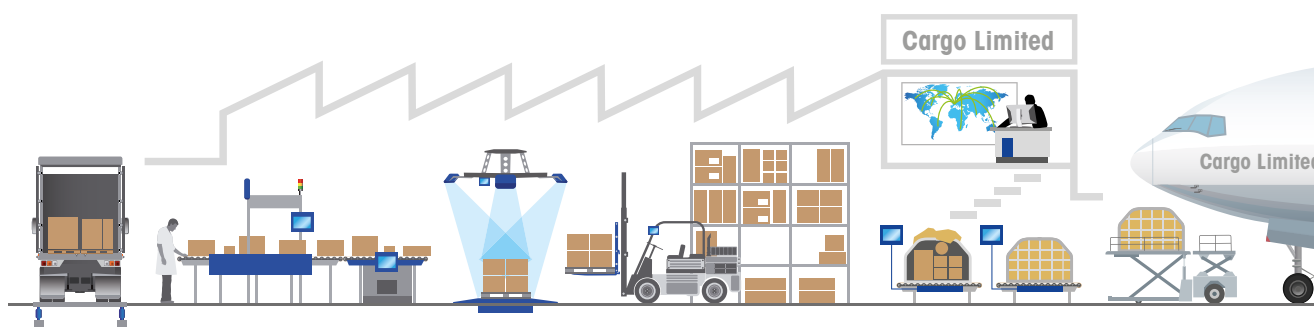
Our instruments meet the highest technical standards.
Are you aware of your most important performance-assurance needs?

Are fast intervention and turnaround times crucial to meet your shipment and delivery dates?

Are your measurement results meeting productivity, quality and regulatory requirements?

Does the accuracy of your measurement equipment meet your quality requirements?

Uptime
You require every minute of up-time. This means guarding against equipment breakdown, parts failure and wear and tear. issues.

Performance
With periodic preventive maintenance, you achieve consistently accurate results, avoiding unexpected downtime and saving money.

Compliance
Whether you operate under ISO 9001 or strict weights and measures regulations, you require documented testing procedures and an accepted calibration certificate.

Do you know how to apply metro-logical concepts, safety procedures and measurement best practice to optimize your process?

Expertise

Ensure you get trained and consulted on measurement technology, regulations and industry best practice..

Over 5 000 Factory-Trained Service Specialists Worldwide

Global Presence

We serve our customers worldwide with one of the largest sales and service networks in the industry to assist you in increasing the efficiency, cost-effectiveness, safety and reliability of your operational processes. Our geographically-focused market organizations ensure close relationships with users. These organizations have the flexibility to adapt support and service offerings to different user requirements.

Our highly trained and authorized service technicians help guarantee:

- Continous operational manufacturing quality and maximized uptime.
- Comprehensive, audit-proof and fully traceable electronic certificates.
- Consistency in procedures and certified, traceable tools.
- Highest operational performance for your compliance needs with combined equipment installation and qualification.

PFA584(x) Floor Scales
Globally Configurable Solutions

We know the needs of every industry are different, which is why the PFA584 is not a one-size-fits-all solution. We have taken the pain out of the floor scale configuration process by creating an easy-to-order, globally standardized set of components that can easily be mixed-and-matched to formulate your ideal scale.

▶ **www.mt.com/PFA584**

Significantly ease the ordering and scale up process with flexible customization and expert METTLER TOLEDO consultancy. It's easy to see why this solution is ideal for multinational companies, because it eliminates the need to order different configurations country-by-country.
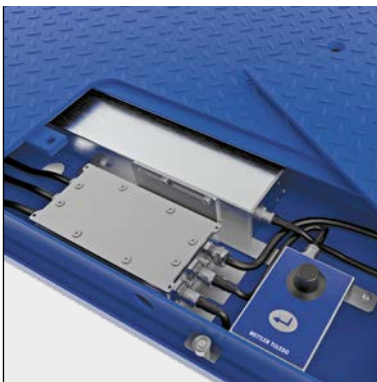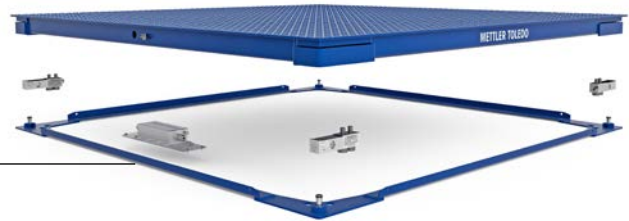
Accurate Out-of-the-Box
By storing the factory calibration values within the scale, you get out-of-the-box accuracy and easy setup.

Faster Scale-Up
The ability to mix-and-match from a set of globally approved components significantly eases the ordering and scale-up process.

Global Approvals for Consistency
Metrology: OIML, NTEP, CPA
Wireless: FCC, CE/RED, SRRC
Safety: UN38.3, IEC/EN61010,
Ex: IECEx, ATEX, FM approved for Hazardous Areas Zone 1/21, 2/22 and Div 1/Div 2
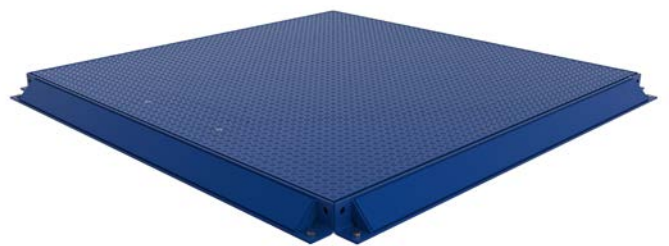
Premium Components with Global Approvals
Mix and Match Your Ideal Configuration

Model		PFA584
Platform Material	Mild steel powder coated/painted, blue	•
Top Deck Plate	Pattern	•
Sizes		From 0.8 x 0.8 m to 2.0 x 2.0 m
Capacities		From 300 kg to 12,000 kg
Compliance	Metrology	OIML Class III, NTEP Class III, CPA Class III
	EMC	10 V/m
Hazardous Area Approvals	ATEX	No
	IECEx	No
	FM US	NI/I, II, III/2/ABCDFG/T6 Ta=55 °C
	FM Canada	NI/I, II/2/ABCDFG/T6 Ta=55 °C / DIP/III/2/T6 ta=55 °C
Load Cell		SLB415 / 0745A, IP68/IP69K
Scale Interfaces		Analog, SICSPro, Cable-Free

BFA231/BFA236 Floor Scales
Simple, Reliable Weighing Performance

These scales' rocker-foot load-cell suspension enables reliable basic-weighing accuracy in dry and wet environments. Simple designs in stainless or mild steel use easy-loading ramps and above-ground installation.

▶ **www.mt.com/BFA231-236**

Rocker-foot suspension is self-aligning and self-centering. It balances side shocks and transmits force vertically into the load cell. Because only vertical forces are transmitted, it eliminates side load and bump impact for better accuracy and longevity in industrial environments. The ramp configuration allows drive-on or drive-through weighing.

Quick Start-Up
These scale indicators and platforms are connected and calibrated in our plant so they are ready to commission and operate when they reach yours.

Easy, Flexible Installation
The rocker foot can be installed with or without anchor plate to allow material handling with or without side load.

Increase operation speed
The simple and convenient menu configuration and intuitive setup makes the BFA231/BFA236 easy to use. It requires minimal operator training and measurably improves production efficiency.

BFA231 and BFA236
Basic and Reliable Weighing

Display	40 mm 7 digits LCD display with backlighting	
Material	Scale indicator housing: painted mild steel or stainless steel depending on platform selection	
Power Supply	AC: 85–264VAC; 50Hz–60Hz	
Data Interfaces	RS232	
	Maximum Capacity	
Platform Size	**1,500 kg**	**3,000 kg**
E 1,500 x 1,250 mm	•	•
ES 1,500 x 1,500 mm	•	•
Approvable Readability	500 g	1,000 g
Recommended Readability (min.)	200 g	200 g
Approvable Resolution	OIML Class III, 3,000e	
Recommended Resolution (max.)	15,000d	
More Information	www.mt.com/BFA231-236	

OIML   IP54 IP67

PTA455/PTA459(x) Pallet Scales
Movable Weighing with Easy Loading

PTA455/PTA459 – the pallet scales for goods shipping and receiving, manufacturing and packaging. These rugged, reliable pallet scales are made of hot-galvanized mild steel or stainless steel. A wide range of options and accessories help these versatile scales to meet your requirements. Let us find the right solution for your application.

▶ **www.mt.com/PTA455**
▶ **www.mt.com/PTA459**

PTA pallet scales come with wheels and a handle so you can weigh wherever it is most convenient for you (product option / accessory). PTA455 comes in galvanized mild steel for dry and light-wet applications, while the PTA459(x) stainless-steel version allows use in wet applications in both safe and hazardous areas.

Open Design for Efficient Cleaning
The frame design with its open tubes makes it easy for you to clean and flush out.

Adaptable to Your Needs
A variety of options and accessories make the platform highly flexible. Choose different materials, surface treatments, wheels, handles and resolutions.

EU Standard Pallets and Beyond
PTA scales are designed to fit the most common EU pallet size. Other dimensions or a tailored mechanical design are available on request.

PTA455/PTA459(x) Pallet Platforms
Ergonomic Designs

Platform Size	Maximum Capacity			
	300 kg	600 kg	1,500 kg	3,000 kg
1 200 x 600 mm	•	•	•	•
Free Sizes				
500 x 450 – 1 260 x 1 000 mm	•	•	•	•
Approvable Readability	50 g / 100 g	100 g / 200 g	500 g / 1,500 g	500 g / 1,000 g
Recommended Readability (min.)	10 g	20 g	50 g	100 g
Approvable Resolution	2 x 3,000e multi range, 3 x 3,000e multi range, 2 x 3,000e multi interval, 1 x 6,000e single range			
Recommended Resolution (max.)	30,000d			
More Information	www.mt.com/PTA455 / www.mt.com/PTA459			

IP68 **IP65** Ex OIML GMP

PJA434/PJA439 Pallet Truck Scales
For High-Productivity Mobile Weighing

Our pallet truck scales are designed to integrate easily into filling, inventory, load management or counting applications anywhere in your workplace. Basic mobile weighing can help increase your throughput and process flexibility.

▶ **www.mt.com/PJA**

Four load cells embedded into the forks of a standard pallet truck make this mobile solution a fully functional scale capable of lifting, weighing, and moving items anywhere in your work area. Unique FlexBolt load-cell fixation eliminates the potential negative influence of stress on the chassis caused by the load, ensuring superb accuracy and repeatability.

Boost Time and Cost Savings
Weigh and move at the same time – no independent material load-in time added.

Fit to Your Processes
Different wheel options help you work anywhere on any floor condition. The ICS4x9 scale indicator lets you perform multiple weighing functions.

Save Space and Clean Freely
Because it requires no pit construction, your workspace retains maximum flexibility. Easy movement also means easy floor cleaning!

Designed for Seamless Integration
PJA434/PJA439 Pallet Truck Scales

Display	LCD liquid crystal graphical display with backlighting				
Material	Scale indicator: Stainless steel 1.4301, AISI 304 Platform: Painted mild steel, stainless steel				
Power Supply	Battery 12V / 7Ah				
Data Interfaces	RS232				
	Maximum Capacity				
Platform Size	**600 kg**	**1,000 kg**	**1,500 kg**	**2,000 kg**	**2,500 kg**
PJA434/PJA439 Painted steel 1,150/950/1,400 x 550/690 fork length x over-fork width	•	•	•	•	•
PJA434/PJA439 Stainless steel 1,150/950/1,400 x 550/690 fork length x over-fork width	•	•	•	•	•
Approvable Readability (optional)	0.2 kg	n/a	0.2/0.5 kg	0.5/1 kg	0.5/1 kg
Recommended Readability (min.)	0.1/0.2 kg	0.1 kg	0.2/0.5 kg	0.5/1 kg	0.5/1 kg
Approvable Resolution (optional)	OIML Class III, 2x3,000e muti range				
Recommended Resolution (max.)	10,000d				
More Information	www.mt.com/PJA				

Global Services
Optimize Operational Efficiency

Our service offering includes an extensive range of services to help you preserve the value of your investment.

Comprehensive Service Agreements
A comprehensive service agreement is tailored to your operational requirements. It includes preventative maintenance, parts, labor, travel and guaranteed response time for repairs. This is your most cost-effective assurance against downtime, low-quality results and unbudgeted expense.

Customer-Specific Requirements
METTLER TOLEDO is familiar with local needs and specific customer requirements. This includes needs for local spare parts stock, special service reports, technical training, failure analysis, product upgrades and interaction with system integrators.

Repair Services
METTLER TOLEDO is your single source for maintenance and repair of dimensioning, weighing and scanning equipment. In case of breakdown, we will provide services and parts in a cost-effective manner to get you up and running as quickly as possible.

▶ **www.mt.com/service**

www.mt.com

For more information