Perfect Positioning
ErgoClips facilitate the accurate positioning and fastening of different tare containers to enable quick and secure weighing operations. The unique SmartGrid weighing pan minimizes the effects of air turbulence, so that stabilization time is reduced.

Ergonomic Operation
SmartSens infrared sensors on each side of the balance display mean the weighing chamber can be opened on the side you want to be hands-free. This enables safe handling of toxic substances.

Optimum Dosing
The MinWeigh Door has a freely adjustable opening which, especially when combined with ErgoClips, enables quick targeted dosing with minimal opening of the draft shield.

Excellence Plus XP
High-Performance Analytical Balances
METTLER TOLEDO XP Balances meet all weighing requirements quickly and securely, particularly in strictly regulated areas, such as the pharmaceutical industry.

Use of innovative XP Balance equipment such as SmartGrid, MinWeigh Door and ErgoClips reduces stabilization time, makes direct weighing into the desired container easier and helps obtain the lowest possible value for the minimum initial weight. Optimized sample transfer reduces waste and, particularly with valuable materials, leads to considerable cost savings. The numerous application-specific solutions enable ergonomic work and ensure efficient weighing processes.

Comprehensive QM equipment meets quality assurance requirements.

XP Analytical Balances give the highest possible weighing performance – even under the most challenging laboratory conditions.
# High-Performance Analytical Balances

**Excellence Plus XP**

## Standard Equipment:
- **SmartSens** – sensor for hands-free operation
- **SmartGrid** – weighing pan for fast and highly accurate results
- **SmartScreen** – color touchscreen for comfortable and secure operation
- **ErgoClips** – holders for different tare containers
- **MinWeigh** – warning signal when the minimum weight has not been reached
- **DeltaTrac** – weighing range displayed in color
- **LevelControl** – warming signal when the balance is not level
- **BalancetCheck** – automatic prompt to check with external weights
- **proFACT** – automatic time and temperature controlled adjustment and linearization
- **Communication in 8 languages (EN, DE, FR, IT, SP, RU, JP, KR)**
- Seven applications with on-screen user guidance (simple weighing, piece counting, formulation, percent weighing, statistics, density determination, differential weighing)
- **UserManagement** for assigning access rights
- **Representation of various units of measurement, units can be customized**
- **Individual reports can be assigned up to 4 IDs**
- **GX-P compliant, seamless, traceable documentation**
- Simple PC connection (software: LabX, Hyperterminal, SQC, etc.)
- **Built-in RS232 interface and two auxiliary outputs**
- **Slot for a second interface (7 options), including Bluetooth and Ethernet**
- Freely positionable terminal with exchangeable protective cover
- **Overload protector**
- **Below-the-balance weighing device**

## Accessories
- **FootSwitch**: switch for balance functions
- **Terminal Extension Cable**: 4.5 m
- **Mounting Kit**: complete

## Model Specifications

<table>
<thead>
<tr>
<th>Model</th>
<th>XP105DR</th>
<th>XP205</th>
<th>XP2050DR</th>
<th>XP204</th>
<th>XP504</th>
<th>XP504DR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum load</td>
<td>120 g</td>
<td>220 g</td>
<td>220 g</td>
<td>220 g</td>
<td>520 g</td>
<td>520 g</td>
</tr>
<tr>
<td>Max. load of the fine range</td>
<td>0.1 mg</td>
<td>0.01 mg</td>
<td>0.1 mg</td>
<td>0.1 mg</td>
<td>0.1 mg</td>
<td>1 mg</td>
</tr>
<tr>
<td>Readability in the fine range</td>
<td>0.01 mg</td>
<td>–</td>
<td>0.01 mg</td>
<td>–</td>
<td>0.1 mg</td>
<td>–</td>
</tr>
<tr>
<td>Repeatability – at nominal load</td>
<td>0.06 mg (100 g)</td>
<td>0.03 mg (200 g)</td>
<td>0.06 mg (200 g)</td>
<td>0.07 mg (200 g)</td>
<td>0.12 mg (500 g)</td>
<td>0.6 mg (500 g)</td>
</tr>
<tr>
<td>– at low load</td>
<td>0.05 mg (10 g)</td>
<td>0.015 mg (10 g)</td>
<td>0.05 mg (10 g)</td>
<td>0.06 mg (10 g)</td>
<td>0.05 mg (10 g)</td>
<td>0.5 mg (10 g)</td>
</tr>
<tr>
<td>– at low load in the fine range</td>
<td>0.015 mg (10 g)</td>
<td>–</td>
<td>0.015 mg (10 g)</td>
<td>–</td>
<td>0.1 mg (10 g)</td>
<td>–</td>
</tr>
<tr>
<td>Linearity</td>
<td>0.10 mg</td>
<td>0.1 mg</td>
<td>0.15 mg</td>
<td>0.2 mg</td>
<td>0.4 mg</td>
<td>0.5 mg</td>
</tr>
<tr>
<td>Corn-load deviation (test load)</td>
<td>0.2 mg (50 g)</td>
<td>0.2 mg (100 g)</td>
<td>0.25 mg (100 g)</td>
<td>0.25 mg (100 g)</td>
<td>0.4 mg (200 g)</td>
<td>0.5 mg (200 g)</td>
</tr>
<tr>
<td>Sensitivity deviation</td>
<td>4x10^{-6} Rnt</td>
<td>2x10^{-6} Rnt</td>
<td>3x10^{-6} Rnt</td>
<td>3x10^{-6} Rnt</td>
<td>4x10^{-6} Rnt</td>
<td>4x10^{-6} Rnt</td>
</tr>
<tr>
<td>Temperature drift of sensitivity</td>
<td>1x10^{-6}°C Rnt</td>
<td>1x10^{-6}°C Rnt</td>
<td>1x10^{-6}°C Rnt</td>
<td>1x10^{-6}°C Rnt</td>
<td>1x10^{-6}°C Rnt</td>
<td>1x10^{-6}°C Rnt</td>
</tr>
<tr>
<td>Stability of sensitivity</td>
<td>1x10^{-6}°Rnt</td>
<td>1x10^{-6}°Rnt</td>
<td>1x10^{-6}°Rnt</td>
<td>1x10^{-6}°Rnt</td>
<td>1x10^{-6}°Rnt</td>
<td>1x10^{-6}°Rnt</td>
</tr>
<tr>
<td>Minimum initial weight (typical, acc. to USP)</td>
<td>21 mg ± 4.5x10^{-6} Rgr</td>
<td>21 mg ± 1.8x10^{-6} Rgr</td>
<td>21 mg ± 3.6x10^{-6} Rgr</td>
<td>120 mg ± 1.5x10^{-6} Rgr</td>
<td>120 mg ± 3.6x10^{-6} Rgr</td>
<td>120 mg ± 6.0x10^{-6} Rgr</td>
</tr>
<tr>
<td>Minimum initial weight (typical, U=1%, 2 sd)</td>
<td>1.4 mg ± 3x10^{-6} Rgr</td>
<td>1.4 mg ± 1.2x10^{-6} Rgr</td>
<td>1.4 mg ± 2.4x10^{-6} Rgr</td>
<td>8 mg ± 1.0x10^{-6} Rgr</td>
<td>8 mg ± 1.2x10^{-6} Rgr</td>
<td>8 mg ± 4.0x10^{-6} Rgr</td>
</tr>
<tr>
<td>Stabilization time (course / fine range)</td>
<td>1.5 s / 2.5 s</td>
<td>2.5 s</td>
<td>1.5 s / 2.5 s</td>
<td>1.5 s</td>
<td>1.5 s / 1.5 s</td>
<td></td>
</tr>
</tbody>
</table>

1) **acc. to OIML R76**  
2) **in the temperature range 10...30°C**  
3) **Stability of sensitivity with proFACT self-adjustment switched on**

*Repeatability and minimum initial weight can be improved by the following measures:
- Selection of appropriate weighing parameters, choice of a better location and use of smaller tare containers

For further information:

**www.mt.com/GWP**

The global weighing guideline GWP® reduces risks associated with your weighing processes and helps to:
- choose the appropriate balance
- reduce costs by optimizing testing procedures
- comply with the most common regulatory requirements

**GWP® Good Weighing Practice™**

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