

Hygienic Bench Scales



BBA639/BBD659 Scales

Modular and Versatile

Exceptional Hygienic Design

Robust and Reliable

Intuitive Touch Interface



Hygienic Benchtop Weighing

Simplified Touchscreen Operation

METTLER TOLEDO

BBA639/BBD659 Bench Scales

Streamline Cleaning and Compliance

The BBA639 and BBD659 industrial bench scales integrate easily into your weighing processes. With hygienic designs and intuitive operation, these scales optimize your checkweighing, counting, data integration, or quality assurance applications. Expedite scale assembly, adjustment, and approval with pre-configured pairings tailored to your needs.

► www.mt.com/BBA4-BBD6



Exceptional Hygienic Design

Easily achieve higher hygienic standards and boost cleaning speed by up to 40% with no additional effort in any harsh or humid environment.



Impact-Resistant Durability

Protect your operation with a solution designed to withstand top and side impacts for peak performance regardless of environment and application.



Optimized Accuracy to Reduce Waste

The smart load cell used within the BBD659 bench scale actively corrects and compensates for measurement errors, which improves accuracy by up to 50% to reduce waste.



Pharmaceutical Industry

For pharmaceutical manufacturers, hygiene, accuracy, and data traceability are paramount. The BBA639/BBD659 are exceptional hygienic bench scales that help prevent contamination and enable accurate measurements so that you can deliver high-quality products, boost throughput, and minimize cleaning time.

Biotech Industry

Hygienic equipment is required in biotech environments to avoid contamination and extended downtime due to long cleaning cycles. The hermetically sealed load cell and unique hygienic design allow you to spend less time on washdown processes and boost your productivity.

Food and Beverage Industry

The rapid advancements and increasing demand in the food and beverage industry require maximum process efficiency and reliable measuring results. To help you meet these requirements, these platforms offer durable construction, IP68/IP69k load cell protection, and easy-to-clean surfaces.



We offer global and local partnership, no matter where you do business.

Whether you are a multinational business or a systems integrator serving customers worldwide, our globally approved weighing platforms enable you to standardize your weighing solutions to minimize procurement and engineering hours and deliver a reliable value to your customers or production facilities worldwide. Our comprehensive consulting and extensive weighing portfolio are available to help you simplify your job.

Stainless-Steel Bench Scales

Designed for Heavy Washdown Environments

The stainless-steel BBA639 and BBD659 are designed with a strong emphasis on hygiene to significantly reduce contamination risks. With low surface roughness and IP69k protection, these solutions enable rapid operation and easy cleaning, ensuring they meet the highest standards for hygienically sensitive environments.

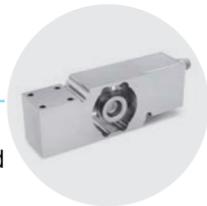
No Cavities or Crevices

The elimination of open threads, cavities, and dead spots helps to prevent contamination by giving bacteria nowhere to hide.



Fully Protected Load Cell

This stainless steel, hermetically sealed load cell withstands harsh and wet environments with IP68 and IP69k protection. The load cell is available in an analog version (BBA639) and a smart digital version (BBD659). The smart load cell can be easily connected and disconnected for maximum efficiency and uptime.



Unique Impact Protection

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.



Simplified Leveling

The platform enables easy set-up and tool-less leveling, so operators can move the scale for cleaning and quickly place it back to continue working without excessive downtime.



Optional: Close Platter or Open Platter



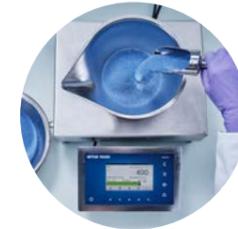
5" Color Display

Minimize training time, avoid operator fatigue, and reduce human errors with clear, highly visible prompts and results.



Capacitive Touchscreen

Benefit from higher sensitivity and optimized touch algorithms that allow for precise touch, light touch, timely response, and smooth sliding, even when you are wearing gloves.



colorWeight® Functionality

Speed up weighing processes and minimize waste with the simple three-color display system that confirms results at a glance.



Intuitive User Interface

Leverage familiar features like toggle, time picker, and the brightness slider to control the system settings like your smartphone.



Learn more about the BBA639/BBD659.

Visit the page: www.mt.com/BBA4-BBD6



BBA639 and BBD659 with IND400 provide visibility into your operation:



Easy Integration with Cloud and ERP Systems
 Access and share data on inventory management, quality control, and other production performance with connectivity via Ethernet, serial, USB, or WiFi to your MES / ERP systems.



Connectivity for Seamless Communication
 Easily exchange data between devices including printers, barcode scanners, or other peripherals, and integrate IND400 into existing processes with connectivity via Modbus RTU or Modbus TCP.



Designed and Tested for Cybersecurity
 IND400's rigorous cybersecurity testing and low-risk verification report demonstrate our commitment to protecting customer privacy and transaction data. Unauthorized activities can be identified quickly, helping to prevent tampering or flag potential data breaches.

Make Data-Driven Decisions
 Connectivity Delivers Visibility

Data is your business's most critical asset, as it is the foundation of lean operations and innovative practices. IND400's rich communication interfaces facilitate data sharing from your manual processes into the overall enterprise system, forming a digital closed loop where your information is securely accessible where and when you need it.

Be Audit-Ready Any Time

Complete, Reliable Reporting

Simplify compliance with on-demand, verifiable documentation and reporting, supported by IND400's data integrity feature bundle. Audit trails track every action and change made within the indicator, attributing them to specific users to promote accountability and transparency, making it clear who performed each action and when.

Bench scales with IND400 support data integrity per ALCOA++ principles:

A

Attributable

The data integrity features ensure that every transaction is recorded together with a user account as well as date and time. Users can be assigned to customizable permission groups, and password policies ensure the security of user accounts.

L

Legible

IND400 can store up to 300,000 weighing records and is equipped with electronic signature functionality, allowing for weighing data to be reviewed directly on the indicator.

C

Contemporaneous

IND400 also supports NTP time-server functionality, allowing it to synchronize with the factory time server to ensure accurate timestamping of every weighing log. A high-performance internal time chip is also built in to reduce the frequency of manual time setting in situations where there is no network available.

O

Original

The built-in SHA-256 hash chain encryption policy ensures that source data cannot be tampered with. Encrypted PDF and CSV file exports are also available to ensure secure archival of data as certified true copies.

A

Accuracy and Traceability

The comprehensive audit trail logging feature ensures that all user actions relating to data generation, review, and deletion are recorded. These operations are time-stamped and tracked for audit purposes, ensuring the integrity and security of the data.



Technical Specifications - Bench Scale

BBA639 and BBD659 – Standard Configurations

Metric (kg/m)

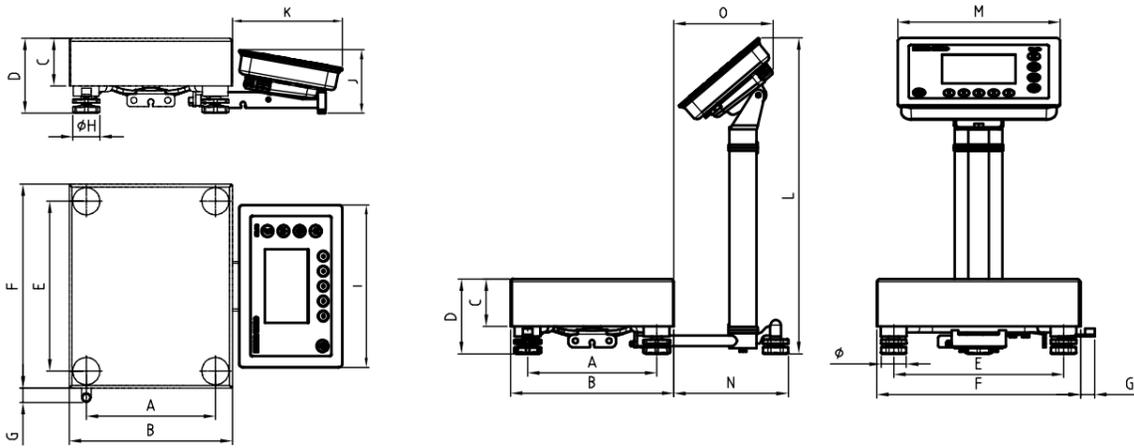
Model	Platform Size	Maximum Capacity								Column Height
		3 kg	6 kg	-	-	-	-	-	-	
BBA639/BBD659 QA	228*228 [mm]	3 kg	6 kg	-	-	-	-	-	-	330 mm
BBA639/BBD659 A	240*300 [mm]	3 kg	6 kg	15/12 kg	-	-	-	-	-	330 mm
BBA639/BBD659 QB	305*305 [mm]	-	-	15/12 kg	30 kg	60 kg	-	-	-	330 mm
BBA639/BBD659 BB	300*400 [mm]	-	-	-	30 kg	60 kg	-	-	-	330 mm
BBA639/BBD659 B	400*500 [mm]	-	-	-	30 kg	60 kg	150/120 kg	-	-	660 mm
BBA639/BBD659 BC	500*650 [mm]	-	-	-	-	60 kg	150/120 kg	300 kg	-	900 mm
BBA639/BBD659 CC	600*800 [mm]	-	-	-	-	60 kg	150/120 kg	300 kg	600 kg	900 mm

Notes: Load cell cable length has option 2.5 m or 5 m cable for BBA639; standard cable length 2.5 m for BBD659 and can order accessory extension cable 22023696 (3 m) or 30024759 (10 m).

BBA639 and BBD659 – Bench Scale Dimensions

Front Mount Type

Column Type



Model	Platform Dimensions									Front Mount Installation			Column Installation			
	mm	A	B	C	D min.	E	F	G	H	I	J	K max.	L max.	M	*N max.	O max.
QA	mm	178	228	70	110	178	228	21	40	239	93	168	465	239	139	160
A	mm	190	240	70	110	250	300	21	40	239	93	168	465	239	139	160
QB	mm	255	305	70	110	255	305	21	40	239	93	168	465	239	139	160
BB	mm	250	300	70	110	350	400	21	40	239	93	168	465	239	139	160
B	mm	350	400	83	126	450	500	21	40	No front mount configuration			795	239	139	160
BC	mm	450	500	90	134	600	650	21	40	No front mount configuration			1035	239	139	160
CC	mm	550	600	*90	*134	750	800	21	40	No front mount configuration			1035	239	139	160

* The 600 kg version of model size CC has two unique dimensions, C = 94 mm and D min. = 140.5 mm

* N max. documented is for the open column. The closed column option has an N max. of 184 mm.

* Front mount or column is installed on the long side of the platform by default before delivery, and the customer can adjust it to short side according to request.

Technical Specifications - Bench Scale

Weighing Platforms

Platform model	BBA639		BBD659	
	PBA639		PBD659	
Approved resolution Class III	OIML	3,000e; 2 x 3,000e	NTEP	3,000e; 6,000e
				5,000d; 10,000d
Readabilities at max. resolution		30,000d		60,000d
Ingress protection	IP68/IP69k			
Scale interface	-	Analog		SICSpro
Materials	Platform Frame: Stainless steel (AISI 304) Load platter: Stainless steel (AISI 304 or AISI316 optional) Feet: TPE (FDA approved) / Load Cell Cable: PVC			
Surface	Load platter: Ra≤1.6um			
Load Cell		Analog stainless-steel hermetically sealed		Digital stainless-steel hermetically sealed
Ambient conditions	Compensated	-10 to 40° C / 14 to 104° F		
	Operation (Safe area)	-20 to 65° C / -4 to 149° F		
Power supply	-	6 to 18 VDC		

Weights and Measures - Legal for Trade Data

OIML (International Organization of Legal Metrology)

OIML certification provides confidence that a weighing device complies with the OIML R76 regulation, which establishes the metrological characteristics required for weighing instruments and specifies methods and equipment for checking their conformity.

OIML/Metric (kg/m)	Maximum Capacity								
	3 kg	6 kg	12 kg/15 kg	30 kg	60 kg	120 kg/150 kg	300 kg	600 kg	
Approved resolution Class III single range - 1x6,000e (*3,000e) for PBD659									
Approved readability (e min.)	[g]	0.5	1	2	5	10	20	50	200*
Minimum capacity	[g]	10	20	40	100	200	400	1,000	4,000
Approved resolution Class III single range - 1x3,000e for PBA639									
Approved readability (e min.)	[g]	1	2	5	10	20	50	100	200
Minimum capacity	[g]	20	40	100	200	400	1,000	2,000	4,000
Approved resolution Class III multi-range - 2x3,000e for PBA639									
Approved readability (Max 1/e1)	[kg/g]	n/a	3/1	6/2	15/5	30/10	60/20	150/50	300/100
Approved readability (Max 2/e2)	[kg/g]	n/a	6/2	15/5	30/10	60/20	150/50	300/100	600/200
Minimum capacity	[g]	n/a	20	40	100	200	400	1,000	2,000

*The 600kg platform is only available for an approved resolution of 3000e.



For additional legal-for-trade information (OIML, NTEP, CE, CPA), refer to the documentation for each component – linked on page 15.

Technical Specifications - Weighing Indicator

IND400 - Touchscreen Weighing Indicator

Specifications	
Enclosure Type and Dimensions	Stainless Electropolished enclosure, steel type 304 stainless steel 239 x 155 x 77 mm (9.4 x 6.1 x 3.0 in), VESA75, VESA100
Keypad	Membrane keyboard for Print, Tare, Clear, Zero and 5 Softkeys
Display	High-resolution capacitive touch graphic display, TFT anti-glare 127 mm (5 in), 800 x 480 px
Clock Accuracy	< 1 second / day (without time server access) at 25° C consistent room temperature
Shipping Weight	2.4 kg / 5.3 lb (net weight)
Environment Protection	IP69k (Stainless enclosure)
Power	Wide range power supply 100 - 240 VAC 50/60 Hz
Supported Scale Types	1 scale interface for Analog or Digital (SICSpro) platform
Analog/Digital Update Rates	Internal: Analog: ≥400 Hz; SICSpro: 50 Hz for scale that include Advanced Setup Mode
Weight Display	Display resolution of 100,000d for analog load cell scale Display resolution for SICSpro bases is determined by the specific base used
Applications	Basic weighing, counting, Over/under checkweighing, Animal weighing, Manual filling, Totalizing, Data integrity
Optional Interfaces	Discrete I/O interface with 4 inputs and 4 outputs RS-232 serial port (300 to 115,200 baud) RS-232 with 5V serial port (300 to 115,200 baud) and with 5V output RS-485 serial port (300 to 115,200 baud) USB OTG with USB 2.0 up to 12Mbit/s support USB stick, USB scanner, etc. Ethernet TCP/IP with 10/100 Mbps auto-negotiation Wi-Fi 4, 2.4 GHz / 5 GHz (supporting 802.11 a,b,g,n)
Protocols	ASCII commands for CTPZ (Clear, Tare, Print, Zero), SICS commands and Shared Data Server Access Continuous or Transfer with up to ten configurable print templates or remote scale protocols PSCP for pharma bioreactors Modbus TCP/Modbus RTU: Modbus protocols for weighing data and CTPZ command MQTT client protocols support Cloud connections, Open API protocol for external systems FTP/FTPs client protocols for files transfer, VNC server is also supported LDAP protocol for remote user access
Interface and Function Update Rates	Weight display: 20 Hz Internal discrete I/O: 50 Hz SICS continuous (SIR): up to 20 Hz Modbus response time: < 50 mS MT Continuous Output: up to 20 Hz
Approvals	Weights and Measures USA: NTEP Class II 100,000d; Class III/IIIL 10,000d Canada: Class II 100,000d; Class III 10,000d; Class IIIHD, 10,000d Europe: OIML R76 Class II approved divisions determined by platform; Class II 100,000e, Class III 10,000e and Class IIII 1,000e
Operating Environment	Application: Indoor use only Altitude: Up to 2,000 m Temperature range Class III: -10 to 40 °C / 14 to 104 °F Overvoltage category: II Pollution degree: 2 Humidity range: 10 to 95% relative humidity, non-condensing

Accessories

Compatible with BBA639 and BBD659 Series

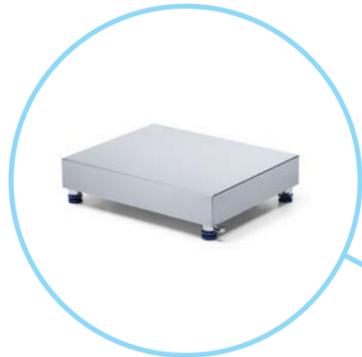
Article #	Designation	Description	Picture
30676281	Column open 330 mm / 13"	Fits for platform sizes. Fits for hazardous area.	
30676282	Column open 660 mm / 26"	Fits for all platform size. Fits for hazardous area.	
30676283	Column open 900 mm / 35.4"	Fits for all platform sizes larger than A-Size. Fits for hazardous area.	
30676284	Column closed 330 mm / 13"	Fits for platform sizes. Fits for hazardous area.	
30676285	Column closed 660 mm / 26"	Fits for all platform size. Fits for hazardous area.	
30676286	Column closed 900 mm / 35.4"	Fits for all platform sizes larger than A-Size. Fits for hazardous area.	
30934087	Front mount bracket for BBA639/BBD659	Fit for IND400 terminal front mount.	
22023696	Cable Extension (two M12 Plugs 6pin/6pin) 3 m	Load cell extension cables for the PBD659 platforms.	
30024759	Cable Extension (two M12 Plugs 6pin/6pin) 10 m	Load cell extension cables for the PBD659 platforms.	
22026963	ACC409	Adapter to convert SICSPro signal into IDNet.	
30674166	APR320 Ticket Printer	Print out as data record	
30722021	APR430 Label Printer	Print out as label	
30722022	APR530 Label Printer	Print out as label	
30452312	APR331 stainless steel Label Printer	Print out as label	
30253326	Roller track 400 x 500 mm / 15.7" x 19.7" stainless steel	Fits for 400x500mm platform. Roll to short side of platform.	
30253328	Roller track 500 x 650 mm / 19.7" x 25.6" stainless steel	Fits for 500x650mm platform. Roll to short side of platform.	
30253330	Roller track 600 x 800 mm / 23.6" x 31.5" stainless steel	Fits for 600x800mm platform. Roll to short side of platform.	
30253327	Roller track 400 x 500 mm / 15.7" x 19.7" stainless steel	Fits for 400x500mm platform. Roll to long side of platform.	
30253329	Roller track 500 x 650 mm / 19.7" x 25.6" stainless steel	Fits for 500x650mm platform. Roll to long side of platform.	
30253331	Roller track 600 x 800 mm / 23.6" x 31.5" stainless steel	Fits for 600x800mm platform. Roll to long side of platform.	
30640393	Roller track 400 x 500 mm / 15.7" x 19.7" stainless steel	Fits for hazardous area.	
30640394	Roller track 500 x 650 mm / 19.7" x 25.6" stainless steel	Fits for hazardous area.	
30640395	Roller track 600 x 800 mm / 23.6" x 31.5" stainless steel	Fits for hazardous area.	
72225939	Stainless steel cart BC	Fits for 500 x 650 mm platform.	
72225940	Stainless steel cart CC	Fits for 600 x 800 mm platform.	

Customize to Application

Complete Your Weighing Solution

Closed platter

The closed platter is the standard option available for use with the PBA639 and PBD659. Choose between AISI 304 or AISI 316 Stainless Steel.



Open platter

Always keep the hygienic frame in view with this open platter AISI 316 stainless steel design. Easily spot contaminants and wash the platform down without having to remove the platter.



Complete Your Weighing Solution



Closed column

Using a completely sealed column with your indicator ensures that contaminants have nowhere to hide and makes cleaning even easier.



Open column

If you prefer easy access to all parts of the scale, choose the open column design. With rounded edges and large openings, cleaning is highly efficient.



APR331 label printer

The stainless steel housing and optional rubber gasket that closes the paper opening facilitate fast, thorough and easy cleaning to save time and reduce contamination risk in hygienic environments.

Additional Documentation

For additional technical specifications, legal-for-trade information, or installation and operation instructions, please refer to the detailed product documentation linked below.

BBA639 and BBD659 – Industrial Bench Scale



www.mt.com/BBA639-BBD659-downloads



PBA639 and PBD659 – Analog and Digital Weighing Platform



www.mt.com/PBA639-PBD659-downloads



IND400 Weighing Indicator



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Explore Our Service Solutions

Tailored to Fit Your Equipment Needs

METTLER TOLEDO Service delivers resources to enhance your efficiency, performance, and productivity by providing service packages that fit your operational needs, maximize your equipment lifetime, and protect your investment.

► www.mt.com/IND-Service



Optimize Performance with Professional Installation

Setup your equipment to operate efficiently with our installation and qualification services, complete with professional documentation and user training.



Calibrate for Quality and Compliance

Achieve measurement accuracy and receive documentation with our tiered calibration offering tailored to your requirements, such as compliance with OIML R76 and NTEP HB44.



Maintain Accuracy with a Quality Assurance Plan

Receive professional guidance (GWP® Verification™), including a routine testing plan that specifies four key factors to maximize your efficiency and ensure quality:

- Tests to perform
- Testing frequency
- Weights to use
- Tolerances to apply



Protect Your Investment from the Start

With our Extended Care service package, receive 24 months of full coverage following installation, including two preventive maintenance visits and cost coverage for labor and replacement parts.



Maximize Equipment Reliability and Longevity

Optimize your equipment's performance with our preventive maintenance plans that include inspections, functional testing, and proactive parts replacement.



How-To Videos: Enhance Your Weighing Experience

Discover our range of how-to videos at

www.mt.com/ind-youtube

for tips and techniques to best utilize your equipment.

www.mt.com/BBA4-BBD6

For more information

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Subject to technical changes

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