Compact Weighing Systems

**Industrial Compact Systems
The ICS4 and ICS6 Family**

Modular and Versatile

Fast and Precise

Robust and Reliable

For Dry and Wet Environments

Tailored Solutions
for Your Industrial Applications

METTLER TOLEDO

One Family
Versatile Use

The ICS product family is a highly modular product range consisting of a large variety of indicators and platforms to best fulfill your specific requirements. From simple weighing to integrated solutions with multiple components including third party devices – a wide range of configurations are possible.

The right solution tailored to the specific needs of your application in any industrial environment.

Maximum Versatility
The ICS6 Excellence level indicators enable you to manage complex systems with a high degree of flexibility and easy setup. With the ability to control up to four platforms and a wide range of interface options, your investment will help maximize profits while providing long-life, high up-time quality weighing equipment.

Highest Throughput
The ICS4 Standard level scales are available with a variety of keypad and housing options to allow a customized solution perfectly tailored to your specific weighing tasks. The software supports a range of applications including counting, over/under checkweighing, dynamic weighing, and portioning. The graphic display with colorWeight® feature ensures high throughput with easy-to-read error free results.

Reliable Weighing
Numerous workplaces in different industrial market segments require only basic weighing solutions. Choose the easy-to-use basic models of the ICS family which provide all the necessary functions, proven industrial quality and reliable weighing results day in and day out.

ICS425

ICS465

ICS685

ICS689

ICS469

ICS429

Filling, Classifying, Data/User Management	
Counting, Over/Under-Checkweighing, Portioning	
Basic Weighing	Application
Dry, Dusty	Wet, Harsh, Hygienic	Environment
Manufacturing	Food, Chemical, Pharmaceutical	Industry

Optimize Your Processes
Meet Your Toughest Requirements

The ICS scale family is designed to integrate easily into your weighing process. It offers a broad range of solutions for your checkweighing, counting or quality assurance applications. Make your choice, select your optimal combination and raise your throughput, increase process security and improve your product and delivered quality.

Reliable Counting

When verifying inventory, packaging or confirming production quantities, every part is important. METTLER TOLEDO counting solutions ensure that only the right number of parts are delivered to the customer. The ICS scale family provides solutions to make parts-counting applications fast, accurate and cost effective.

Portioning and Classifying

The ICS product family supports fast and efficient portioning or classifying processes. Depending on the preferred working procedure the operator can choose between different modes. Whether filling small containers placed on the platform, or using the powerful take away mode feature for filling without a keystroke, the ICS scales help to speed up productivity up to 20%.

Quality Checks by Weight

When product integrity matters, check-weighing is a fast and cost-effective quality assurance method. Whether you need to detect missing components of assemblies or whole shipments, control the completeness of castings or verify the amount of lubricants applied, the ICS scales provide clear information as to whether the quality specifications are met and the shipment is complete.

Flexible and Mobile

All ICS4 and ICS6 models can be equipped an optional built-in rechargeable battery, the scales can easily be moved and placed where they best fit into the process. The state of the art Lithium-Ion battery technology ensures many hours of continuous operation.

High Throughput
and Reliable Processes

Speed counts in today's competitive environment. Manufacturers need not only to deliver error free, high-quality products, but to produce with high throughput. With the ICS4 and ICS6 Industrial Compact Scales you can achieve both. Benefit from an intuitive user menu with easy-to-use weighing and counting applications and superior weighing performance for fast and accurate results.

Increase Speed

While counting pieces or checking completeness using a weighing system, operators typically have to concentrate intensely on the indicator display which slows down their process. The colorWeight® function clearly indicates, using different colors, when the target is reached. This eases the operator's concentration, speeds up the task and saves time and money.

Avoid Errors

Intuitive user menus and efficient user prompting prevent operator errors and fatigue during repetitive tasks. Configurable softkeys allow fast access to frequently used functions. Users are guided through the weighing and counting tasks in different languages. Set user profiles and deactivate unused hardkeys to make operation traceable, secure and error free.
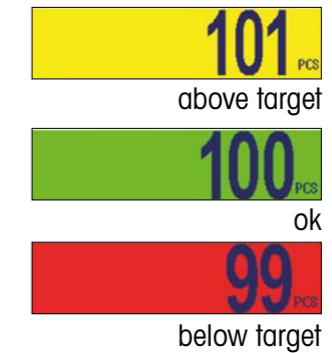
Ensure Accuracy

ICS compact scales feature high-performance weighing technology. This includes MonoBloc® electromagnetic force-compensation load cells, built for long service life, extreme ruggedness and outstanding accuracy. These high-precision load cells deliver accurate results fast and reliable measurements day in and day out for increased productivity and minimum downtime.

colorWeight®
Speeds up production

Save time and money with the smart colored display making weighing applications such as completeness checks, portioning, classifying and counting simple, fast and less error prone. The colorWeight® display indicates at a glance if weight or count is below, within or above target.

colorWeight®

101 PCS
above target

100 PCS
ok

99 PCS
below target

Resist Wet and Harsh 24/7
for Fast and Complete Washdown

From light wet to harsh washdown conditions - it doesn't matter. The stainless steel platforms and indicators of the ICS4 and ICS6 series provide a flexible and rugged solution for a wide range of weighing tasks. All parts have been engineered and manufactured according to the latest hygienic design guidelines resulting in a construction without closed cavities or sharp edges and with minimum horizontal surfaces. This allows easy, fast and efficient cleaning.

Designed for Harsh Conditions

Equipment used in hygienic sensitive areas such as food production must be designed and installed according to sound sanitary principles. The ICS689 product line is designed using the latest hygienic design guidelines including EHEDG or NSF. This includes a double sealed, IP69k protected indicator.

EHEDG: European Hygienic Engineering & Design Group NSF: National Sanitation Foundation

Configurable to your Environment

Whether your processes require only wet wiping or heavy washdown procedures, the appropriate load cell according to your cleaning requirements can be chosen. Selections include an aluminum potted load cell with IP65 protection up to a hermetically sealed stainless steel load cell (IP68/IP69k) for permanently wet environments.

Open and Rugged Design

The stainless steel construction is built to withstand wet and harsh environments. Designs feature open construction. Optimally placed and independently adjusted overload stops and additional side impact protection maintain your load cell's accuracy and the efficiency of your processes in rough industrial environments.

Built for Efficient Cleaning

IP69K protected indicators and hermetic sealed loadcells engineered in conjunction with platform designs conforming to the latest hygienic guidelines, enable efficient and easy cleaning access to all areas.

- Open platter construction
- Full stainless steel
- Reduced flat surfaces
- Die-casting load cell mounting plate
- Reduced cavities
- No exposed threads

IP68   **IP69k**   **GMP**

Integrated Data Handling
Fast, Reliable and Traceable

Accurate weighing is important, but so is weighing data integration. Easily manage articles, materials and related parameters on the scale or a connected computer. Capture weighing results and other relevant data on the scale, print them on customizable labels or securely transfer them to your data management system to document and monitor your process.

Proven Traceability

Whether legally required or specified by customers, today traceable processes are standard. Ensure full traceability of your weighing process with a comprehensive set of features such as
- Identification of arti	cles and materials via barcode reader
- Definition of tolerances and tare values in an article database
- Secure storage of weighing data and related parameters
- Accurate batch identification with customizable label printing

Easy Connectivity

Connect your scale via Ethernet or USB for easy data transfer and connect a barcode reader (via RS232 or USB) for secure material identification.
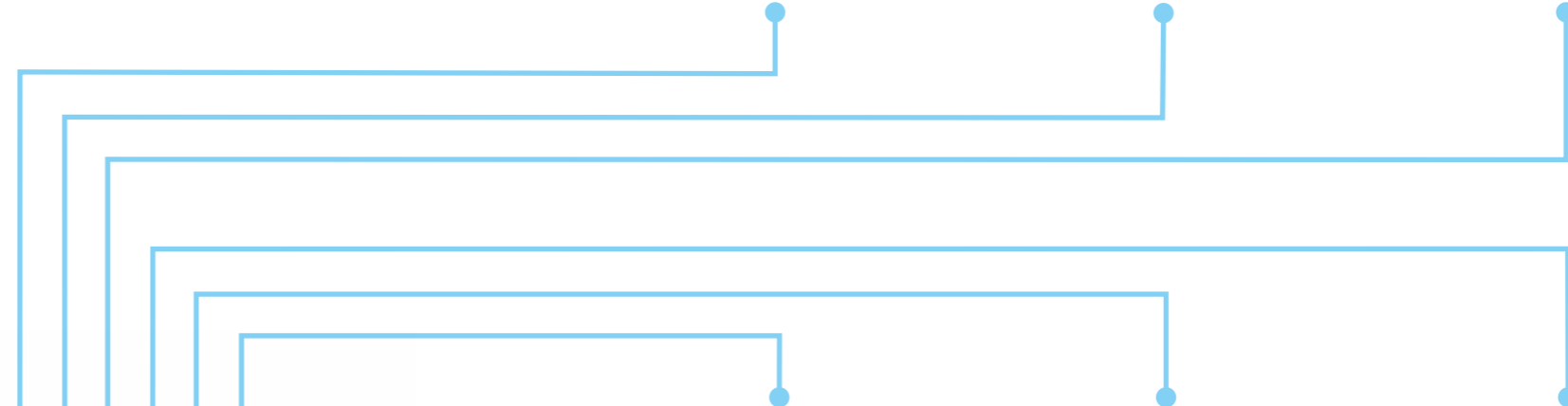
Customizable Label Printing

Customize printing labels to meet customer and industry requirements. Ensure traceable printing of weighing or counting results and process identification.

Real-time Monitoring

Visualize your weighing results from anywhere in real-time with the software Collect+. Capture statistical quality control data with FreeWeigh. Net PC software.

Powerful Database

Store your articles and materials in the scale-embedded database together with relevant parameters such as target weight or count, tolerances, tare values or average piece weights.

Secure Data Handling

Weighing data including date/time, article ID or operator ID, is securely stored in a protected memory. Manage access to the scale and weighing data with multi-level user access rights.

Efficient Data Management

Manage articles and related data directly on the scale or use the PC software DatabICS to easily set-up and manage your article database centrally for multiple scales.

Safe and Accurate Weighing
In Hazardous Areas

Three considerations are important in potentially explosive environments: Is the weighing process safe and compliant? Does it deliver accurate results? And can it be handled efficiently? The intrinsically safe ICS4_6x-Series combi bench scales deliver all three aspects and ensure safe, accurate and efficient weighing in hazardous areas.

Full Protection

The ICS4_6x-Series combi bench scales enable safe and efficient operations in hazardous areas classified as Zone 1/21 and Division 1. The intrinsically safe product design ensures the highest level of safety and compliance with the latest hazardous area requirements. In addition, the scales feature a compact design and can be easily maintained.

Highest Accuracy

High-precision weighing in a hazardous area is a challenge. The ICS4_6x-Series enable industry leading accuracy of up to 750.000d in Zone 1/21, Division 1. When tolerances are tight, these scales deliver the precision to ensure consistently accurate results without compromising safety.

Best Usability

The scales can be flexibly configured to ensure ergonomic and efficient operation. An intuitive operating philosophy provides easy and secure handling of even complex weighing applications in the hazardous area. The colorWeight® functionality of the ICS466x improves speed and control of weighing tasks by immediately indicating if a result is within tolerance.

Proven Compliance

The ICS4_6x-Series are approved according global and local standards. IECEx, ATEX and FMC+US are approvals for use in hazardous areas classified as Zone 1/21 and Division 1. Regular audits of the METTLER TOLEDO production facilities by the certification bodies verify that standards are applied and safety is ensured.

Compact Weighing Systems
For Dry and Dusty Environments

The **ICS4_5** and **ICS685** compact scales are the perfect fit for your applications in dry or dusty environment. Whether you look for a scale for simple weighing, advanced counting or quality control applications you will find the perfect solution for your specific needs.

1 Choose an Application / Indicator

Model	ICS425	ICS435	ICS445	ICS465	ICS685
Applications	• Basic Weighing	• Basic Weighing	• Basic Weighing • Counting	• Basic Weighing • Counting • Over/Under Checkweighing	• Basic Weighing • Counting • Over/Under Check-weighing • Filling/Dosing • Classifying • Formulation • SpeedWeigh • Pick&Pack
Color TFT display					•
colorWeight®				•	•
Configurable soft keys			•	•	•
Numeric (n) / alphanumeric (a) keypad		n		n	a
Additional interface options	1	1	1	1	3
Attachable platforms	1	1	2	2	4*

* Maximum 2 analog, or 2 IDNet platforms respectively 1 analog plus 1 IDNet

General Specifications

Resolution for analog platforms**	300,000d; 7,500e, OIML / 10,000d, NTEP
Display	**ICS4_5:** LCD liquid crystal graphical display with backlighting **ICS685:** Color TFT display 320 x 240 pixels
Keypad	Tactile-touch membrane keypad (PET), scratch-resistant material
Housing	Die-cast aluminium
Protection	IP65
Power	100–240 VAC; optional battery 12 V / 2.5 A
Standard Interfaces	1 RS232

** for digital platforms, the resolution is defined by the respective platform

2 Interface Options / Accessories

Optional Data Interfaces	RS232, RS422/485, USB device/host, Ethernet, Digital I/O (4 Inputs + 4 Outputs)
Optional Scale Interfaces	digital SICSpro, digital IDNet, analog (max. 2 analog, or 2 IDNet resp. 1 analog + 1 IDNet)
Accessories	Choose from various accessories such as wall bracket, columns/stands, roller tops, printers, battery packs, relays for digital I/O, barcode scanners and much more

3 Combine with the best fit platform for dry environment

Standard Resolution, ICS4_5/685 Compact Scales

PBD555

Platform Size (Loadplate size)	0.6 kg	3 kg	6 kg	12 kg	15 kg	30 kg	35 kg	60 kg	120 kg	300 kg	600 kg
SM 206x247 (200x240 mm)		•	•								
LA 247x357 (240x350 mm)					•		•				
Approved readability (up to 7,500e)		0.5 g	1 g		2 g		5 g				
Recommended readability at max. resolution (up to 75,000d)		0.05 g	0.1 g		0.2 g		0.5 g				
Ingress Protection	IP65 (optional)										

High Precision, ICS4_5/685 Compact Scales

PBK785

Platform Size (Loadplate size)	0.6 kg	3 kg	6 kg	12 kg	15 kg	30 kg	35 kg	60 kg	120 kg	300 kg	600 kg
XS 206x247 (130x160 mm)	•	•	•								
SM 206x247 (200x240mm)				•							
LA 247x357 (240x350 mm)						•		•			
Approved readability (up to 60,000e)	0.1 g	0.1 g	0.1 g	1 g		1 g		1 g			
Recommended readability at max. resolution (up to 610,000d)	0.01 g	0.01 g	0.01 g	0.1 g		0.1 g		0.1 g			
Ingress Protection	IP65 (optional)										

High Capacity, ICS4_5/685 Compact Scales

PBD655

Platform Size	0.6 kg	3 kg	6 kg	12 kg	15 kg	30 kg	35 kg	60 kg	120 kg	300 kg	600 kg
A 240x300 mm			•	•							
BB 300x400 mm						•		•			
B 400x500 mm								•	•		
BC 500x650 mm								•	•	•	
CC 600x800 mm								•	•	•	•
Approved readability (6,000e)			1 g	2 g		5 g		10 g	20 g	50 g	100 g/200 g[1)
Recommended readability at max. resolution (60,000d)			0.1 g	0.2 g		0.5 g		1 g	2 g	5 g	10 g
Ingress Protection	IP65										

* For counting applications; process tolerance 1%; probability 95.4%

Your Customized Solution
Wet and Harsh Environments

The ICS4_9 and ICS689 compact systems are the perfect solution for any application in wet and harsh environment. The rugged stainless steel design of all indicators and platforms with high ingress protection guarantees long lifetime and allows frequent and intensive cleaning.

1 Choose an Application / Indicator

Model	ICS429	ICS439	ICS449	ICS469	ICS689
Applications	• Basic Weighing	• Basic Weighing	• Basic Weighing • Counting • Over/Under Checkweighing	• Basic Weighing • Counting • Over/Under Checkweighing	• Basic Weighing • Counting • Over/Under Check-weighing • Filling/Dosing • Classifying • Formulation • SpeedWeigh • Pick&Pack
Color TFT display					•
colorWeight®			•	•	•
Five configurable soft keys			•	•	•
Numeric (n) / alphanumeric (a) keypad		n		n	a
Additional interface options	1	1	1	1	3
Attachable platforms	1	1	2*	2*	4**

* Connection of a second scale to ICS449 and ICS469 is limited to SICSpro- or SICS-interface
** Maximum 2 analog, or 2 IDNet platforms respectively 1 analog plus 1 IDNet

General Specifications

Resolution for analog platforms***	Up to OIML 2x3,000e/ NTEP 5,000d
Display	**ICS4_9:** LCD liquid crystal graphical display with backlighting **ICS689:** Color TFT display 320 x 240 pixels
Keypad	**ICS4_9:** Tactile-touch membrane keypad (PET), scratch-resistant material **ICS689:** Piezo keypad scratch-resistant material
Housing	Stainless steel 1.4301, AISI 304
Protection	Up to IP69k
Power	100–240 VAC; optional battery 12 V/2.5 A
Standard Interfaces	1 RS232

*** for digital platforms, the resolution is defined by the respective platform

2 Interface Options / Accessories

Optional Data Interfaces	RS232, RS422/485, USB device/host, Ethernet, Digital I/O (4 Inputs + 4 Outputs)
Optional Scale Interfaces	digital SICSpro, digital IDNet, analog (max. 2 analog, or 2 IDNet resp. 1 analog + 1 IDNet)
Accessories	Choose from various accessories such as wall bracket, columns/stands, roller tops, printers, battery packs, relays for digital I/O, barcode scanners and much more

3 Combine with the best fit platform for wet and harsh environments
Modular Solutions, ICS429/439/449/469 and ICS689 Combi Bench Scales

Platform Size	3 kg	6 kg	12 kg	15kg	30 kg	60 kg	120 kg	150 kg	300 kg	600 kg
QA 228 x 228 [mm]	•	•								
A 240 x 300 [mm]	•	•	•	•						
QB 305 x 305 [mm]			•	•	•	•				
BB 300 x 400 [mm]					•	•				
B 400 x 500 [mm]					•	•	•	•		
BC 500 x 650 [mm]						•	•	•	•	
CC 600 x 800 [mm]							•	•	•	•

PBD659	3 kg	6 kg	12 kg	15kg	30 kg	60 kg	120 kg	150 kg	300 kg	600 kg
Approved readability (6,000e)	0.5 g	1 g	2 g	n/a	5 g	10 g	20 g	n/a	50 g	200 g*
Recommended readability at max. resolution (60,000d)	0.05 g	0.1 g	0.2 g	n/a	0.5 g	1 g	2 g	n/a	5 g	10 g
Ingress Protection	IP68/IP69k									

PBA639	3 kg	6 kg	12 kg	15kg	30 kg	60 kg	120 kg	150 kg	300 kg	600 kg
Approved readability (3,000e)	1 g	2 g	n/a	5 g	10 g	20 g	n/a	50 g	100 g	200 g
Approved readability (2x3,000e)	n/a	1/2 g	n/a	2/5 g	5/10 g	10/20 g	n/a	20/50 g	50/100 g	100/200 g
Recommended readability at max. resolution (30,000d)	0.1 g	0.2 g	n/a	0.5 g	1 g	2 g	n/a	5 g	10 g	20 g
Ingress Protection	IP68/IP69k									

PBA439**	3 kg	6 kg	12 kg	15kg	30 kg	60 kg	120 kg	150 kg	300 kg	600 kg
Approved readability (3,000e)	1 g	2 g	n/a	5 g	10 g	20 g	n/a	50 g	100 g	200 g
Recommended readability at max. resolution (15,000d)	0.2	0.5	n/a	1	2	5	n/a	10	20	50
Ingress Protection	IP68/IP69k									

PBA436**	3 kg	6 kg	12 kg	15kg	30 kg	60 kg	120 kg	150 kg	300 kg	600 kg
Approved readability (3,000e)	1 g	2 g	n/a	5 g	10 g	20 g	n/a	50 g	100 g	200 g
Approved readability (2x3,000e)	n/a	1/2 g	n/a	2/5 g	5/10 g	10/20 g	n/a	20/50 g	50/100 g	100/200 g
Recommended readability at max. resolution (15,000d)	0.2	0.5	n/a	1	2	5	n/a	10	20	50
Ingress Protection	IP65									

*3,000e / **Only for ICS4x9 Combi Bench Scales

High Precision, Bundle ICS Indicators with PBK989

PBK9 Series									
Platform Size (Load Plate Size)	0.6 kg	3 kg	6 kg	15 kg	30 kg	120 kg	150 kg	300 kg	600 kg
XS 210x250 (130x160 mm)	•								
A 275x345 (240x300 mm)		•	•						
AB 280x350 mm				•	•	•			
B 400 x 500 mm						•	•		
CC 600 x 800 mm							•	•	
Approved readability (30,000e)*	0.1 g	0.2 g	0.5 g	1 g	2 g	5 g	5 g	10 g	
Recommended readability at max. resolution (750,000d)*	0.005 g	0.01g	0.02 g	0.05 g	0.1g	0.2 g	0.2 g	0.5 g	
Ingress Protection	IP66/IP68								

*max. readability/resolution, other resolutions see datasheet

Compact Scales
For Hazardous Environments

The ICS4_6x-Series combi bench scales are specifically designed for safe and accurate performance in potentially explosive environments. The scales are approved for use in hazardous areas classified as Zone 1/21 and Division 1. Select the right solution for your weighing application:

General specification Indicator

Hazardous Area Approval	Zone 1/21, Division 1
Resolution for analog platforms	Up to OIML 2x3,000e/ NTEP 5,000d
Display	LCD liquid crystal graphical display with backlighting
Keypad	Tactile-touch membrane keypad (PET), scratch resistant material
Housing	Stainless steel 1.4301, AISI 304
Protection	IP65
Power	Either 120V or 230V via APS768x power supply
Standard Data Interface	Intrinsically safe RS232
Optional Data Interfaces	1 RS232 or RS422/485 via ACM200 communication module
Accessories	Choose from accessories such as wall bracket, columns/stands and printer (safe area)

High Precision, ICS4_6x Combi Bench Solution

Applications	ICS426x: Basic Weighing ICS466x: Basic Weighing, Over/Under Checkweighing Over/Under, Filling/Dosing
Attachable Platforms	1 digital weighing platform

High Precision, Bundle ICS4_6x Indicators with PBK989

PBK9 Series	Capacity									
Platform Size (Load Plate Size)	0.6kg	3kg	6kg	15kg	30kg	60kg	120kg	150kg	300kg	600kg
A 275x345 (240x300 mm)		•	•							
AB 280x350 mm				•	•	•				
Approved Readability*		0.1g	0.2g	0.5g	1g	2g				
Recommended Readability (min.)*		0.005g	0.01g	0.02g	0.05g	0.1g				

*max. readability/resolution, other resolutions see datasheet

Match the ICS466x to Your Requirements in Hazardous Areas

Applications	Basic Weighing, Over/Under CheckaweighinOver/Under, Filling/Dosing
Attachable Platforms	2 digital platforms or one analog and one digital platform
Features	colorWeight®, 5 configurable soft keys, alphanumeric keypad

Economic Solutions, ICS466x Combi Bench Scales

PBA439x								
Platform Size	3 kg	6 kg	15 kg	30 kg	60 kg	150 kg	300 kg	600 kg
QA 228 x 228 [mm]	•	•						
A 240 x 300 [mm]	•	•	•					
QB 305 x 305 [mm]			•	•	•			
BB 300 x 400 [mm]				•	•			
B 400 x 500 [mm]				•	•	•		
BC 500 x 650 [mm]					•	•	•	
CC 600 x 800 [mm]						•	•	•
Approved readability (3,000e)	1 g	2 g	5 g	10 g	20 g	50 g	100 g	200 g
Recommended readability at max. resolution (15,000d)	0.2	0.5	1	2	5	10	20	50
Ingress Protection	IP68/IP69k							

Hygienic Design, ICS466x Combi Bench Scales

PBA639x								
Platform Size	3 kg	6 kg	15 kg	30 kg	60 kg	150 kg	300 kg	600 kg
QA 228 x 228 [mm]	•	•						
A 240 x 300 [mm]	•	•	•					
QB 305 x 305 [mm]			•	•	•			
BB 300 x 400 [mm]				•	•			
B 400 x 500 [mm]				•	•	•		
BC 500 x 650 [mm]					•	•	•	
CC 600 x 800 [mm]						•	•	•
Approved readability (3,000e)	1 g	2 g	5 g	10 g	20 g	50 g	100 g	200 g
Approved readability (2x3,000e)	n/a	1/2 g	2/5 g	5/10 g	10/20 g	20/50 g	50/100 g	100/200 g
Recommended readability at max. resolution (30,000d)	0.1 g	0.2 g	0.5 g	1 g	2 g	5 g	10 g	20 g
Ingress Protection	IP68/IP69k							

High Precision, ICS466x Combi Bench Scales

PBK9 Series								
Platform Size (Load Plate Size)	3kg	6kg	15kg	30kg	60kg	120kg	150kg	300kg	600kg
A 275x345 (240x300 mm)	•	•							
AB 280x350 mm			•	•	•				
B 400 x 500 mm					•	•			
CC 600 x 800 mm							•	•	
Approved readability (30,000e)*	0.1 g	0.2 g	0.5 g	1 g	2 g	5 g	5 g	10 g	
Recommended readability at max. resolution (750,000d)*	0.005 g	0.01 g	0.02 g	0.05 g	0.1 g	0.2 g	0.2 g	0.5 g	
Ingress Protection	IP66/IP68								

*max. readability/resolution, other resolutions see datasheet

A Tailored Service Offering
Ensures Compliance and Reliability

From evaluating your needs to select the right scale, through to daily routine operation, our Sales & Service Team can accompany you every step of the way. The METTLER TOLEDO Good Weighing Practice approach GWP® ensures excellent performance, maximum uptime and full compliance with the norms and standards relevant to your industry.

Evaluation and selection
Our GWP® Recommendation service helps you select the right scale according to your specific process and quality requirements.

Installation
We document the installation and qualification of your scale in accordance with the relevant industry regulations. Operator training following installation leads to improved productivity.

Calibration
Scale calibration is at the core of accurate weighing results. Each calibration certificate declares the scale's minimum weight and measurement uncertainty.

Routine operation
GWP® Verification provides clear guidance for performance verification of your scale to save you time and money.

▶ **www.mt.com/gwp**

www.mt.com/bench-scales

For more information