

XSR Analytical Balances Simplified Weighing Processes



Efficient Weighing

The motorized draft shield doors can be configured to open and close according to your requirements to simplify and speed up repetitive weighing operations.



Intuitive User Interface

The color touchscreen user interface provides clear icons and easy access menus. Save your own customized weighing methods to make it quick to start daily tasks. Easy to use, even whilst wearing thick, protective gloves.



Easy Cleaning

The draft shield and weighing pan dismantle easily in seconds, and the tray underneath simply slides out. No tools are needed and all parts are dishwasher-safe for fast and efficient cleaning.



Ergonomic Design

The weighing chamber is designed to provide easy access from both the left and right hand sides. The low-positioned weighing pan allows you to rest your hand on the bench for more comfortable dosing.



XSR Analytical Balances Fast and Accurate Results

XSR analytical balances deliver the high weighing accuracy you want whilst providing the convenient operation you need. Clever features, such as SmartGrid, automated doors and the results protocol, simplify your routine weighing tasks and take the stresses and strains out of weighing.

Built-in applications support you with everyday weighing tasks. Your own weighing methods can be saved on the balance and conveniently started from the method window. StatusLight™ checks that all the conditions for correct weighing have been met to ensure your results are reliable.

XSR Analytical Balances – Technical Specifications

	XSR105	XSR105DU	XSR205DU	XSR225DU	XSR64	XSR104	XSR204	XSR204DR	XSR304
Material number	30355059	30355435	30355396	30355364	30355481	30355485	30355500	30355491	30355496
Limit values									
Maximum capacity (full range/fine range)	120 g	120 g/ 41 g	220 g/ 81 g	220 g/ 121 g	61 g	120 g	220 g	220 g/ 81 g	320 g
Readability (full range/fine range)	0.01 mg	0.1 mg/ 0.01 mg	0.1 mg/ 0.01 mg	0.1 mg/ 0.01 mg	0.1 mg	0.1 mg	0.1 mg	1 mg/ 0.1 mg	0.1 mg
Repeatability, 5% load	0.02 mg	0.02 mg	0.02 mg	0.02 mg	0.07 mg	0.07 mg	0.07 mg	0.1 mg	0.08 mg
Linearity deviation	0.2 mg	0.2 mg	0.2 mg	0.2 mg	0.2 mg	0.2 mg	0.2 mg	0.5 mg	0.3 mg
Typical values									
Repeatability, 5% load	0.008 mg	0.01 mg	0.01 mg	0.01 mg	0.04 mg	0.04 mg	0.04 mg	0.04 mg	0.04 mg
Linearity deviation	0.06 mg	0.06 mg	0.06 mg	0.06 mg	0.06 mg	0.06 mg	0.06 mg	0.15 mg	0.1 mg
Sensitivity offset, nominal load	0.08 mg	0.2 mg	0.16 mg	0.16 mg	0.12 mg	0.2 mg	0.24 mg	0.24 mg	0.24 mg
Minimum weight (k = 2, U = 1%) ¹⁾	1.6 mg	2 mg	2 mg	2 mg	8.2 mg	8.2 mg	8.2 mg	8.2 mg	8.2 mg
Minimum weight (according to USP) ¹⁾	16 mg	20 mg	20 mg	20 mg	82 mg	82 mg	82 mg	82 mg	82 mg
Settling time	3 s	1.5 s	1.5 s	1.5 s	1.5 s	1.5 s	1.5 s	1.5 s	1.5 s
Dimensions									
Weighing pan size (mm)	78×73	78×73	78×73	78×73	78×73	78×73	78×73	78×73	78×73
Draft shield, W×D×H (mm)	160×137 ×235	160×137 ×235	160×137 ×235	160×137 ×235	160×137 ×235	160×137 ×235	160×137 ×235	160×137 ×235	160×137 ×235

¹⁾ Minimum weight typical at 5% load

Features

Accurate Results	Efficient Operation	Quality Assurance	Seamless Process
<ul style="list-style-type: none"> proFACT Advanced internal adjustment Compact ionizer (with stand) ready 	<ul style="list-style-type: none"> Color touchscreen (glove compatible) ErgoClip for direct dosing ErgoSens ready SmartTrac dosing guide SmartGrid weighing pan Results protocol Storage of methods Automatic draft shield side doors 	<ul style="list-style-type: none"> GWP Approved MinWeigh warning function Balance ready StatusLight LevelControl: Level warning with graphical levelling guide Tolerance profiles Password protection Adjustment and routine test history 	<ul style="list-style-type: none"> LabX ready Calibry ready Multiple ports for easy connectivity and data export: 4×USB, 1×LAN

Accessories Included:

1× ErgoClip Basket small (11106747)

2× SmartPrep weighing funnel (30061260, 50pcs)

Other Selected Accessories

Compact ionizer with stand	30215452	Bluetooth adapter for printer (P-58, P-56, P-52)	30086494
ErgoSens USB, optical sensor for remote operation	30300915	Bluetooth USB adapter for balance	30416089
P-58RUE printer (thermal printer for label and protocol printing)	30094674	Barcode reader USB	30417466
P-56RUE printer (thermal printer for protocol printing)	30094673	USB-RS232 converter	64088427
P-52RUE printer (dot matrix printer for protocol printing)	30237290	CarePacs, more information at www.mt.com/carepacs	

View the full range of accessories online at www.mt.com/lab-accessories

METTLER TOLEDO Group

Laboratory Weighing
Local contact: www.mt.com/contacts

Subject to technical changes

© 04/2021 METTLER TOLEDO. All rights reserved

30476766B

Group MarCom RITM729110 KA/IK

www.mt.com/xsr-analytical

For more information

XPR Micro-Analytical Balances

Direct Dosing of Very Small Samples



Static-Free Samples

StaticDetect™ measures the weighing error due to electrostatic charging and provides a warning if tolerances are exceeded. In combination with the optional external ionizer, you have a unique solution that guarantees static-free weighing.



Right-First-Time Results

The integrated StatusLight™, LevelControl and GWP Approved work actively together to ensure all the relevant conditions for correct weighing are satisfied, giving you the reassurance that your results are valid.



Economical Sample Use

XPR micro-analytical balances are capable of weighing down to USP minimum weights of 1.2 mg at 52 g capacity. You only need to use the tiniest amounts of expensive, rare and potent substances.



Effortless Data Integrity

Connect all your Excellence laboratory instruments to LabX software for full support with regulatory compliance. LabX helps you meet FDA ALCOA+ requirements for data integrity.



XPR Micro-Analytical Balances Go Beyond Weighing

With capacity up to 52 g, samples as small as of 1.2 mg (according to USP) can be conveniently weighed out into larger containers or labware of different sizes, simplifying weighing processes and avoiding the need for sample transfer. The extremely high accuracy and low minimum weight lead to considerable material and cost savings.

Optional accessories make it easy to customize your XPR micro-analytical balance to perfectly fit your process needs.

XPR Micro-Analytical Balances – Technical Specifications

	XPR36C	XPR36	XPR36DR	XPR56C	XPR56	XPR56DR
Material number	30594503	30594493	30594498	30355547	30355535	30355539
Limit values						
Maximum capacity (full range/fine range)	32 g	32 g	32 g/8.1 g	52 g	52 g	52 g/11 g
Readability (full range/fine range)	0.001 mg	0.001 mg	0.01 mg/ 0.001 mg	0.001 mg	0.001 mg	0.01 mg/ 0.001 mg
Repeatability, 5% load	0.001 mg	0.0015 mg	0.002 mg	0.001 mg	0.0012 mg	0.002 mg
Linearity deviation	0.012 mg	0.012 mg	0.02 mg	0.02 mg	0.02 mg	0.03 mg
Typical values						
Repeatability, 5% load	0.0006 mg	0.0007 mg	0.001 mg	0.0006 mg	0.0007 mg	0.001 mg
Linearity deviation	0.005 mg	0.005 mg	0.008 mg	0.005 mg	0.005 mg	0.008 mg
Sensitivity offset, nominal load	0.06 mg	0.06 mg	0.08 mg	0.08 mg	0.08 mg	0.08 mg
Minimum weight (k=2, U=1%) ¹⁾	0.12 mg	0.14 mg	0.2 mg	0.12 mg	0.14 mg	0.2 mg
Minimum weight (according to USP) ¹⁾	1.2 mg	1.4 mg	2 mg	1.2 mg	1.4 mg	2 mg
Settling time	3.5 s	3.5 s	2.5 s	3.5 s	3.5 s	2.5 s
Dimensions						
Weighing pan size (mm)	∅ 35; 40×40	40×40	40×40	∅ 35; 40×40	40×40	40×40
Draft shield, W×D×H (mm)	83×83×115	83×83×115	83×83×115	83×83×115	83×83×115	83×83×115
Weighing pan type	SmartGrid, Hanging weighing pan	SmartGrid	SmartGrid	SmartGrid, Hanging weighing pan	SmartGrid	SmartGrid

¹⁾ Minimum weight typical at 5% load

Features

Accurate Results	Efficient Operation	Quality Assurance	Seamless Process
<ul style="list-style-type: none"> Active Temperature Control system (ATC™) proFACT Advanced internal adjustment Compact ionizer ready StaticDetect™ 	<ul style="list-style-type: none"> 7" color touchscreen with gesture control (glove compatible) ErgoClip for direct dosing SmartSens for touch-less door operation SmartTrac dosing guide SmartGrid weighing pan Built-in results notepad Storage of methods Automatic draft shield doors 	<ul style="list-style-type: none"> GWP Approved built-in quality monitoring MinWeigh warning function Balance ready StatusLight LevelControl: Level warning with graphical levelling guide Tolerance profiles User management Adjustment and routine test history Change history function 	<ul style="list-style-type: none"> LabX ready Calibry ready Multiple ports for easy connectivity and data export: 4 × USB, 1 × LAN

Other Selected Accessories

Compact external ionizer with stand	30499859
P-58RUE printer (thermal printer for label and protocol printing)	30094674
P-56RUE printer (thermal printer for protocol printing)	30094673
P-52RUE printer (dot matrix printer for protocol printing)	30237290
Bluetooth adapter for printer (P-58, P-56, P-52)	30086494
Bluetooth USB adapter for balance	30416089
Barcode reader USB	30417466
USB-RS232 converter	64088427

CarePacs on www.mt.com/carepacs

View the full range of accessories online at www.mt.com/lab-accessories

METTLER TOLEDO Group
Laboratory Weighing
Local contact: www.mt.com/contacts

Subject to technical changes
© 06/2020 METTLER TOLEDO. All rights reserved
30476765B
Group MarCom RITM639873 KA

www.mt.com/micro

For more information

XPR Analytical Balances Valid Results Every Time



Eliminate Static

StaticDetect measures the weighing error due to electrostatic charging and provides a warning if tolerances are exceeded. In combination with the optional ionizer, you have a unique solution that guarantees static-free weighing.



Right-First-Time Results

The integrated StatusLight™, LevelControl and GWP Approved work actively together to ensure all the relevant conditions for correct weighing are satisfied, giving you the reassurance that your results are valid.



Easy Automation Upgrade

Optional modules make it easy for you to quickly upgrade your balance to provide automated powder and/or liquid dosing. Automated dosing enables you to achieve a level of accuracy that is impossible to match in a manual process.



Effortless Data Integrity

Connect all your Excellence laboratory instruments to LabX software for full support with regulatory compliance. LabX helps you meet FDA ALCOA+ requirements for data integrity.



XPR Analytical Balances Go Beyond Weighing

With a range of intelligent quality assurance functions, you can depend on XPR to deliver right-first-time results. The patented StaticDetect™ technology, used in combination with the optional ionizing module, offers a complete electrostatic detection and elimination system to ensure accurate weighing results and highest process security.

Optional modules and accessories make it easy to customize your XPR analytical balance to perfectly fit your process needs and improve comfort of everyday weighing.

Even in highly regulated environments, XPR balances integrate seamlessly into your processes.

XPR Analytical Balances—Technical Specifications

	XPR106DUH	XPR226CDR	XPR226DR	XPR205	XPR205DU
Material number	30532226	30594507	30594478	30355411	30469076
Limit values					
Maximum capacity (full range/fine range)	120 g/41 g	220 g/121 g	220 g/121 g	220 g	220 g/81 g
Readability (full range/fine range)	0.005 mg/ 0.002 mg	0.01 mg/ 0.005 mg	0.01 mg/ 0.005 mg	0.01 mg	0.1 mg/0.01 mg
Repeatability, 5% load	0.005 mg	0.01 mg	0.01 mg	0.015 mg	0.015 mg
Linearity deviation	0.1 mg	0.1 mg	0.1 mg	0.1 mg	0.2 mg
Typical values					
Repeatability, 5% load	0.003 mg	0.004 mg	0.005 mg	0.007 mg	0.01 mg
Linearity deviation	0.03 mg	0.03 mg	0.03 mg	0.03 mg	0.06 mg
Sensitivity offset, nominal load	0.15 mg	0.25 mg	0.25 mg	0.25 mg	0.4 mg
Minimum weight (k=2, U=1%) ¹⁾	0.6 mg	0.8 mg	1 mg	1.4 mg	2 mg
Minimum weight (according to USP) ¹⁾	6 mg	8 mg	10 mg	14 mg	20 mg
Settling time	4 s	5 s	2 s	2 s	1.5 s
Dimensions					
Weighing pan size (mm)	64×56	78×73	78×73	78×73	78×73
Draft shield, W×D×H (mm)	160×137×159	160×137×235	160×137×235	160×137×235	160×137×235

¹⁾ Minimum weight typical at 5% load

	XPR225DR	XPR225DU	XPR105DR	XPR205D5	XPR305D5	XPR204
Material number	30594483	30594488	30355342	30469150	30469154	30355419
Limit values						
Maximum capacity (full range/fine range)	220 g/121 g	220 g/121 g	120 g/41 g	220 g	320 g	220 g
Readability (full range/fine range)	0.1 mg/0.01 mg	0.1 mg/0.01 mg	0.1 mg/0.01 mg	0.05 mg	0.05 mg	0.1 mg
Repeatability, 5% load	0.015 mg	0.015 mg	0.015 mg	0.04 mg	0.06 mg	0.05 mg
Linearity deviation	0.15 mg	0.2 mg	0.15 mg	0.2 mg	0.3 mg	0.2 mg
Typical values						
Repeatability, 5% load	0.007 mg	0.007 mg	0.007 mg	0.02 mg	0.02 mg	0.04 mg
Linearity deviation	0.03 mg	0.05 mg	0.05 mg	0.06 mg	0.1 mg	0.06 mg
Sensitivity offset, nominal load	0.3 mg	0.4 mg	0.25 mg	0.4 mg	0.6 mg	0.4 mg
Minimum weight (k=2, U=1%) ¹⁾	1.4 mg	1.4 mg	1.4 mg	4.1 mg	4.1 mg	8.2 mg
Minimum weight (according to USP) ¹⁾	14 mg	14 mg	14 mg	41 mg	41 mg	82 mg
Settling time	1.5 s	1.5 s	1.5 s	1.5 s	1.5 s	1.5 s
Dimensions						
Weighing pan size (mm)	78×73	78×73	78×73	78×73	78×73	78×73
Draft shield, W×D×H (mm)	160×137×235	160×137×235	160×137×235	160×137×235	160×137×235	160×137×235

¹⁾ Minimum weight typical at 5% load

Features

Accurate Results	Efficient Operation	Quality Assurance	Seamless Process
<ul style="list-style-type: none"> • Active Temperature Control system (ATC™) • proFACT Advanced internal adjustment • Compact ionizer ready • StaticDetect™ 	<ul style="list-style-type: none"> • 7" color touchscreen with gesture control (glove compatible) • ErgoClip for direct dosing • SmartSens for touch-less door operation • SmartTrac dosing guide • SmartGrid weighing pan • Built-in results notepad • Storage of methods • Automatic draft shield doors 	<ul style="list-style-type: none"> • GWP Approved built-in quality assurance monitoring • MinWeigh warning function • Balance ready StatusLight • LevelControl: Level warning with graphical levelling guide • Tolerance profiles • User management • Adjustment and routine test history • Change history function 	<ul style="list-style-type: none"> • LabX ready • Calibry ready • Multiple ports for easy connectivity and data export: 4×USB, 1×LAN • Upgradable to automatic powder and/or liquid dosing

Software and Accessories



Antistatic Solutions

Single antistatic components and integrated solutions for detection and elimination of static charges from samples and vessels



Printers

High quality printers and label printers for improved data management, less transcription errors and faster processes



CarePacs®

Everything you need for efficient balance routine testing—two selected test weights, calibration certificate and accessories

Other Selected Accessories

	Material number
Compact external ionizer with stand	30499859
Optional built-in ionizer module	30460823
ErgoSens USB, optical sensor for remote operation	30300915
P-58RUE printer (thermal printer for label and protocol printing)	30094674
P-56RUE printer (thermal printer for protocol printing)	30094673
P-52RUE printer (dot matrix printer for protocol printing)	30237290
Bluetooth adapter for printer (P-58, P-56, P-52)	30086494
Bluetooth USB adapter for balance	30416089
Barcode reader USB	30417466
USB-RS232 converter	64088427

CarePacs on ► www.mt.com/carepacs

View the full range of accessories online at ► www.mt.com/lab-accessories

LabX Laboratory Software

Connect your balance to LabX software to benefit from a fully integrated solution which can satisfy all your data handling needs.

- SOP user guidance on the instrument
- Automatic data handling and calculations
- Easy data access and documentation
- Full process and results traceability
- Centralized management of multiple instruments



METTLER TOLEDO Group
Laboratory Weighing
Local contact: www.mt.com/contacts

www.mt.com/xpr-analytical

For more information

Subject to technical changes
© 03/2021 METTLER TOLEDO. All rights reserved
30476764C
Group MarCom RITM723391 KA/MA

XPR Automatic Balance

Automated Powder and Liquid Weighing



Smallest Minimum Weight

Thanks to the outstanding accuracy of automated weighing, the balance minimum weight can be reduced by up to 30%. This means you can make considerable savings by using less of your expensive and rare samples.



Maximum User Protection

Automated weighing protects you from toxic and chemically aggressive substances. Hazardous samples are dispensed directly into the target container, avoiding manual sample handling and eliminating spills.



Flexibility of Use

With just one click, the dosing head moves up and you can use your balance for all your manual weighing applications in the usual way.



Perfect Concentrations

Prepare highly accurate concentrations as low as 0.1 mg/g in just one step. The balance calculates the precise amount of solvent required based on the amount of substance dosed to produce the target concentration.



Automation, Safety and Compliance for Maximum Return on Investment

XPR Automatic Balances offer a standalone solution for highly accurate, reproducible and safe automated weighing of powders and liquids.

Automated weighing reduces OOS results and other errors by up to 50%. XPR Automatic Balances combine all the benefits of automated dispensing with METTLER TOLEDO advanced weighing technologies.

Weighing small amounts of substances is now considerably faster, giving you more time to focus on other critical elements of your analysis.

XPR Automatic Balance Models—Weighing and Dispensing in One

Technical Specifications

	XPR106DUHQ	XPR226DRQ	XPR305D5Q
Typical use	For automated weighing of small amounts of precious samples	For a wide range of weighing applications	For automated weighing using heavier tare vessels
Material number	30591875	30591935	30586237
Capacity (full range/fine range)	120/41 g	220/121 g	320 g
Readability (full range/fine range)	0.005/0.002 mg	0.01/0.005 mg	0.05 mg
Minimum weight automated (tolerance = 1%)	0.4 mg	0.7 mg	4.1 mg
Minimum weight automated (USP, tolerance = 0.10%)	4 mg	7 mg	41 mg
Minimum weight (tolerance = 1%)	0.6 mg	1 mg	4.1 mg
Minimum weight (USP, tolerance = 0.10%)	6 mg	10 mg	41 mg
Target vessel	Opening diameter of >6 mm. Suitable for capsules, bottles, vials, tubes with maximum height of 212 mm (135 mm for XPR106DUHQ)		

Sample characteristics	Powder	Liquid
Dispensing range (typical values)	1 mg–5 g*	100 mg–10 g (0.1 mL–10 mL for water)
Suitable samples	Free-flowing, fluffy, granular, electrostatically charged	Low-viscosity solvents (<20 cP), e.g. water, acetonitrile, methanol, ethanol, DMSO
Average dispensing time	10–60 s, depending on target weight, powder flow and required accuracy	Maximum flow rate 30 g/min (0.5 bar pressure)
Lowest automated concentration**	n/a	0.1 mg/g (0.1 mg/mL for water)

* Recommended maximum weight for automated powder dispensing

** Lowest value achieved with automated dispensing. Lower concentrations are easily achieved via dilution.



Smart Accessories

Choose from our range of vial and capsule adapters, special dosing heads, anti-static solutions, and more.



Increased Throughput

With the Sample Changer, you can weigh up to 30 powder or liquid samples in just one run.



Substance Tracking

Each dosing head has an integrated RFID chip to store data such as substance ID, quantity etc.



LabX – digital data handling and automatic documentation

Connect your XPR Automatic Balance to LabX laboratory software and benefit from:

- Full traceability
- Workflow guidance on the balance terminal
- Seamless connectivity to e.g. chromatography software or LIMS
- Central data storage

All data and process information is saved securely, assisting in compliance with FDA 21 CFR Part 11.

METTLER TOLEDO Group
Laboratory Weighing
Local contact: www.mt.com/contacts

www.mt.com/xpr-automatic

For more information

Subject to technical changes
© 11/2020 METTLER TOLEDO. All rights reserved
30609989A
Group MarCom RITM656559 KA