

Excellence Plus XP

The new precision balance
from METTLER TOLEDO

Full Compliance
High Productivity
Amazing Solutions

That's the weigh!



The Power of Color

METTLER TOLEDO

Your wishes? Our solution.

As the world's leading manufacturer of laboratory balances, our goal is to make weighing easier with innovative solutions that focus on your needs. Because, in our opinion, technical progress is only true innovation if it gives our customers measurable benefits.



Many applications

Our balances are used in numerous industries and environments, including pharmaceuticals, food, cosmetics, research, quality assurance and production, for a multitude of applications. So, to ensure we address this diversity of needs, we talked to customers about their requirements during the development of our innovative new balance range.



One balance

With the Excellence Plus XP, the latest generation of precision balances at Professional Level, METTLER TOLEDO again sets the standard for weighing in laboratory and industrial environments. Created for a broad spectrum of applications in a variety of industries, the XP provides full compliance in regulated environments, utmost productivity and unique flexibility when tailored solutions are required.



Regulated area

“In our pharmaceutical company, we work according to GLP/GMP, USP and internal work instructions. Authorities and customers regularly perform audits to verify conformity with these quality guidelines. Balances are some of our most important measuring instruments and have to comply 100% with these regulations and support their daily enforcement. The **security** of our measurement values is vital for our success.”

Julie Evans, USA



Production environment

“We print textiles with different patterns which are based on specific mixtures of dye. Because of our high daily production rate, the **speed** of our balances is very important. Also, to ensure consistent printing quality, it's essential to mix the dyes as **precisely** as possible.”

Céline Dubois, France



Research and development

“When manufacturing toxic solutions, I often weigh in the laminar-flow bench wearing gloves. So for me, it's crucial for the **work process to be as simple as possible**. Ideally, the balance should have hands-free operation and the printer could be placed outside the laminar-flow bench. Then I would have both hands free to work safely and the printed records would be guaranteed free from contamination.”

Ralf Sommer, Germany

The power of color

- Touchscreen display for intuitive, easy operation
- Clear user guidance with color for maximum security
- 8 individually configurable user profiles in 7 languages

Easy operation

Balances are among the most commonly used instruments in the lab. So it's vital that they are easy to operate. With the Excellence Plus XP precision balance METTLER TOLEDO brings color into the world of weighing – for optimum user-friendliness and security.

Work smarter

SmartScreen, the unique color display with touchscreen operation, leads the way. Whether weighing parameters are being changed, samples identified or the date entered, the large, touch-sensitive display means operation of the Excellence Plus XP is easy and efficient.

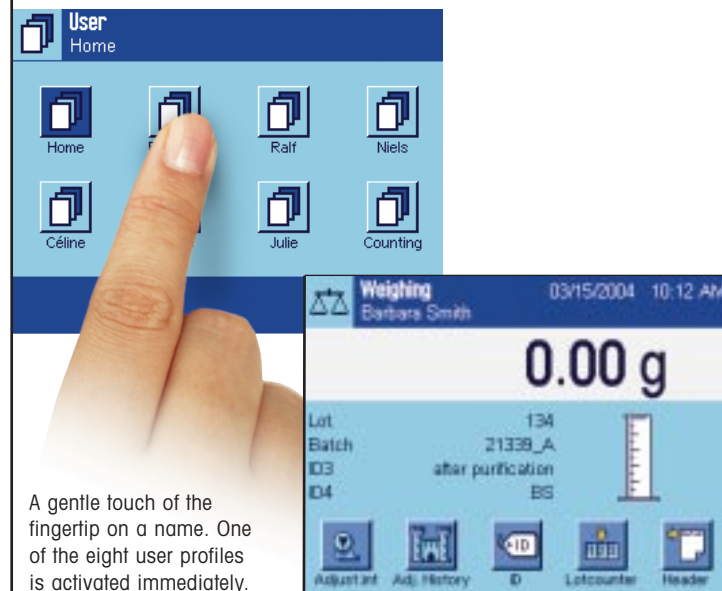
Clear user guidance

Brilliant colors and high-resolution graphics guide the user through applications and warn if tolerance limits are violated. This prevents mistakes and guarantees safe routine operation of the XP.

Individual configuration

Up to eight users can save their individual settings, including color profile, in their own language and activate them effortlessly at the touch of a fingertip. Using your "own" balance guarantees settings are always correct – for more reliable results.

Touchscreen operation



A gentle touch of the fingertip on a name. One of the eight user profiles is activated immediately.

And now start working. Everything is easy, clear, and functions reliably.



SmartScreen

brings color into the lab – for more security thanks to clear user guidance.

Color-coded user profiles

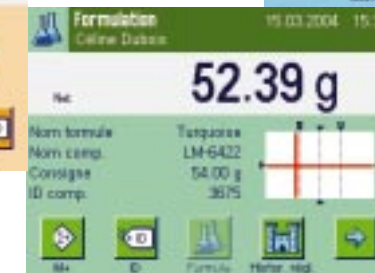
in the user's language give him the certainty of working with "his" balance – and always with the correct settings.



Julie Evans



Ralf Sommer



Céline Dubois



Full compliance

“My XP balance gives me security. The QM tools are very practical and help me to implement our quality guidelines in my daily work.”

Julie Evans, USA

- proFACT and BalanceCheck for utmost measurement certainty
- User management and password protection for 8 users
- Change/adjustment history makes settings and adjustments traceable
- Reports compliant with GxP and other quality guidelines

Regulated environments

Is strict adherence to quality guidelines part of your daily work? Then your balances must offer 100% compliance – with no ifs or buts. The Excellence Plus XP gives you outstanding support. With innovative QM tools which warn, remind and protect, the XP helps you achieve full regulatory compliance.

Precision redefined

Highly precise, repeatable results are the hallmark of the XP thanks to fully automatic temperature- and/or time-controlled internal adjustment with proFACT. And regular checking of the measurement certainty is assured with BalanceCheck – at the times you define and with the external weights you specify.

Programmed security

The personal settings of up to eight users can be stored in the menu and protected with a password. The XP opens up a new dimension in security: thanks to User Management the administrator can define individual access rights for each user and protect them against unwanted modification by means of a password – for programmed security at all levels.

Tailor-made documentation

Adjustments and changes to protected settings are registered in the change/adjustment history. Thanks to four alphanumeric IDs, full traceability of samples is possible and all measurement results can be documented to conform to GxP.

ChangeHistory



Who changed which settings when? This information is detailed in the ChangeHistory – fully traceable of course.

Data management

If data management according to FDA 21 CFR Part 11 interests you, our LabX balance PC-based software offers the comprehensive solution for stand alone or networked balances. For more information visit www.mt.com/LabX

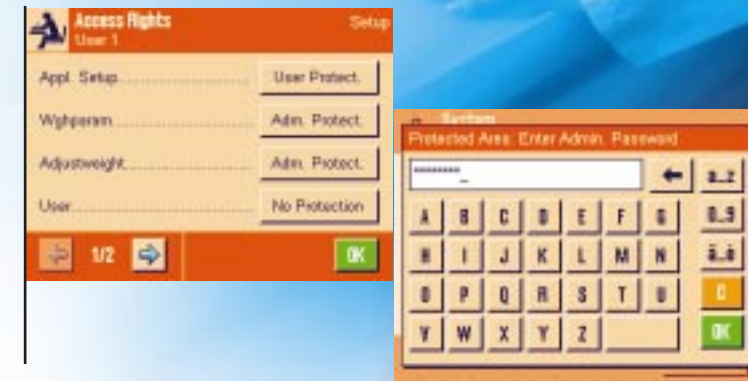


Gapless documentation
With the XP, GxP-compliant reports can be configured easily.



User management

Eight users, individual settings, specific applications, different authorizations – no problem. The administrator manages each user's access rights – for total security.

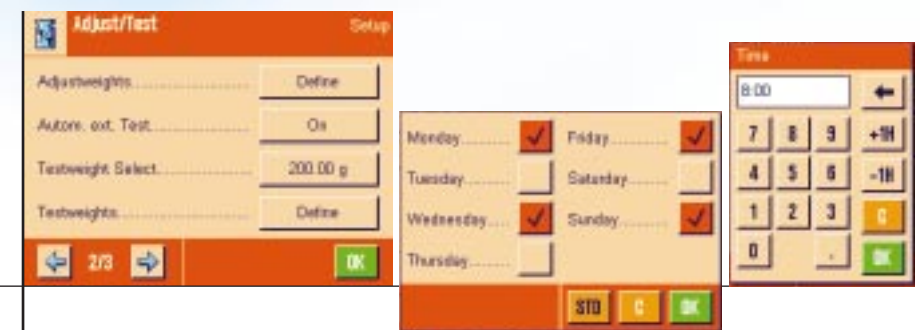


Password protection

No-one escapes the XP's alphanumeric password protection. Users' individual settings can be protected against unwanted changes.

BalanceCheck

If desired, BalanceCheck automatically prompts you to validate the measuring accuracy with an external weight – every time the SOP demands it.





Productivity pays

“It’s marvelous how fast I can work with my XP and thanks to MinWeigh never make a mistake when mixing the dyes. That cuts out waste and reduces downtime on our printing machines, so we save money.”

Céline Dubois, France

- Cutting-edge weighing technology for fast, precise results
- Repeatable production processes with MinWeigh
- Rugged construction for use in harsh environments equivalent to IP54
- Easy cleaning thanks to straightforward design

Weighing time is money

Whether you print textiles, develop fragrances or manufacture screws, productivity is key for your company. This also applies to your work on the balance, which must be fast and faultless. The Excellence Plus XP provides outstanding measurement performance and process security – for utmost productivity in weighing.

Outstanding measurement performance

Cutting-edge weighing technology makes it possible: the weighing results of the XP stabilize very quickly. Thanks to intelligent software, environmental influences are minimised effectively, making the XP extremely stable even in harsh environments. proFACT adjusts the balance automatically for extremely

precise and repeatable results.

In short: with the XP you get your work done much faster – and more accurately.

Process security


If repeatability of your processes is crucial – for example when mixing dyes – the accuracy of small sample quantities is essential. If the defined minimum weight is not reached, the XP sends a MinWeigh-warning to the display – thereby preventing process deviations and their associated costs.

Ruggedness to rely on

No matter where your balance is used, the rugged construction of the XP can be relied on. It also has uncompromising protection against dust and water, which in use is equivalent to IP54.



Process security thanks to MinWeigh

The XP warns if the minimum weight is not reached. With dimmed figures and the  symbol in the display.

Designed to be cleaned

Thanks to its straightforward design with large, flat surfaces and removable terminal, the XP precision balance is fast and easy to clean.



Removable terminal, large and flat surfaces: the XP is designed for fast and easy cleaning.

Sealed interfaces, screw-in power cable. Keep water and dust out – protection equivalent to IP54.



Perfection in detail



Once level, always level – thanks to the stabilizing safety feet which are easy to lower and lock.

Always readable

20 mm high, brightly backlit figures – selectable at a touch.



Clear user guidance

prevents mistakes. Fast and certain dye mixing thanks to clear guidance in red and green.



Leading-edge technology

Fast, precise and rugged: the measuring performance of the MonoBloc^{HighSpeed} weighing cell is peak. The overload protection ensures that excessively heavy loads do not damage the XP.





One balance, many solutions

“My XP is just great! The hands-free operation makes weighing toxic substances easier and safer. And I’ve placed my wireless printer outside the laminar-flow bench so my printouts don’t get contaminated.”

Ralf Sommer, Germany

- Infrared sensors for hands-free operation
- Freely placeable, adjustable-slope operating terminal
- Separate weighing platforms for system integration
- Models with unique combination of high capacity and fine resolution

Tailored solutions

Just as there are different users with individual needs, the demands placed on balances are different too. So it’s good if your balance is sufficiently flexible. A variety of accessories, diversity of interfaces and practical software applications make the Excellence Plus XP the first choice when tailored solutions are called for.

Remote operation included

Wouldn’t it be handy if you could operate the balance hands-free? Thanks to SmartSens, the two infrared sensors built into the XP’s operating terminal, this is possible.

A wave of the hand is sufficient to tare the balance or send your results to the printer – depending on which of the many functions you have assigned to the individually programmable sensors.

Visible ergonomics

The freely positionable ErgoSens infrared sensors, available as accessories, follow your instructions exactly and allow individual settings for up to eight users. You save two work steps per weighing, and always have both hands free, which makes handling toxic or sticky substances easier and safer.

System integration

The weighing platform of the XP precision balance is also available separately. Compact, robust and with outstanding weighing performance, it is ideal for system integration.



Short of space?

The operating terminal can be placed next to the balance or above it.

Modularity to fit

The XP’s operating terminal and weighing platform can be separated. Stands and mountings allow the terminal to be mounted above the balance or on the wall – depending on your requirements.



Just practical: the stand for the XP which is available as accessory.

ErgoSens

An open eye for your instructions: ErgoSens. Freely positionable, individually configurable – for hands-free operation of the XP from a distance.

Status display

The green illuminated symbol indicates that SmartSens is activated and set to “Print”. The yellow flashing dot shows that the command is being executed.



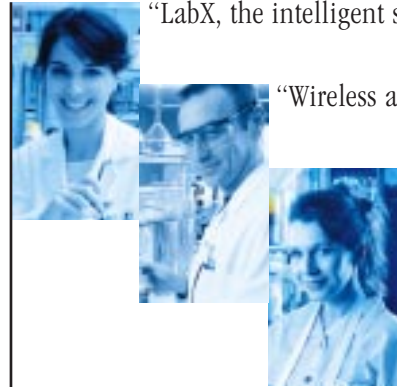
Bluetooth printer

Thanks to wireless connection to the balance, the printer can be placed outside the laminar-flow bench – and printouts don’t get contaminated.

SmartSens

Brief movement of a hand over one of the sensors is all it needs: the programmed command is executed immediately. Without touching. Different functions can be individually programmed right and left for up to 8 users – smart work!

Connection guaranteed



“LabX, the intelligent software solution for 21 CFR Part 11.” **Julie Evans**

“Wireless at last – brilliant!” **Ralf Sommer**

“It’s ideal how it connects to our network.”
Céline Dubois

- RS232C interface built in as standard
- Optional second interface (6 types available)
- Bluetooth for wireless communication
- Ethernet for networked solutions
- PS/2 for connection of commercial keyboards and barcode readers

The data flow grows

Quality guidelines demand gapless recording of sample and process data. Ideally, reading devices from different manufacturers need to be linked seamlessly, the balance easily integrated into networks and existing PC-based software solutions supported.

Total compatibility

The Excellence Plus XP was developed with the goal of effortless integration into a networked world. Whether trendsetting wireless communications based on the Bluetooth standard or network solutions via Ethernet: the flexible interface concept guarantees connection and compatibility, forwards and backwards.

Flexible interfaces

All balances are equipped as standard with a sealed RS232C interface, two auxiliary connections for various switches and a slot for a second, optional interface. Six types of interface are available.

Optional interfaces

Ethernet	Supports dynamic IP addresses
BTS	Bluetooth standard option (point-point connection)
RS232C	Allows connection of printer (RS-P42), PC and others
PS/2	Enables connection of commercial keyboards and barcode readers
LC	LocalCan interface from METTLER TOLEDO. Allows simultaneous connection of up to five peripheral devices.
MM	MiniMETTLER interface

USB is supported with a normal commercial converter.



Ethernet

Fully supported, fully integrated.

XP precision balances also speak the language of the Ethernet – including dynamic IP addresses. Software solutions like LabX balance and Freeweigh.Net support the XP without restriction.

Bluetooth

Possible at last: wireless connection between the balance and printer as far as 10 m apart. Place the printer just where you want it – with no cable to worry about.



Plug and weigh!

Commercial keyboards and barcode readers – wireless ones too – just plug in and start weighing. The flexible interface concept of the XP makes it possible.



Choice of second interface

Bluetooth, Ethernet or USB: the XP guarantees to connect. Choose one of six possible auxiliary interfaces, plug it in – and that’s it.

You will find further information in the Excellence Plus XP Solution Guide at www.mt.com/XP

Outstanding technology for precise results

Standard equipment

- Backlit color graphics display with touchscreen operation
- 2 infrared sensors for hands-free operation of the balance, with status display
- proFACT fully automatic temperature- and/or time-controlled internal adjustment
- Overload protection
- Weighing pan made from stainless steel, with draft ring or draft shield depending on resolution
- Fold-out stabilizing feet for all 10 mg and 0.01 g models
- RS232C interface and two auxiliary connections built in. Slot for second freely selectable interface (6 options)
- Protective cover for terminal and weighing platform
- Feedthrough for below-the-balance weighing

- Power supply with AC/DC adapter, primary 100–240V, –15%/+10%, 50/60Hz, 0.8A, secondary 12VDC ±5%, 2.25A (with electronic overload protection)
- Country-specific power cable
- Production certificate

All models can/have

- Download software via the Internet
- Display different weighing units
- Be tared over the entire weighing range
- Be adapted to the environment
- Be adapted to the weighing type
- Statistics application with ± and % display
- Piece-counting application with reference optimization
- Formula-weighing application with security check
- Factor calculation
- 8 individually configurable user profiles
- User management and password protection for 8 users
- Change/adjustment history
- Prompting function for calibration with external weight
- MinWeigh, determined according to different methods
- Alphanumeric identification
- 4 IDs per sample
- Documentation to GxP
- Communicate in 7 languages: e, g, f, i, sp, jap, russ
- All models available in approved versions (4002S starting Oct 1, 2004)



Technical data (threshold values)	XP203S	XP603S	XP603SDR	XP1203S
Stand alone weighing platform	X203S	X603S	X603SDR	X1203S
Maximum capacity	210 g	610 g	610 g	1210 g
Maximum capacity of fine range	–	–	120 g	–
Readability	1 mg	1 mg	10 mg	1 mg
Readability in fine range	–	–	1 mg	–
Repeatability (sd) at maximum capacity	0.9 mg	0.9 mg	4 mg	0.8 mg
Repeatability (sd) at 1/10 max. capacity	–	–	1 mg	–
Linearity	2 mg	2 mg	10 mg	2 mg
Corner load at 1/3 max. capacity ¹⁾	3 mg	3 mg	10 mg	3 mg
Sensitivity drift	0.0025%	0.00075%	0.0015%	0.0005%
Temperature drift of sensitivity ²⁾	0.0005%/°C	0.0002%/°C	0.0002%/°C	0.0002%/°C
Stability of sensitivity ³⁾	0.0025%/a	0.001%/a	0.001%/a	0.001%/a
Typical stabilization time	1.2 s	1.2 s	1.2 s	1.5 s
Update rate of the interface	23 /s	23 /s	23 /s	23 /s

Typical data for calculating the measurement uncertainty

Typical repeatability sd	0.5 mg+8x10 ⁻⁷ ·R _{gr}	0.5 mg+2.5x10 ⁻⁷ ·R _{gr}	4 mg+1.5x10 ⁻⁶ ·R _{gr}	0.4 mg+1.5x10 ⁻⁷ ·R _{gr}
Typical differential non-linearity sd	√(5x10 ⁻¹⁰ g·R _{nt})	√(2x10 ⁻¹⁰ g·R _{nt})	√(2x10 ⁻¹⁰ g·R _{nt})	√(10 ⁻¹⁰ g·R _{nt})
Typical differential corner load sd	2x10 ⁻⁶ ·R _{nt}	2x10 ⁻⁶ ·R _{nt}	2x10 ⁻⁶ ·R _{nt}	10 ⁻⁶ ·R _{nt}
Typical sensitivity drift sd	8x10 ⁻⁶ ·R _{nt}	2x10 ⁻⁶ ·R _{nt}	5x10 ⁻⁶ ·R _{nt}	10 ⁻⁶ ·R _{nt}
Typical minimum weight ¹⁾ (1%, 3 sd)	1.5 g+2.4x10 ⁻³ ·R _{gr}	1.5 g+7.5x10 ⁻⁴ ·R _{gr}	12 g+4.5x10 ⁻³ ·R _{gr}	1.2 g+5x10 ⁻⁴ ·R _{gr}

R_{gr} = gross weight, R_{nt} = net weight, ¹⁾ Based on repeatability measurements



Technical data (threshold values)	XP1202S	XP4002S	XP6002S	XP6002SDR	XP8002S	XP10002S	XP10002SDR
Stand alone weighing platform	X1202S	X4002S	X6002S	X6002SDR	X8002S	X10002S	X10002SDR
Maximum capacity	1210 g	4100 g	6100 g	6100 g	8100 g	10100 g	10100 g
Maximum capacity of fine range	–	–	–	1200 g	–	–	2000 g
Readability	10 mg	10 mg	10 mg	100 mg	10 mg	10 mg	100 mg
Readability in fine range	–	–	–	10 mg	–	–	10 mg
Repeatability (sd) at maximum capacity	8 mg	8 mg	8 mg	40 mg	8 mg	8 mg	40 mg
Repeatability (sd) at 1/10 max. capacity	–	–	–	8 mg	–	–	8 mg
Linearity	20 mg	20 mg	20 mg	100 mg	20 mg	20 mg	50 mg
Corner load at 1/3 max. capacity ¹⁾	20 mg	30 mg	30 mg	100 mg	40 mg	40 mg	100 mg
Sensitivity drift	0.005%	0.0015%	0.001%	0.0025%	0.00075%	0.0005%	0.001%
Temperature drift of sensitivity ²⁾	0.0003%/°C	0.0003%/°C	0.0003%/°C	0.0003%/°C	0.00025%/°C	0.00025%/°C	0.00025%/°C
Stability of sensitivity ³⁾	0.0025%/a	0.0015%/a	0.0015%/a	0.0015%/a	0.0015%/a	0.0015%/a	0.0015%/a
Typical stabilization time	1.2 s	1.2 s	1.2 s	1.2 s	1.8 s	1.8 s	1.8 s
Update rate of the interface	23 /s	23 /s	23 /s	23 /s	23 /s	23 /s	23 /s

Typical data for calculating the measurement uncertainty

Typical repeatability sd	4 mg+1.5x10 ⁻⁶ ·R _{gr}	4 mg+5x10 ⁻⁷ ·R _{gr}	4 mg+3x10 ⁻⁷ ·R _{gr}	40 mg+1.5x10 ⁻⁶ ·R _{gr}	4 mg+2.5x10 ⁻⁷ ·R _{gr}	4 mg+2x10 ⁻⁷ ·R _{gr}	40 mg+10 ⁻⁶ ·R _{gr}
Typical differential non-linearity sd	√(10 ⁻⁸ g·R _{nt})	√(3x10 ⁻⁸ g·R _{nt})	√(2x10 ⁻⁸ g·R _{nt})	√(2x10 ⁻⁸ g·R _{nt})	√(1.5x10 ⁻⁸ g·R _{nt})	√(10 ⁻⁸ g·R _{nt})	√(10 ⁻⁸ g·R _{nt})
Typical differential corner load sd	3x10 ⁻⁶ ·R _{nt}	2x10 ⁻⁶ ·R _{nt}	2x10 ⁻⁶ ·R _{nt}	2x10 ⁻⁶ ·R _{nt}	10 ⁻⁶ ·R _{nt}	10 ⁻⁶ ·R _{nt}	10 ⁻⁶ ·R _{nt}
Typical sensitivity drift sd	10 ⁻⁵ ·R _{nt}	4x10 ⁻⁶ ·R _{nt}	2.5x10 ⁻⁶ ·R _{nt}	2.5x10 ⁻⁶ ·R _{nt}	2x10 ⁻⁶ ·R _{nt}	1.5x10 ⁻⁶ ·R _{nt}	1.5x10 ⁻⁶ ·R _{nt}
Typical minimum weight ¹⁾ (1%, 3 sd)	12 g+4.5x10 ⁻³ ·R _{gr}	12 g+1.5x10 ⁻³ ·R _{gr}	12 g+9x10 ⁻⁴ ·R _{gr}	120 g+4.5x10 ⁻³ ·R _{gr}	12 g+7.5x10 ⁻⁴ ·R _{gr}	12 g+6x10 ⁻⁴ ·R _{gr}	120 g+3x10 ⁻³ ·R _{gr}

R_{gr} = gross weight, R_{nt} = net weight, ¹⁾ Based on repeatability measurements



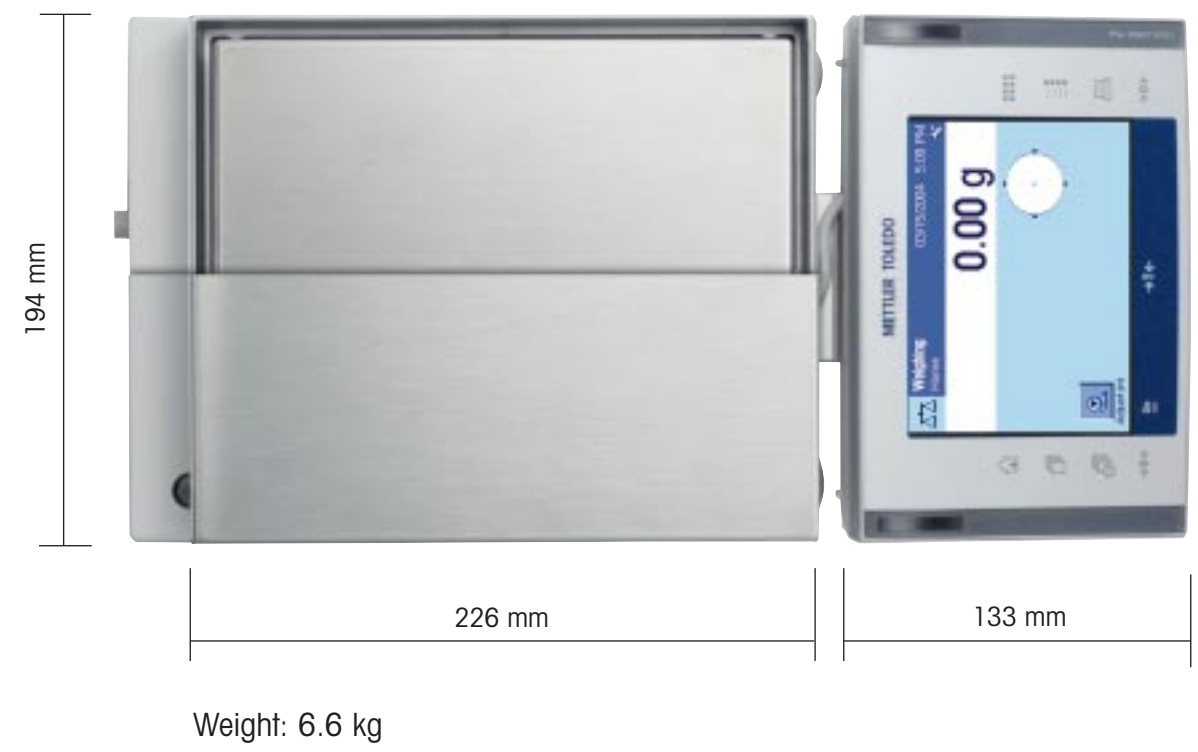
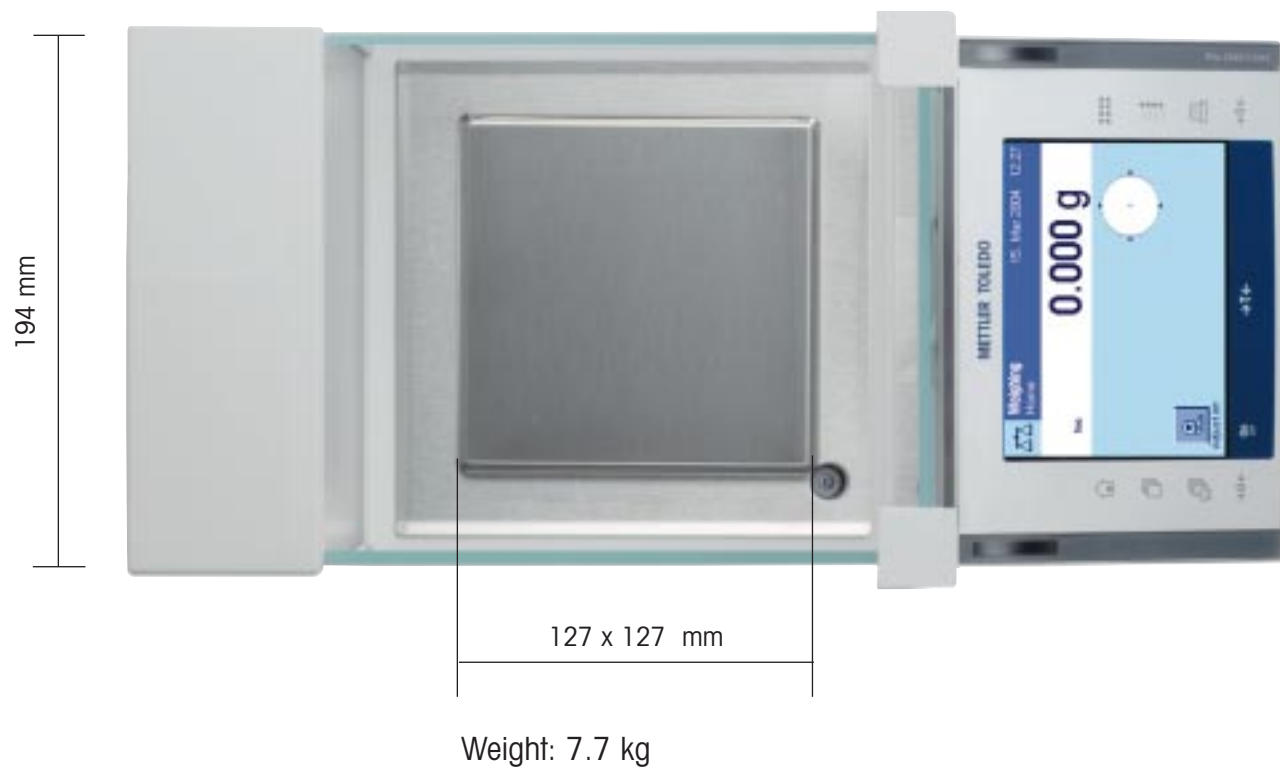
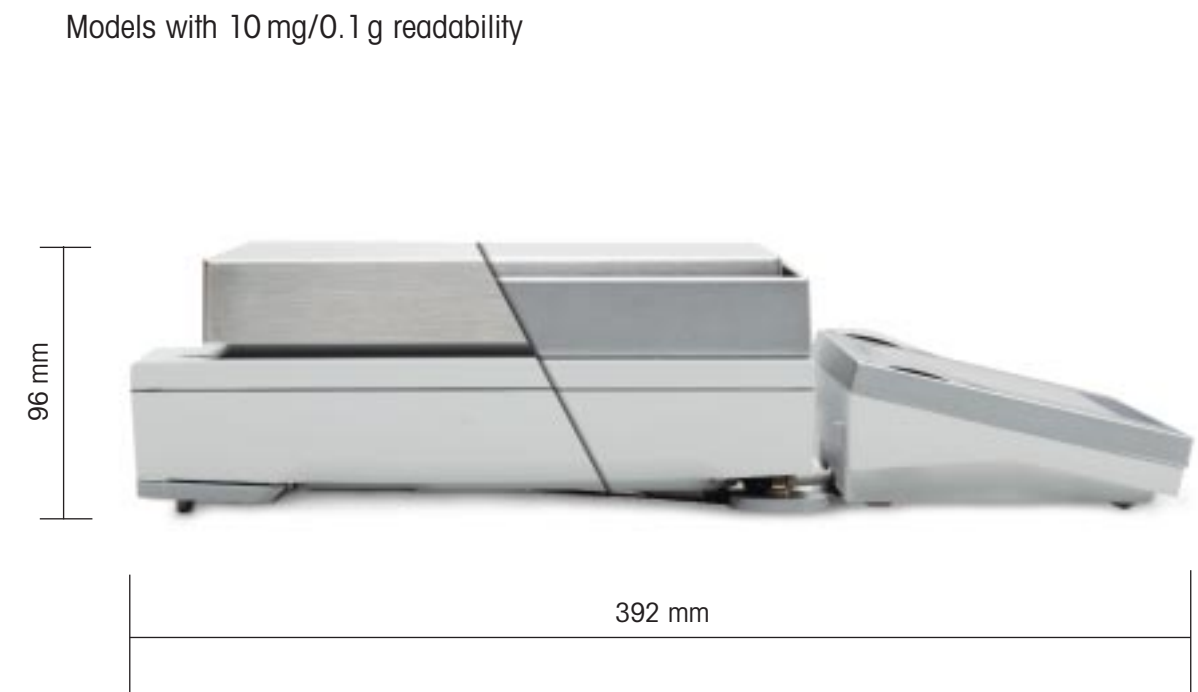
Technical data (threshold values)	XP4001S	XP6001S	XP8001S	XP10001S
Stand alone weighing platform	X4001S	X6001S	X8001S	X10001S
Maximum capacity	4100 g	6100 g	8100 g	10100 g
Maximum capacity of fine range	–	–	–	–
Readability	100 mg	100 mg	100 mg	100 mg
Readability in fine range	–	–	–	–
Repeatability (sd) at maximum capacity	80 mg	80 mg	80 mg	80 mg
Repeatability (sd) at 1/10 max. capacity	–	–	–	–
Linearity	100 mg	100 mg	100 mg	100 mg
Corner load at 1/3 max. capacity ¹⁾	200 mg	200 mg	200 mg	200 mg
Sensitivity drift	0.0075%	0.0075%	0.0075%	0.005%
Temperature drift of sensitivity ²⁾	0.001%/°C	0.001%/°C	0.0015%/°C	0.0015%/°C
Stability of sensitivity ³⁾	0.0015%/a	0.005%/a	0.005%/a	0.005%/a
Typical stabilization time	0.8 s	0.8 s	1.0 s	1.0 s
Update rate of the interface	23 /s	23 /s	23 /s	23 /s

Typical data for calculating the measurement uncertainty

Typical repeatability sd	40 mg+5x10 ⁻⁶ ·R _{gr}	40 mg+3x10 ⁻⁶ ·R _{gr}	40 mg+2.5x10 ⁻⁶ ·R _{gr}	40 mg+2x10 ⁻⁶ ·R _{gr}
Typical differential non-linearity sd	√(7x10 ⁻⁸ g·R _{nt})	√(5x10 ⁻⁸ g·R _{nt})	√(3.5x10 ⁻⁸ g·R _{nt})	√(3x10 ⁻⁸ g·R _{nt})
Typical differential corner load sd	8x10 ⁻⁶ ·R _{nt}	8x10 ⁻⁶ ·R _{nt}	3x10 ⁻⁶ ·R _{nt}	3x10 ⁻⁶ ·R _{nt}
Typical sensitivity drift sd	2x10 ⁻⁵ ·R _{nt}	2x10 ⁻⁵ ·R _{nt}	2x10 ⁻⁵ ·R _{nt}	1.5x10 ⁻⁵ ·R _{nt}
Typical minimum weight ¹⁾ (1%, 3 sd)	120 g+1.5x10 ⁻² ·R _{gr}	120 g+9x10 ⁻³ ·R _{gr}	120 g+7.5x10 ⁻³ ·R _{gr}	120 g+6x10 ⁻³ ·R _{gr}

R_{gr} = gross weight, R_{nt} = net weight, ¹⁾ Based on repeatability measurements

- 1) To OIML R76
- 2) In temperature range 10...30 °C
- 3) Stability of sensitivity when first put into operation with proFACT self-adjustment switched on



Accessories

	Article	Part Number	
Sensors	ErgoSens, optical sensor for hands-free operation of the balance, with status bar, freely positionable (0.6 m cable)	11132601	
Weighing pans	Magnetic Shield Protection weighing pan for 0.1 g models 190 x 223 mm	11132625	
	Magnetic Shield Protection weighing pan for 10 mg models 170 x 205 mm	11132626	
	Weighing pan 190 x 223 mm, incl. pan support	11132655	
	Weighing pan 170 x 205 mm, incl. pan support and draught ring	11132660	
Draft shield	MagiCube draft shield made of plastic for 1 mg models (food industry)	11131652*)	
Printer	BT-P42 printer with wireless connection to balance via Bluetooth wireless network	11132540	
	RS-P42 printer with RS232C connecting cable to balance	229265	
Optional interfaces	BTS option: second interface Bluetooth, point-to-point connection for a Bluetooth printer (BT-P42) or a Bluetooth auxiliary display or a connection to a PC	11132535	
	Ethernet option: second interface Ethernet for connection to an Ethernet network	11132515	
	PS/2 option: second interface for connection of commercial keyboards and barcode readers	11132520	
	RS232C option: second interface for connection of a printer (RS-P42), computer or titrator	11132500	
	LocalCan option: second interface for connection of up to five LC (LocalCan) based instruments	11132505	
	MiniMettler option: second interface MiniMettler, for connection to older systems	11132510*)	
eLink network interface	eLink IP65 EB01, Ethernet connection with IP65 protection	11120003	
Protective covers	Protective cover for XP terminal	11132570	
	Protective cover for XP weighing platform for 10 mg/0.1 mg models	11133034	
Stands and wall mountings	Terminal stand for placement of the XP terminal 30 cm above the weighing pan	11132636	
	Terminal wall mounting	11132665	
IP54 AC adapter protection	IP54 AC adapter protection	11132550*)	
Barcode scanner	RS232C barcode scanner	21900879	
	AC adapter for barcode scanner 230V EUR	21900882	
	AC adapter for barcode scanner 115V USA	21900883	
Filling-process control	LV11 small-items transporter for automatic loading of the balance with small items	21900608	
Antitheft device	Steel cord	11600361	
Interface cable	RS99-RS9, connecting cable to computer or RS-P42 printer (DB9m/DB9f, length 1 m)	11101051	
	RS9-RS25, connecting cable to computer (IBM-XT compatible) (DB9m/DB9f, length 1 m)	11101052	
	RS9-RS9, connecting cable to computer or RS-P42 printer, suitable for industrial balances (DB9m/DB9m, length 1 m)	21250066	
	LC-RS9, connecting cable to PC such as IBM-AT and compatibles (DB9f, length 2 m)	229065	
	LC-RS25, connecting cable to PC such as IBM-XT and compatibles (DB25, f/m, length 2 m)	229050	
	LC-RS open, connecting cable to MTCOMBus system (length 4 m)	21900640	
	LC-CL, connecting cable to instrument with METTLER TOLEDO CL interface (length 2 m)	229130	
	LC-LC03, extension cable for LocalCAN 0.3 m	239270	
	LC-LC2, extension cable for LocalCAN 2 m	229115	
	LC-LC5, extension cable for LocalCAN 5 m	229116	
	LC-LCT, T-junction for LocalCAN	229118	
	MM-RS9, connecting cable from MiniMettler option to RS232 instruments	210493	
	Terminal cable	Terminal extension cable, 4 m	11600517
	LC switchbox	For connection of up to three balances simultaneously to one LC-P45 printer	229220
LC-I/O box	Relay interface for control of up to 8 external instruments from the balance	21202217	
Foot switch	LC-FS foot switch with settable function for balances with LocalCan universal interface	229060	
Auxiliary displays	BT-BLD (Bluetooth) auxiliary display, for benchtop mounting. Wireless connection from balance to display by means of Bluetooth wireless network with backlit LCD display.	11132555	
	Auxiliary RS/LC-BLDS for mounting on benchtop or balance. Connection by means of RS232C cable with backlit LCD display.	11132630	
	LC-AD auxiliary display on benchtop stand with fluorescent display	229140	
	LC-ADS auxiliary display on high benchtop stand with fluorescent display	229150	
	RS/LC-BLD auxiliary display on benchtop stand with backlit LC display	224200	
Transport case	Transport case for XP precision balance 10 mg/0.1 g models with space for printer	11132595	

*) Articles available from September 2004

The Q-circle (qualification/validation) simply illustrates how the regulations are applied in practice to a balance and how we can support you with our services in all areas.

Tailored service

METTLER TOLEDO offers the service you need to protect your balances, no matter whether they are used in regulated areas or not.

Systematic control of inspection, test and measuring equipment is more important than ever before. Not only as a crucial component of seamless quality assurance but also as an additional instrument for permanently reducing costs. It also avoids complaints by inspectors and auditors.



With **IPac** (Initial Qualification Package) you make sure that your balance is optimally configured to your needs right from the start. Qualification of your balance ensures compliance, traceability and security of your measurement results.

Benefit from the worldwide know-how and experience of METTLER TOLEDO. Combine services from our range of offerings to provide an integral solution that suits your needs. Service which pays for itself quickly.

Service Packages

Simply select the appropriate service package according to the demands placed on the balance. You can add further services to ensure the package matches your changing requirements.

Service specialists

With sales and service companies in more than 100 countries, METTLER TOLEDO ensures you are cared for by highly trained specialists.

Service know-how

Knowledge and practical experience is exchanged within our global service network – for your benefit, too.



Design Qualification (DQ)

Define the requirements for a product according to the specification, regulations, and compliances.

Installation Qualification (IQ)

Correct and documented installation at the right location.

Operational Qualification (OQ)

Check and confirm the required performance data.

Performance Qualification (PQ)

Check that in normal operation the instrument constantly performs according to specification.

Maintenance Qualification (MQ)

Periodic maintenance.

Suitable for all industries:

- Companies which comply with GMP, GLP, ISO
- FDA regulated areas
- Pharmaceutical industry
- Chemical industry (suppliers to the pharma industry)
- Biotechnology
- Food industry
- Electrical, metal, and automobile industries

Mettler-Toledo GmbH
Laboratory & Weighing Technologies
CH-8606 Greifensee, Switzerland
Phone +41-1-944 22 11, Fax +41-1-944 30 60
Internet: <http://www.mt.com>

AT Mettler-Toledo GmbH., A-1100 Wien
Tel. (01) 604 19 80, Fax (01) 604 28 80

AU Mettler-Toledo Ltd., Port Melbourne, Victoria 3207
Tel. (03) 9644 57 00, Fax (03) 9645 39 35

BE N.V. Mettler-Toledo s.a., B-1932 Zaventem
Tel. (02) 334 02 11, Fax (02) 334 03 34

CA Mettler-Toledo Inc., Ontario, Canada
Tel (800) 638-8537, Fax (905) 681-8036

CH Mettler-Toledo (Schweiz) AG, CH-8606 Greifensee
Tel. (01) 944 45 45, Fax (01) 944 45 10

CN Mettler-Toledo (Shanghai) Ltd., Shanghai 200233
Tel. (21) 6485 04 35, Fax (21) 6485 33 51

CZ Mettler-Toledo, spol. s.r.o., CZ-100 00 Praha 10
Tel. (0) 272 123 150, Fax (0) 272 123 170

DE Mettler-Toledo GmbH, D-35353 Giessen
Tel. (0641) 50 70, Fax (0641) 507 128

DK Mettler-Toledo A/S, DK-2600 Glostrup
Tel. (43) 270 800, Fax (43) 270 828

ES Mettler-Toledo S.A.E., E-08908 Barcelona
Tel. (93) 223 76 00, Fax (93) 223 76 01

FR Mettler-Toledo s.a., F-78222 Viroflay
Tel. (0) 130 97 17 17, Fax (0) 1 30 97 16 16

HK Mettler-Toledo (HK) Ltd., Kowloon
Tel. (02) 744 12 21, Fax (02) 744 68 78

HR Mettler-Toledo, d.o.o., HR-10000 Zagreb
Tel. (01) 230 41 47, Fax (01) 41 233 63 17

HU Mettler-Toledo, KFT, H-1139 Budapest
Tel. (01) 288 40 40, Fax (01) 288 40 50

IN Mettler-Toledo India Pvt Ltd, Mumbai 400 072
Tel. (22) 2857 08 08, Fax (22) 2857 50 71

IT Mettler-Toledo S.p.A., I-20026 Novate Milanese
Tel. (02) 333 321, Fax (02) 356 29 73

JP Mettler-Toledo K.K., Tokyo 143-006
Tel. (3) 5762 0606, Fax (3) 5762 0756

KR Mettler-Toledo (Korea) Ltd., Seoul 137-891
Tel. (02) 3498-3500, Fax (02) 3498-3555

KZ Mettler-Toledo CA, 480009 Almaty
Tel. (07) 3272 980 834, Fax (07) 3272 980 835

MY Mettler-Toledo (M) Sdn. Bhd., 40150 Selangor
Tel. (03) 784 55 773, Fax (03) 784 58 773

MY Mettler-Toledo (S.E.A.), 40150 Selangor
Tel. (03) 7845 5373, Fax (03) 7845 3478

MX Mettler-Toledo S.A. de C.V., México C.P. 06430
Tel. (05) 547 57 00, Fax (05) 541 65 13

NL Mettler-Toledo B.V., NL-4004 JK Tiel
Tel. (0344) 638 363, Fax (0344) 638 390

PL Mettler-Toledo, Sp. z o.o., PL-02-929 Warszawa
Tel. (22) 651 92 32, Fax (22) 651 71 72

RU Mettler-Toledo C.I.S. AG, 10 1000 Moskau
Tel. (95) 921 92 11, Fax (95) 921 63 53

SE Mettler-Toledo AB, S-12008 Stockholm
Tel. (08) 702 50 00, Fax (08) 642 45 62

SG Mettler-Toledo (S) Pte. Ltd., Singapore 139959
Tel. 65-6890 0011, Fax 65-6890 0012/13

SK Mettler-Toledo, SK-82104 Bratislava
Tel. (02) 434 27 496, Fax (02) 433 37 190

SI Mettler-Toledo, d.o.o., SI-1236 Trzin
Tel. (01) 562 1801, Fax (01) 562 1789

TH Mettler-Toledo (Thailand) Ltd., Bangkok 10320
Tel. (02) 723 0300, Fax (02) 719 6479

TW Mettler-Toledo Pac Rim AG, Taipei 114
Tel. (02) 2657 8898, Fax (02) 2657 0776

UK Mettler-Toledo Ltd., Leicester, LE4 1AW
Tel. (0116) 235 70 70, Fax (0116) 236 63 99

US Mettler-Toledo, Inc., Columbus, OH 43240
Tel. (614) 438 4511, Fax (614) 438 4900

For all other countries:
Mettler-Toledo GmbH
PO Box VI-400, CH-8606 Greifensee
Tel. +41-1-944 22 11, Fax +41-1-944 31 70



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