Shimadzu Electronic Balances
General Catalog
Excellent performance for a wide variety of applications in multiple industries

**Food**
- Quality Assurance
- Harvest Inspection

**Environmental**
- Polluted Sludge Measurement
- Biofuel Measurement

**Chemical**
- Paint Quality Control
- Material Inspection

**Pharmaceutical**
- Drug Quality Assurance
- Cosmetics Inspection

AUW/AUX/AUY Series
UW/UX Series
TW/TX/TXB Series
BW-K/BX-K Series
SHIMADZU:

A Tradition of Weighing Expertise

Shimadzu Corporation was established in 1875 in Kyoto, Japan, as one of the pioneers of scientific precision instruments.

Top-pan and torsion balance production started in 1918, and equal-beam analytical balances were introduced in 1925. Since their release, the continuous improvement of Shimadzu balances has contributed to research and development across all industries.

Around the turn of the 20th Century, precision weighing was a time-consuming practice performed only by experienced operators. Placing the sample and small masses on pans hung from a beam scale with a moving indicator was a tedious process. Shimadzu strove continuously to streamline weighing procedures. The introduction of the direct reading analytical balance (patented in Japan in 1948) signified a new era in weighing technology. In the Type L balance, the sensitive mass-loading work was replaced by convenient dial operations. Users reduced weighing time by 66%, and consequently reduced demand for conventional balances. Shimadzu then added the top-loading direct reading balance with Roberval’s mechanism in 1959. Until recently many of these instruments were still utilized in modern laboratories.

Shimadzu continued to pioneer new technologies, releasing its first electronic balance in 1971—the Digibalance. This release marked a milestone in precision weighing, introducing simplicity and ease of use to analytical weighing. Six years later (1977), the application of microprocessors in electronic balances further enhanced weighing performance. The compact ED Series provided substantial improvements in sensitivity, resolution, and stability.

More recently, Shimadzu has introduced user-friendly instruments and features to the market, such as: the temperature-based fully-automatic calibration in 1985, the first one-piece forcecell (OPF, later renamed UniBloc) in 1989, the high-sensitivity AEM-5200 Micro Balance in 1993, and the unique WindowsDirect feature perfectly suited for the computerized laboratory of the 21st Century.

Moving forward, Shimadzu is committed to providing innovative products for the analytical marketplace.

One of the latest achievements is MOC63u series, High-performance Moisture Analyzer with advantages of UniBloc and applicable for a wide application area.

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Excellent performance for multiple industries

Capacity/Minimum display

Pharmaceutical industry
- Sample preparation in R&D laboratories
- Quality assurance of drugs
- Material inspection

AUW220D
Capacity: 220g/82g
Minimum Display: 0.1mg/0.01mg
P.10

UW1020H
Capacity: 1020g
Minimum Display: 0.001g
P.14

UW6200H
Capacity: 6200g
Minimum Display: 0.01g
P.22

MOC63u
Capacity: 60g
Minimum Display: 0.001g/0.01%
P.22

Food industry
- Quality assurance of processed food
- Inspection for harvest before export
- Packaging final products

MOC63u
Capacity: 60g
Minimum Display: 0.001g/0.01%
P.22

AUW220
Capacity: 220g
Minimum Display: 0.1mg
P.12

TX3202L
Capacity: 3200g
Minimum Display: 0.01g
P.16

Chemical industry
- Reagent preparations
- Manufacturing process inspection

AUW220
Capacity: 220g
Minimum Display: 0.1mg
P.12

UX420H
Capacity: 420g
Minimum Display: 0.001g
P.14

UX4200H
Capacity: 4200g
Minimum Display: 0.01g
P.22

MOC63u
Capacity: 60g
Minimum Display: 0.001g/0.01%
P.22
Electronic and semiconductor

- Piece counting for small parts in factories
- Measurement of thin film on the surface of silicon wafer
- Pass/fail by checkweighing

ATX224
Capacity: 220g
Minimum Display: 0.1mg
► P.13

UX420H
Capacity: 420g
Minimum Display: 0.001g
► P.14

UX4200H
Capacity: 4200g
Minimum Display: 0.01g
► P.16

TX323L
Capacity: 320g
Minimum Display: 0.001g
► P.16

TX3202L
Capacity: 3200g
Minimum Display: 0.01g
► P.19

BL320H
Capacity: 320g
Minimum Display: 0.001g
► P.19

ELB300
Capacity: 300g
Minimum Display: 0.01g
► P.20

Jewelry market

- Jewelry making
- In retail shop
- Purity check

TXC623L / TWC623L
Capacity: 620ct
Minimum Display: 0.001ct
► P.17

TX323L
Capacity: 320g
Minimum Display: 0.001g
► P.17

TX3202L
Capacity: 3200g
Minimum Display: 0.01g
► P.14

UX420H
Capacity: 420g
Minimum Display: 0.001g
► P.14

UX4200H
Capacity: 4200g
Minimum Display: 0.01g
► P.17

TXB622L
Capacity: 620g
Minimum Display: 0.01g
► P.17
Quick reference by capacity and minimum display

<table>
<thead>
<tr>
<th>Capacity</th>
<th>Minimum display</th>
<th>0.01mg</th>
<th>0.1mg</th>
<th>0.001g</th>
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<tbody>
<tr>
<td>30g</td>
<td>AUW120D</td>
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<td>50g</td>
<td>AUW220D</td>
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<td>AUW220D</td>
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<td>AUW/AUX/AUY220</td>
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<td>ATX/ATY224</td>
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<td>AW/AY220</td>
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<tr>
<td></td>
<td>UX/UY620</td>
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<td>UX/UY1020</td>
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<tr>
<td>10000g</td>
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</tr>
</tbody>
</table>

*Dual-range models appearing twice for both ranges.

UniBloc Family of Balances

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### Features and Symbols

**REDUCE MANUAL CALIBRATION WORK**

- **Perfect Self Calibration**
  - The balance self-calibrates when it detects temperature changes that would affect accuracy. Operator is released from constantly monitoring surrounding conditions.

- **Clock-CAL**
  - Fully automated feature initiates self-calibration at set time intervals, using motor-driven internal calibration weight. Up to three automatic calibrations per day may be pre-set to coincide with work schedules or to meet specific quality goals.

- **Internal Calibration**
  - Calibration can be performed any time with a simple push-button operation.

- **One-lever CAL**
  - Single lever operation loads and unloads built-in calibration weight.

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**GLP, GMP, AND ISO9000 CONFORMANCE**

- **Calibration Report**
  - With optional printer connected to the balance, calibration reports which meet the requirements of GLP, GMP, and ISO9000 can be produced.

- **Built-in Clock**
  - Date and time can be readily supplied by the balance.

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**APPLICATION SPECIFIC FEATURES**

- **WindowsDirect**
  - (See p.9)
  - Weighed result is directly typed at the cursor position of any application on Windows® OS. No communication software is required.

- **Built-in RS-232C Interface**
  - RS-232C interface is a standard feature.
### Shimadzu Electronic Balances

**General Catalog 9**

**Quick reference by capacity and minimum display**

**REDUCE MANUAL CALIBRATION WORK**

**Features and Symbols**
- **Fully automated feature initiates self-calibration at set time intervals, using motor-driven internal calibration weight. Up to three automatic calibrations per day may be pre-set to coincide with work schedules or to meet specific quality goals.**

**Clock-CAL**
- **Calibration can be performed any time with a simple push-button operation.**

**Internal Calibration**
- **Single lever operation loads and unloads built-in calibration weight.**

**One-lever CAL**
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**Perfect Self Calibration**

**GLP, GMP, AND ISO9000 CONFORMANCE**

**APPLICATION SPECIFIC FEATURES**
- **Date and time can be readily supplied by the balance.**

**Built-in Clock**
- **Weighed result is directly typed at the cursor position of any application on Windows® OS. No communication software is required.**

**WindowsDirect**
- **RS-232C interface is a standard feature.**

**Built-in RS-232C Interface**
- **OTHER FEATURES**

**Piece counting function is a standard feature.**

**Piece Counting Mode**
- **Simple and easy counting.**

**Analog Bar Graph Display**
- **Allows viewing of remaining capacity.**

**Specific Gravity Measurement**
- **Software for specific gravity measurement is pre-installed. Simply add optional specific gravity kit for efficient measurements.**

**UniBloc**
- **Single-block technology brings high performance and durability.**

**Standard Below-weigh Hook**
- **Measurement beneath the balance is possible.**

**Interval Timer Output**
- **Data can be automatically output at pre-set time intervals.**

** AUTO PRINT**
- **Data can be automatically output as each measurement is made.**

**Checkweighing**
- **Utilized in quality control applications.**

**Dry Battery Operation**
- **Portable for use in the field.**

<table>
<thead>
<tr>
<th>Capacity</th>
<th>Minimum Display</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.1g</td>
<td></td>
</tr>
<tr>
<td>1g</td>
<td></td>
</tr>
</tbody>
</table>

**Top-loading Balances**
- **UW/UX Series (P.14)**
- **TW/TX/TXB/TWC/TXC (P.16 and P.17)**
- **BL Series (P.19)**
- **Analytical Balances (P.12, P.13 and P.19)**
- **Semi-micro Balances (P.11)**
- **Portable Electronic Balances (P.20)**
- **Precision Platform Balances (P.18)**

**WindowsDirect Experience it!**
- **Place the cursor at the desired position in your Windows application.**

- **Press the [PRINT] key on the balance.**

- **The weighed result will be directly typed there.**

- **Send as if typed from the computer keyboard!**

Any application on Windows®: e.g. Excel, Word etc.

**All that you need to add is just one cable!**

**No communication software is required!**

If you’d like to use “WindowsDirect” with “Windows 7” “Windows Vista”, or USB port, please contact to our distributors.
UniBloc Family of Balances

UniBloc Analytical Balances
AUW-D series dual-range semi-micro balances
AUW/AUX/AUY series
ATX/ATY series

UniBloc Top-loading Balances
UW/UX/TW/TWC/TX/TXC series

UniBloc Precision Platform Balances
BW-K/BX-K series

UniBloc Electronic Moisture Balances
MOC-120H/MOC63u

Shimadzu introduced one piece force cell technology for precision balances in 1989. Today’s UniBloc is created by high-precision electric discharge wire processing applied to a block of aluminum alloy, and replaces the conventional electro-magnetic balance sensor assembly. UniBloc’s compact, uniform structure ensures stable temperature characteristics, excellent response time and stable corner-load performance. The UniBloc design permits a consistancy of production that assures reliability and a long operational life.

The updated UniBloc technology expanded the UniBloc balance line up, which now ranges from semi-micro with minimum display of 0.01 mg to precision platform balances up to 52 kg in capacity.

UniBloc Analytical Balances

AUW-D series dual-range semi-micro balances
AUW/AUX/AUY series analytical balances

Excellent Weighing Performance
- Compact UniBloc mechanism and digital processing technology produce fast response and stability at the same time.
- Microprocessor digital control can be set to automatically provide the most suitable data processing for the installation environment and weighing application.

User-friendly Features
- Weighing work is made easy by the smooth door movement. It is easy to remove and replace the door rails for cleaning.
- The embossed key panel sheet provides clear clicking response as operated. The key operations can be confirmed with a gentle beeping sound, too.
- Level adjustment can be performed with ease.

For Application
- Shimadzu’s unique WindowsDirect is a standard feature for all the UniBloc Analytical Balances.
  Measurement results can be transmitted to Excel or other Windows applications without any software installation to your computer.
  All you have to add is one RS-232C cable.
  WindowsDirect works with Windows® 95, 98, NT4.0, 2000, ME and XP.
  PC must be IBM PC/AT compatible.
  If you’d like to use “WindowsDirect” with “Windows 7” “Windows Vista”, or USB port, please contact to our distributors.
- Piece counting, various mass units, below-weigh hook, specific gravity measurement software are all standard features.

Dual-range semi-micro balances

<table>
<thead>
<tr>
<th>AUW-D Series</th>
</tr>
</thead>
</table>

AUW-D dual-range semi-micro balances are the first five-decimal balances with the advantages of UniBloc one-piece force cell technology.

Choose one of the two models according to your field requirements.

Choice of fully-automatic calibrations: PSC and Clock-CAL

Operator can choose from two types of fully-automatic span calibration methods. "PSC" is initiated based on temperature change detection, and “Clock-CAL” operates at user pre-set times (up to three times a day).

GLP/GMP/ISO calibration report

Calibration report can be automatically printed out with the optional electronic printer.
Date and time are also output to meet GLP/GMP/ISO requirements.

WindowsDirect (See p.9)

Weighed data can be directly typed into any Windows application and no interface software is required.
If you’d like to use “WindowsDirect” with “Windows 7” “Windows Vista”, or USB port, please contact to our distributors.

<table>
<thead>
<tr>
<th>Model</th>
<th>Capacity</th>
<th>Minimum display</th>
<th>Pan size(mm)</th>
<th>Internal calibration</th>
<th>Internal calibration modes</th>
<th>WindowsDirect</th>
</tr>
</thead>
<tbody>
<tr>
<td>AUW220D</td>
<td>220g/82g</td>
<td>0.1mg/0.01mg</td>
<td>80 dia</td>
<td>✓</td>
<td>PSC, Clock-CAL, any time with key touch</td>
<td>✓</td>
</tr>
<tr>
<td>AUW120D</td>
<td>120g/42g</td>
<td>0.1mg/0.01mg</td>
<td>80 dia</td>
<td>✓</td>
<td>PSC, Clock-CAL, any time with key touch</td>
<td>✓</td>
</tr>
</tbody>
</table>
Analytical Balances

AUW/AUX/AUY Series

AUW  
AUX  
AUY

AUW/AUX/AUY models are the single-range analytical balances engineered with the UniBloc technology. This provides especially fast response and superb stability.

- **PSC, fully-automatic calibration** (AUW/AUX models)
  Calibration is carried out when temperature change has been detected.

- **Clock-CAL, fully-automatic calibration** (AUW model only)
  Calibration carried out at user-preset times (up to three times a day). Operators can work without unexpected interruptions.

- **GLP/GMP/ISO calibration report** (AUW/AUX models)
  Meets requirements of GLP/GMP/ISO9000. Calibration reports can be output with date and time, provided by the built-in clock.

- **WindowsDirect** (See p.9)
  Weighed data can be directly typed into any Windows application and no interface software is required. If you’d like to use "WindowsDirect" with "Windows 7" "Windows Vista", or USB port, please contact to our distributors.

- **Backlight LCD** (AUW model only)
  LCD with backlight can be read with ease and comfort under any lighting condition.

### Model Specifications

<table>
<thead>
<tr>
<th>Model</th>
<th>Capacity</th>
<th>Minimum display</th>
<th>Pan size (mm)</th>
<th>Internal calibration</th>
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<tbody>
<tr>
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<td>320 g</td>
<td>0.1 mg</td>
<td>80 dia</td>
<td>✓</td>
<td>PSC, Clock-CAL, any time with key touch</td>
<td>✓</td>
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<td>AUW220</td>
<td>220 g</td>
<td>0.1 mg</td>
<td>80 dia</td>
<td>✓</td>
<td>PSC, Clock-CAL, any time with key touch</td>
<td>✓</td>
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<td>AUW120</td>
<td>120 g</td>
<td>0.1 mg</td>
<td>80 dia</td>
<td>✓</td>
<td>PSC, Clock-CAL, any time with key touch</td>
<td>✓</td>
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<tr>
<td>AUX320</td>
<td>320 g</td>
<td>0.1 mg</td>
<td>80 dia</td>
<td>✓</td>
<td>PSC, any time with key touch</td>
<td>✓</td>
</tr>
<tr>
<td>AUX220</td>
<td>220 g</td>
<td>0.1 mg</td>
<td>80 dia</td>
<td>✓</td>
<td>PSC, any time with key touch</td>
<td>✓</td>
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<tr>
<td>AUX120</td>
<td>120 g</td>
<td>0.1 mg</td>
<td>80 dia</td>
<td>✓</td>
<td>PSC, any time with key touch</td>
<td>✓</td>
</tr>
<tr>
<td>AUY220</td>
<td>220 g</td>
<td>0.1 mg</td>
<td>80 dia</td>
<td>✓</td>
<td>PSC, any time with key touch</td>
<td>✓</td>
</tr>
<tr>
<td>AUY120</td>
<td>120 g</td>
<td>0.1 mg</td>
<td>80 dia</td>
<td>✓</td>
<td>PSC, any time with key touch</td>
<td>✓</td>
</tr>
</tbody>
</table>

**Static Remover STABLO-EX** (p.25)
High specification and low cost with UniBloc.

**Touch-key calibration**
Automated calibration can be started by pressing keys. (ATX series)
Also, your external calibration weights can be used for span calibration. (All models)

**Easy Setting Best fit to weighing application**
Quickly adjust the desired ratio of stability and response for every application, even during measurement, with one-touch operation.

**Expanded Piece Counting function**
Unit weights of up to 5 different samples can be easily entered, stored and recalled for use.

**Comparator function**
Compare samples to target values or pass/fail criteria and clearly indicate the results.

**Formulation mode**
Convenient for making many measurements of minute samples and seeking the total mass.

**WindowsDirect Communication Function**
Send balance data to Excel or other Windows applications without any data communication software installation required. By combining standard AutoPrint functions with typical spreadsheet functions, even difficult applications can be easily automated.*I/O–RS cable is needed.

**Very large size pan**
It enables the use of a large flask. (91 dia)

<table>
<thead>
<tr>
<th>Model</th>
<th>Capacity</th>
<th>Minimum display</th>
<th>Pan Size (mm) approx.</th>
<th>Main Body Dimensions (mm) approx.</th>
<th>Weight (kg) approx.</th>
<th>Power Requirement</th>
<th>Internal Calibration</th>
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<tbody>
<tr>
<td>ATX84</td>
<td>82 g</td>
<td>0.1mg</td>
<td>91 dia</td>
<td>213(W) x 356(D) x 338(H)</td>
<td>6.2</td>
<td>12V, 1A</td>
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<td>ATX124</td>
<td>120 g</td>
<td>0.1mg</td>
<td>91 dia</td>
<td>213(W) x 356(D) x 338(H)</td>
<td>6.2</td>
<td>12V, 1A</td>
<td>✓</td>
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<td>ATX224</td>
<td>220 g</td>
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<td>91 dia</td>
<td>213(W) x 356(D) x 338(H)</td>
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<td>0.1mg</td>
<td>91 dia</td>
<td>213(W) x 356(D) x 338(H)</td>
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<tr>
<td>ATY124</td>
<td>120 g</td>
<td>0.1mg</td>
<td>91 dia</td>
<td>213(W) x 356(D) x 338(H)</td>
<td>6.0</td>
<td>12V, 1A</td>
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<tr>
<td>ATY224</td>
<td>220 g</td>
<td>0.1mg</td>
<td>91 dia</td>
<td>213(W) x 356(D) x 338(H)</td>
<td>6.0</td>
<td>12V, 1A</td>
<td>✓</td>
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</table>

Data transfer port of ATX/ATY Series
UniBloc Top-Loading Balances

Top-Loading Balances

**UW/UX Series**

The new line of Shimadzu top-loading balances are engineered with the UniBloc mechanism resulting in unrivaled response, stability and durability. Powerful features support any imaginable weighing application. UW Series includes internal calibration and fully-automatic calibration functions.

**GLP/GMP/ISO calibration report**

Meets requirements of GLP/GMP/ISO9000. Calibration reports can be output with date and time, provided by the built-in clock.

**Analog display modes**

**Bar graph display**

Bar graph clearly indicates the total weight (including the tare) as a portion of the balance capacity.

**Target weighing**

Select a target weight and tolerance. The display clearly indicates when they are reached.

**Checkweighing**

Set an upper and lower threshold. The display continually indicates whether the sample is within the range “GO”, over range “HI” or under range “LO”. Choose one of two checkweighing bar graph display modes.

The results can also be output to external devices.

**PSC, fully-automatic calibration** (UW only)

Calibration is carried out when temperature change has been detected.

**Clock-CAL, fully-automatic calibration** (UW only)

Calibration carried out at user-preset times (up to three times a day). Operators can work without unexpected interruptions.
WindowsDirect (See p.9)
Weighed data can be directly typed into any Windows application and no interface software is required. If you’d like to use “WindowsDirect” with "Windows Vista", or USB port, please contact to our distributors.

Auto Print
Automatically outputs data as each measurement is made. Combination with WindowsDirect makes up a handy weigh-and-record system.

Auto Print and WindowsDirect

(1) Just place it on the pan
(2) Automatically sent to the cell

If you’d like to use “WindowsDirect” with "Windows Vista", or USB port, please contact to our distributors.

Backlight LCD
LCD with backlight can be read with ease and comfort under any lighting condition.

Unit conversion and piece counting function
Weight value can be presented in 22 different units and modes, including percentage, carat, specific gravity, lb, oz, and others. Users can pre-register any combination of units depending on their needs. Piece counting function is standard.

<table>
<thead>
<tr>
<th>Model</th>
<th>Pan type</th>
<th>Capacity</th>
<th>Minimum display</th>
<th>Pan size (mm) approx.</th>
</tr>
</thead>
<tbody>
<tr>
<td>UW220H*</td>
<td>Small-pan</td>
<td>220 g</td>
<td>0.001 g</td>
<td>108×105</td>
</tr>
<tr>
<td>UW420H*</td>
<td>Small-pan</td>
<td>420 g</td>
<td>0.001 g</td>
<td>108×105</td>
</tr>
<tr>
<td>UX620H*</td>
<td>Small-pan</td>
<td>620 g</td>
<td>0.001 g</td>
<td>108×105</td>
</tr>
<tr>
<td>UX820H</td>
<td>Small-pan</td>
<td>820 g</td>
<td>0.001 g</td>
<td>108×105</td>
</tr>
<tr>
<td>UX1020H</td>
<td>Small-pan</td>
<td>1020 g</td>
<td>0.001 g</td>
<td>108×105</td>
</tr>
<tr>
<td>UX2200H</td>
<td>Large-pan</td>
<td>2200 g</td>
<td>0.01 g</td>
<td>170×180</td>
</tr>
<tr>
<td>UX4200H</td>
<td>Large-pan</td>
<td>4200 g</td>
<td>0.01 g</td>
<td>170×180</td>
</tr>
<tr>
<td>UX6200H</td>
<td>Large-pan</td>
<td>6200 g</td>
<td>0.01 g</td>
<td>170×180</td>
</tr>
<tr>
<td>UX8200H</td>
<td>Large-pan</td>
<td>8200 g</td>
<td>0.1 g</td>
<td>170×180</td>
</tr>
</tbody>
</table>

*Models with minimum display of 0.001 g come with a standard windbreak.

All that you need to add is just one cable!

No communication software is required! Available as standard with AUW-D/AUW/AUX/AUY, ATX/ATY, UW/UX, TW/TX/TWC/TXB, BW-K/BX-K series, MOC-120H, MOC63u

Data transfer port of UW/UX Series

Model	| Pan type  | Capacity | Minimum display | Pan size (mm) approx. |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>UX220H*</td>
<td>Small-pan</td>
<td>220 g</td>
<td>0.001 g</td>
<td>108×105</td>
</tr>
<tr>
<td>UX320G</td>
<td>Small-pan</td>
<td>320 g</td>
<td>0.001 g</td>
<td>108×105</td>
</tr>
<tr>
<td>UX420H*</td>
<td>Small-pan</td>
<td>420 g</td>
<td>0.001 g</td>
<td>108×105</td>
</tr>
<tr>
<td>UX620H*</td>
<td>Small-pan</td>
<td>620 g</td>
<td>0.001 g</td>
<td>108×105</td>
</tr>
<tr>
<td>UX820H</td>
<td>Small-pan</td>
<td>820 g</td>
<td>0.001 g</td>
<td>108×105</td>
</tr>
<tr>
<td>UX1020H</td>
<td>Small-pan</td>
<td>1020 g</td>
<td>0.001 g</td>
<td>108×105</td>
</tr>
<tr>
<td>UX2200H</td>
<td>Large-pan</td>
<td>2200 g</td>
<td>0.01 g</td>
<td>170×180</td>
</tr>
<tr>
<td>UX3200G</td>
<td>Large-pan</td>
<td>3200 g</td>
<td>0.01 g</td>
<td>170×180</td>
</tr>
<tr>
<td>UX4200H</td>
<td>Large-pan</td>
<td>4200 g</td>
<td>0.01 g</td>
<td>170×180</td>
</tr>
<tr>
<td>UX6200H</td>
<td>Large-pan</td>
<td>6200 g</td>
<td>0.01 g</td>
<td>170×180</td>
</tr>
<tr>
<td>UX8200H</td>
<td>Large-pan</td>
<td>8200 g</td>
<td>0.01 g</td>
<td>170×180</td>
</tr>
<tr>
<td>UX420S</td>
<td>Small-pan</td>
<td>420 g</td>
<td>0.1 g</td>
<td>170×180</td>
</tr>
<tr>
<td>UX820H</td>
<td>Small-pan</td>
<td>820 g</td>
<td>0.1 g</td>
<td>170×180</td>
</tr>
<tr>
<td>UX420S</td>
<td>Large-pan</td>
<td>420 g</td>
<td>0.1 g</td>
<td>170×180</td>
</tr>
<tr>
<td>UX8200S</td>
<td>Large-pan</td>
<td>820 g</td>
<td>0.1 g</td>
<td>170×180</td>
</tr>
</tbody>
</table>
UniBloc Top-Loading Balances

Top-Loading Balances

TW/TX/TXB Series

TW

TX

TXB

The beginning of the new standard. Extremely capable, but easy to operate.

Internal Calibration (TW series only)
Calibration can be performed any time with a simple push-button operation.

Easy Setting

Easy Setting Best fit to weighing application
Quickly adjust the desired ratio of stability and response for every application, even during measurement, with one touch operation provided by the built-in clock.

Menu Operation Key

Menu Operation Key Easy to operate key layout
Menu navigation keys are separated from weighing operation keys and arranged in a familiar 5-way navigation circle. Up, Down, Right, Left and Enter are the simple steps of menu operation.

WindowsDirect (See p.9)
Weighed data can be directly typed into any Windows application and no interface software is required.
If you’d like to use “WindowsDirect” with “Windows 7” “Windows Vista”, or USB port, please contact to our distributors.

Can be used anywhere with battery power (TXB only)
Battery power the TXB series balances by AC adapter or batteries.

Power saving function
If you don’t operate for a given length time, power (TXB) or display (TX) can be turned off automatically.

<table>
<thead>
<tr>
<th>Model</th>
<th>Pan type</th>
<th>Capacity</th>
<th>Minimum display</th>
<th>Pan size (mm) approx.</th>
</tr>
</thead>
<tbody>
<tr>
<td>TX223L</td>
<td>Small-pan</td>
<td>220 g</td>
<td>0.001 g</td>
<td>ø110</td>
</tr>
<tr>
<td>TX323L</td>
<td>Small-pan</td>
<td>320 g</td>
<td>0.001 g</td>
<td>ø110</td>
</tr>
<tr>
<td>TX423L</td>
<td>Small-pan</td>
<td>420 g</td>
<td>0.001 g</td>
<td>ø110</td>
</tr>
<tr>
<td>TX2202L</td>
<td>Large-pan</td>
<td>2200 g</td>
<td>0.01 g</td>
<td>167(W)×181(D)</td>
</tr>
<tr>
<td>TX3202L</td>
<td>Large-pan</td>
<td>3200 g</td>
<td>0.01 g</td>
<td>167(W)×181(D)</td>
</tr>
<tr>
<td>TX4202L</td>
<td>Large-pan</td>
<td>4200 g</td>
<td>0.01 g</td>
<td>167(W)×181(D)</td>
</tr>
<tr>
<td>TW223L</td>
<td>Small-pan</td>
<td>220 g</td>
<td>0.001 g</td>
<td>ø110</td>
</tr>
<tr>
<td>TW323L</td>
<td>Small-pan</td>
<td>320 g</td>
<td>0.001 g</td>
<td>ø110</td>
</tr>
<tr>
<td>TW423L</td>
<td>Small-pan</td>
<td>420 g</td>
<td>0.001 g</td>
<td>ø110</td>
</tr>
<tr>
<td>TXB222L</td>
<td>Small-pan</td>
<td>220 g</td>
<td>0.01 g</td>
<td>ø110</td>
</tr>
<tr>
<td>TXB422L</td>
<td>Small-pan</td>
<td>420 g</td>
<td>0.01 g</td>
<td>ø110</td>
</tr>
<tr>
<td>TXB622L</td>
<td>Small-pan</td>
<td>620 g</td>
<td>0.01 g</td>
<td>ø110</td>
</tr>
<tr>
<td>TXB2201L</td>
<td>Large-pan</td>
<td>2200 g</td>
<td>0.1 g</td>
<td>ø160</td>
</tr>
<tr>
<td>TXB4201L</td>
<td>Large-pan</td>
<td>4200 g</td>
<td>0.1 g</td>
<td>ø160</td>
</tr>
<tr>
<td>TXB6201L</td>
<td>Large-pan</td>
<td>6200 g</td>
<td>0.1 g</td>
<td>ø160</td>
</tr>
<tr>
<td>TXB621L</td>
<td>Small-pan</td>
<td>620 g</td>
<td>0.1 g</td>
<td>ø110</td>
</tr>
<tr>
<td>TXB6200L</td>
<td>Large-pan</td>
<td>6200 g</td>
<td>1 g</td>
<td>ø160</td>
</tr>
</tbody>
</table>
Weighing gold in a local unit
Various weighing units including Tael (Hong Kong, Taiwan, Singapore, Malaysia, China) plus user-defined unit are available.

Counting coins or parts
Piece counting function is standard.

Pass/fail checkweighing
According to the user-preset thresholds, GO (pass), HI (over) or LO (under) will be displayed.

Production/sales management using computer
WindowsDirect function directly types the weighed results to any Windows application you are using (e.g. Excel) without interface software required. (TX series)
If you’d like to use “WindowsDirect” with “Windows 7” “Windows Vista”, or USB port, please contact to our distributors.

Internal Calibration (TW/TWC series only)
Calibration can be performed any time with a simple push-button operation.

Battery operation (TXB)
TXB may be operated with dry batteries. Suitable for sites where reliable power supply is not available.

*1 If you need PSC or timer calibration, please select UX/UW series.
*2 If a second display is required, please select UX/UW series.
UniBloc Precision Platform Balances

Precision Platform Balances

**BW-K/BX-K Series**

The Shimadzu Precision Platform balances have been engineered with the innovative UniBloc mechanism since 1989. Powerful features support any imaginable weighing application. BW-K Series includes internal calibration weight.

**GLP/GMP/ISO calibration report**

Meets requirements of GLP/GMP/ISO9000. Calibration reports can be output with date and time, provided by the built-in clock.

**Analog display modes**

**Bar graph display**

Bar graph clearly indicates the total weight (including the tare) as a portion of the balance capacity.

**Target weighing**

Select a target weight and tolerance. The display clearly indicates when they are reached.

**Checkweighing**

Set an upper and lower threshold. The display continually indicates whether the sample is within the range, “GO”; over range, “HI”; or under range, “LO”. Choose one of two checkweighing bargraph display modes.

**WindowsDirect (See p.9)**

Weighed data can be directly typed into any Windows application and no interface software is required. If you’d like to use "WindowsDirect" with "Windows 7” "Windows Vista", or USB port, please contact to our distributors.

**Large-size calibration weight** *(BW-K only)*

For accurate internal calibration. Calibration can be performed by simple lever operation.

<table>
<thead>
<tr>
<th>Model</th>
<th>Capacity</th>
<th>Minimum display</th>
<th>Pan size (mm) approx.</th>
<th>Calibration weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>BW12KH</td>
<td>12 kg</td>
<td>0.1 g</td>
<td>345x250</td>
<td>Built-in</td>
</tr>
<tr>
<td>BW22KH</td>
<td>22 kg</td>
<td>0.1 g</td>
<td>345x250</td>
<td>Built-in</td>
</tr>
<tr>
<td>BW32KH</td>
<td>32 kg</td>
<td>0.1 g</td>
<td>345x250</td>
<td>Built-in</td>
</tr>
<tr>
<td>BW32KS</td>
<td>32 kg</td>
<td>1 g</td>
<td>345x250</td>
<td>Built-in</td>
</tr>
<tr>
<td>BW52KS</td>
<td>52 kg</td>
<td>1 g</td>
<td>345x250</td>
<td>Built-in</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Model</th>
<th>Capacity</th>
<th>Minimum display</th>
<th>Pan size (mm) approx.</th>
<th>Calibration weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>BX12KH</td>
<td>12 kg</td>
<td>0.1 g</td>
<td>345x250</td>
<td>External</td>
</tr>
<tr>
<td>BX22KH</td>
<td>22 kg</td>
<td>0.1 g</td>
<td>345x250</td>
<td>External</td>
</tr>
<tr>
<td>BX32KH</td>
<td>32 kg</td>
<td>0.1 g</td>
<td>345x250</td>
<td>External</td>
</tr>
<tr>
<td>BX32KS</td>
<td>32 kg</td>
<td>1 g</td>
<td>345x250</td>
<td>External</td>
</tr>
<tr>
<td>BX52KS</td>
<td>52 kg</td>
<td>1 g</td>
<td>345x250</td>
<td>External</td>
</tr>
</tbody>
</table>
Analytical Balances, Top-Loading Balances

**Analytical Balances**

**AW/AX/AY Series**

**AW**

**AX**

**AY**

- Fully-automatic calibration; PSC (AW only)
  Calibration is carried out when temperature change has been detected.

- Clock-CAL function (AW only)
  Calibration carried out at user-preset times (up to three times a day).
  Operators can work without unexpected interruptions.

- GLP/GMP/ISO calibration report
  Meets requirements of GLP/GMP/ISO9000. Calibration reports can be output with date and time, provided by the built-in clock.

- WindowsDirect (See p.9)
  Weighed data can be directly typed into any Windows application and no interface software is required.
  If you'd like to use "WindowsDirect" with "Windows 7" "Windows Vista", or USB port, please contact to our distributors.

**Unit conversion**

Automatic unit conversion at the push of a button. Carat, and other units are standard.

---

**Top-Loading Balances**

**BL Series**

High-resolution balances made affordable

- Quick response
  Very fast response for operator comfort and efficiency.

- Piece counting function
  Piece counting function is standard.

- Analog bar graph display
  Remaining weighing capacity can be seen at a glance.

- Compact body
  This electro-magnetic precision balance is as compact as a portable scale.

---

**Model** | **Capacity** | **Minimum display** | **Pan size (mm)** | **Internal calibration** | **Internal calibration modes** | **Windows Direct**
---|---|---|---|---|---|---
AW320 | 320 g | 0.1 mg | 80 dia | ✓ | PSC, Clock-CAL, any time with key | ✓
AW220 | 220 g | 0.1 mg | 80 dia | ✓ | PSC, Clock-CAL, any time with key | ✓
AW120 | 120 g | 0.1 mg | 80 dia | ✓ | PSC, Clock-CAL, any time with key | ✓
AX200 | 200 g | 0.1 mg | 80 dia | ✓ | any time with key touch | ✓
AX120 | 120 g | 0.1 mg | 80 dia | ✓ | any time with key touch | ✓
AY220 | 220 g | 0.1 mg | 80 dia | ✓ | PSC, Clock-CAL, any time with key | ✓
AY120 | 120 g | 0.1 mg | 80 dia | ✓ | any time with key touch | ✓

**Models with minimum display of 0.001 g come with a standard windbreak.**
Portable Electronic Balances

Portacile Electronic Balances
ELB Series

Optional battery operation makes it readily portable with no compromise in accuracy.

High sensitivity and stability
Improved internal resolution provides extra accuracy.

Quick response
Stable results are quickly displayed.

Various application modes
Piece counting, percent display, and specific gravity modes are easily accessible.

Standard specific gravity software
Optional specific gravity kit is available for extra efficiency.

Digital stability control
User-selectable parameters for high-vibration environments provide dependable results.

Two-way power supply (AC or Battery operation)
Battery operation makes it portable.

<table>
<thead>
<tr>
<th>Model</th>
<th>Pan type</th>
<th>Capacity</th>
<th>Minimum display</th>
<th>Calibration weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>ELB120</td>
<td>Small-pan</td>
<td>120 g</td>
<td>0.01 g</td>
<td>110 dia</td>
</tr>
<tr>
<td>ELB200</td>
<td>Small-pan</td>
<td>200 g</td>
<td>0.01 g</td>
<td>110 dia</td>
</tr>
<tr>
<td>ELB300</td>
<td>Small-pan</td>
<td>300 g</td>
<td>0.01 g</td>
<td>110 dia</td>
</tr>
<tr>
<td>ELB600</td>
<td>Large-pan</td>
<td>600 g</td>
<td>0.05 g</td>
<td>170×130</td>
</tr>
<tr>
<td>ELB600S</td>
<td>Large-pan</td>
<td>600 g</td>
<td>0.1 g</td>
<td>170×130</td>
</tr>
<tr>
<td>ELB1200</td>
<td>Large-pan</td>
<td>1,200 g</td>
<td>0.1 g</td>
<td>170×130</td>
</tr>
<tr>
<td>ELB2000</td>
<td>Large-pan</td>
<td>2,000 g</td>
<td>0.1 g</td>
<td>170×130</td>
</tr>
<tr>
<td>ELB3000</td>
<td>Large-pan</td>
<td>3,000 g</td>
<td>0.1 g</td>
<td>170×130</td>
</tr>
<tr>
<td>ELB6000S</td>
<td>Large-pan</td>
<td>6,000 g</td>
<td>1 g</td>
<td>170×130</td>
</tr>
<tr>
<td>ELB12K</td>
<td>Large-pan</td>
<td>12,000 g</td>
<td>1 g</td>
<td>170×130</td>
</tr>
</tbody>
</table>

Totally portable
This whole system can be operated with dry batteries.
Application Balances

UniBloc Electronic Moisture Balance

MOC-120H

Large sample pan and capacity allow any sample to be placed for the best drying conditions. Reliable UniBloc weighing mechanism and unique continuous auto-tare system assure accurate measurements.

Large sample pan and continuous auto-tare mechanism
A larger sample pan contributes to accurate measurements, but the larger heat capacity of it normally results in a larger zero drift in the precision weighing.

The MOC-120H is equipped with a unique continuous auto-tare mechanism, which eliminates the zero drift continuously and ensures high accuracy, even with a larger sample pan.

UniBloc technology for precision weighing
Shimadzu’s UniBloc cell is used as the core mechanism of the weighing part. Its uniform structure maintains the high performance of precision weighing under repeated heating / cooling.

Mid-wave infrared quartz heater
Mid-wave infrared quartz heater provides effective drying for a wide range of samples. Besides the excellent drying performance, it offers a long operational life of 20,000 to 30,000 hours. Therefore, the long-term operational cost is much lower than halogen lamp heaters.

Predictive measuring mode
The final result can be predicted from the drying process, saving time in repeated measurements.

WindowsDirect (See p.9)
Complete sample data and instrument settings can be directly typed into any application on Windows and no interface software is required.

If you’d like to use “WindowsDirect” with “Windows 7” “Windows Vista”, or USB port, please contact to our distributors.

Optional Accessories

**Temperature calibration kit**
The temperature at the sample position can be directly measured.

**Electronic printer**
Measurements can be printed out in tabular or graphical style.

---

Shimadzu Electronic Balances

General Catalog 21
Application Balances

UniBloc Electronic Moisture Balance

MOC63u

Easy operation
—Automatic starting mode
Easy-to-operate software and key layout. Automatic starting mode saves measurement time.

Backlight display
Illuminated display provides comfortable display visibility in all settings.

Compact design
MOC63u is one of the most compact instruments in its class. Width is only 202 (mm).

Data management
—WindowsDirect and USB connection
The measurement conditions and data can be stored in MOC63u. Data I/O for printer, RS-232C and USB connection for PC are available as standard. Send balance data to Excel or other Windows applications.

Maintenance
It's very easy to clean up and replace the halogen lamp.

Large pan size
Large sample pan: 95-mm diameter

Long lifetime halogen heater
Halogen heater promises you quick and accurate measurement.

Data transfer port of MOC63u

Measurement data
With WindowsDirect

For food industry
Measurement data of soft flour

For chemical industry
Measurement data of resin pellet
Measurement modes of MOC63u
Choose the right measuring mode for your application.

Ending modes

Automatic ending mode
Automatically ends measurement when moisture loss over the previous 30 seconds becomes smaller than specified percentage.

Timed ending mode
Automatically ends measurement when the specified amount of time has elapsed.

Alternate drying modes

Rapid drying mode
First dries with the highest temperature for the specified period, then shifts to the specified temperature shortening measurement time.

Slow drying mode
Gently heats samples that might solidify at the surface or samples that reduce under high temperature.

Step drying mode
Allows step-by-step changes in drying conditions. This feature is useful when measuring samples that contain a large amount of water.

Starting mode

Automatic starting mode
Starts measurement immediately after closing the lid. It will save time in repeated measurement.

<table>
<thead>
<tr>
<th>Capacity</th>
<th>Max</th>
<th>60 g</th>
</tr>
</thead>
<tbody>
<tr>
<td>Min</td>
<td>0.02 g</td>
<td></td>
</tr>
<tr>
<td>Minimum readability</td>
<td>0.001 g</td>
<td></td>
</tr>
<tr>
<td>0.01/0.1% (Selectable)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Repeatability</td>
<td>0.15% (2 g)</td>
<td></td>
</tr>
<tr>
<td>0.05% (5 g)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0.02% (10 g)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Drying Heater</td>
<td>Straight type halogen heater</td>
<td></td>
</tr>
<tr>
<td>Power</td>
<td>400 W</td>
<td></td>
</tr>
<tr>
<td>Temperature range setting</td>
<td>50–200°C (1°C increments)</td>
<td></td>
</tr>
<tr>
<td>(There is a time restriction when exceeding 180°C.)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Display</td>
<td>LCD with backlight</td>
<td></td>
</tr>
<tr>
<td>Pan size</td>
<td>ø95 mm</td>
<td></td>
</tr>
<tr>
<td>Dimensions (W×D×H) mm</td>
<td>202 × 336 × 157</td>
<td></td>
</tr>
<tr>
<td>Weight</td>
<td>4 kg</td>
<td></td>
</tr>
<tr>
<td>Operational temperature and humidity range</td>
<td>5 to 40°C, 85% RH or lower</td>
<td></td>
</tr>
</tbody>
</table>
Application Balances

<table>
<thead>
<tr>
<th>SMK Specific Gravity Measurement Kits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Simple specific gravity meters based on precision balances.</td>
</tr>
</tbody>
</table>

Combine your Shimadzu balance with a specific gravity measurement kit for handy specific gravity measurements. Software for specific gravity measurement is pre-installed in all AUW-D / AUW / AUX / AUY, AW / AX / AY, UW / UX, and ELB Series.

Order one of the balances and the corresponding specific gravity measurement kit.

Liquid density can also be measured with a sinker (except for ELB Series).

Electronic Balances for Weighing Animals

<table>
<thead>
<tr>
<th>Animal Balances</th>
</tr>
</thead>
<tbody>
<tr>
<td>UW</td>
</tr>
<tr>
<td>UX</td>
</tr>
<tr>
<td>BW-K</td>
</tr>
<tr>
<td>BX-K</td>
</tr>
</tbody>
</table>

* When animal weighing mode is not used, all the functions indicated on p.14 and p.18 are available.

Dedicated software functions quick and reliable results in live animal weighing applications

Upon removing the weighed animal, the balance is automatically reset to zero regardless of deposited material. Display response and stability can be optimized for the level of animal movement conditions.

<table>
<thead>
<tr>
<th>Model</th>
<th>Balance Series</th>
<th>Reduced Capacity (approx.)</th>
<th>Sample Phase</th>
</tr>
</thead>
<tbody>
<tr>
<td>SMK-401</td>
<td>AUW-D/AUW/AUX/AUY</td>
<td>0 g</td>
<td>✓ ✓</td>
</tr>
<tr>
<td>SMK-301</td>
<td>AW/AX/AY</td>
<td>0 g</td>
<td>✓ ✓</td>
</tr>
<tr>
<td>SMK-101</td>
<td>UW/UX (Capacity 2200 g or more)</td>
<td>100 g</td>
<td>✓ ✓</td>
</tr>
<tr>
<td>SMK-102</td>
<td>UW/UX (Capacity 420 to 820 g)</td>
<td>270 g</td>
<td>✓ ✓</td>
</tr>
<tr>
<td>SMK-201S</td>
<td>ELB (Capacity 600 to 6000 g)</td>
<td>200 g</td>
<td>✓</td>
</tr>
</tbody>
</table>

A sinker is additionally needed for liquid density measurement.

<table>
<thead>
<tr>
<th>Model</th>
<th>Balance Series</th>
<th>Reduced Capacity (approx.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Small Animal Bucket set</td>
<td>UW/UX (Capacity 2200 g or more)</td>
<td>Bottom 110 dia, Top 200 dia, Height 130</td>
</tr>
<tr>
<td>Medium-size Animal Bucket set</td>
<td>BW-K</td>
<td>Bottom 305 x 215, Top 377 x 245, Height 215</td>
</tr>
<tr>
<td>Large Animal Bucket set</td>
<td>BW-K (Capacity 22 kg or more)</td>
<td>Bottom 335 x 245, Top 465 x 395, Height 345</td>
</tr>
</tbody>
</table>

*1 Capacity is reduced about 2 kg.
*2 Capacity is reduced about 6 kg.
Optional Accessories

**Electronic Printer**

|-------|-------|

**Common Features for EP-80 and EP-90**
- Simple connection to balances using the cable provided.
- Uses normal paper, suitable for long-term storage compatible with GLP/GMP/ISO (dot impact method).
- Operation can be powered by AC adapter or dry batteries
- Hassle-free long-use printer paper rolls (8000 lines of printing with one roll).
- High-speed printing at approx. 3 lines/sec (printer mechanism performance).
- Installed with statistical calculation function as standard.
- Can be used simultaneously with Shimadzu’s unique WindowsDirect function (output to computer).

**EP-90 Capable of Attaching Sample/ID Numbers, Date and Time to Each Measurement Result**
- Equipped with keyboard, capable of defining ID number (fixed input number), and sample number (number input and then increased automatically with each printing).
- Printing of date and time (when connected to an electronic balance with a built-in clock) can be controlled from the printer.
- Multiplication and comparator functionality built-in.

**Static Remover**

<table>
<thead>
<tr>
<th>STABLO-EX</th>
</tr>
</thead>
</table>

**Shimadzu’s unique 2-WAY ionizer**

**Secure static removal**
The excellent ion polarity balance achieved by the alternating method ensures:
- No inverse charging
- Wide angle static removal
- High performance maintained over a long period of use

**Space saving design**
Compact main unit requires minimal space. Holder height and angle are adjustable.

- Quickly discharge container or bulk samples with fan ON.
- For powdered samples, fan can be turned OFF.
- As a handheld unit
## Optional Accessories

### Accessories for Shimadzu Balances

<table>
<thead>
<tr>
<th>Optional accessories</th>
<th>AUW-D / AUW / AUX / AUY Series</th>
<th>ATX / ATY Series</th>
<th>AW / AX / AY Series</th>
<th>UW / UX</th>
<th>TX</th>
<th>TXB</th>
<th>BL</th>
<th>ELB</th>
<th>BW-K / BX-K</th>
<th>MOC-120H</th>
<th>MOC63u</th>
</tr>
</thead>
<tbody>
<tr>
<td>EP-80</td>
<td><img src="image1.png" alt="Image" /></td>
<td><img src="image2.png" alt="Image" /></td>
<td><img src="image3.png" alt="Image" /></td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>EP-90</td>
<td><img src="image4.png" alt="Image" /></td>
<td><img src="image5.png" alt="Image" /></td>
<td><img src="image6.png" alt="Image" /></td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>Printer for MOC-120H</td>
<td><img src="image7.png" alt="Image" /></td>
<td><img src="image8.png" alt="Image" /></td>
<td><img src="image9.png" alt="Image" /></td>
<td><img src="image10.png" alt="Image" /></td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>IFB-102A-UNC</td>
<td><img src="image11.png" alt="Image" /></td>
<td><img src="image12.png" alt="Image" /></td>
<td><img src="image13.png" alt="Image" /></td>
<td><img src="image14.png" alt="Image" /></td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>I/O–RS Cable</td>
<td><img src="image15.png" alt="Image" /></td>
<td><img src="image16.png" alt="Image" /></td>
<td><img src="image17.png" alt="Image" /></td>
<td><img src="image18.png" alt="Image" /></td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>AKB-301</td>
<td><img src="image19.png" alt="Image" /></td>
<td><img src="image20.png" alt="Image" /></td>
<td><img src="image21.png" alt="Image" /></td>
<td><img src="image22.png" alt="Image" /></td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>Windbreak WBC-102</td>
<td><img src="image23.png" alt="Image" /></td>
<td><img src="image24.png" alt="Image" /></td>
<td><img src="image25.png" alt="Image" /></td>
<td><img src="image26.png" alt="Image" /></td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>Large size windbreak WBC-502</td>
<td><img src="image27.png" alt="Image" /></td>
<td><img src="image28.png" alt="Image" /></td>
<td><img src="image29.png" alt="Image" /></td>
<td><img src="image30.png" alt="Image" /></td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
</tr>
</tbody>
</table>

### Optional accessories list

<table>
<thead>
<tr>
<th>Balances</th>
<th>Optional accessories</th>
</tr>
</thead>
<tbody>
<tr>
<td>AUW-D / AUW / AUX / AUY Series</td>
<td>Electronic Printer EP-80 / EP-90 &lt;br&gt;Foot Switch FSB-102TK (For taring) &lt;br&gt;Foot Switch FSB-102PK (For printing) &lt;br&gt;Specific Gravity Measurement Kit SMK-401 &lt;br&gt;Application Keyboard AKB-301 &lt;br&gt;RS-232C Cable, for IBM PC/AT Compatibles (25P-9P, Null modem, 1.5m)</td>
</tr>
<tr>
<td>ATX / ATY Series</td>
<td>Electronic Printer EP-80 / EP-90 &lt;br&gt;IFB-102A-UNC &lt;br&gt;USB Conversion Kit &lt;br&gt;In-use Protective Cover (5 pcs) &lt;br&gt;I/O–RS Cable</td>
</tr>
<tr>
<td>AW / AX / AY Series</td>
<td>Electronic Printer EP-80 / EP-90 &lt;br&gt;Foot Switch FSB-102TK (For taring) &lt;br&gt;Foot Switch FSB-102PK (For printing) &lt;br&gt;Specific Gravity Measurement Kit SMK-301 &lt;br&gt;RS-232C Cable, for IBM PC/AT Compatibles (25P-9P, Null modem, 1.5m)</td>
</tr>
</tbody>
</table>

### Optional Accessories for MOC-120H

- In-use Protective Cover (5 pcs)
- Interface for comparator IFB-RY1
- Comparator lamps 100V
- Comparator buzzer
- I/O–RS Cable

### Optional Accessories for MOC-63u

- In-use Protective Cover (5 pcs)
- Interface for comparator IFB-RY1
- Comparator lamps 100V
- Comparator buzzer
- I/O–RS Cable

*1 USB serial adaptor and RS-232C cable for MOC are needed.
*2 Not available in EU.
## Optional Accessories

### Shimadzu Electronic Balances

<table>
<thead>
<tr>
<th>Balances</th>
<th>Optional accessories</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Comparator Lamps 100V (needs IFB-RY1 and RY1 Connection Cable)</strong></td>
</tr>
<tr>
<td></td>
<td><strong>RS-232C Interface IFB-102A (for multiple connection)</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Small Size Windbreak (for models with capacity of 300 to 620 g only)</strong></td>
</tr>
<tr>
<td></td>
<td><strong>(Std Acc. for models with readability of 1 mg)</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Specific Gravity Measurement Kit SMK-101 (for models with capacity of 300 to 620 g)</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Specific Gravity Measurement Kit SMK-102 (for models with capacity of 420 to 820 g only)</strong></td>
</tr>
<tr>
<td></td>
<td><strong>In-use Protective Cover (5 pcs)</strong></td>
</tr>
<tr>
<td><strong>MOC63u</strong></td>
<td><strong>Printer EP-80</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Temperature calibration kit</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Printer EP-90</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Sample pan (SUS)</strong></td>
</tr>
<tr>
<td></td>
<td><strong>In-use protection cover for display (5 pcs)</strong></td>
</tr>
<tr>
<td></td>
<td><strong>RS-232C cable</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Aluminum sheet</strong></td>
</tr>
<tr>
<td></td>
<td><strong>USB connection cable</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Fiberglass sheet</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Halogen heater for replacement</strong></td>
</tr>
</tbody>
</table>

### Shimadzu Electronic Balances - General Catalog

- **USB conversion kit with RS-232C cable**
  - **Foot switch for print**: FSB-102PK
  - **Foot switch for TARE**: FSB-102TK
  - **Foot switch for print**: FSB-101P
  - **Foot switch for TARE**: FSB-101T
- **Specific gravity measurement kit**
  - **SMK-101, -102** (See p. 24)
  - **SMK-201** (for ELB large-pan model)
  - **SMK-301** (See p. 24)
  - **SMK-401** (AUW Series with SMK-401)
- **Battery for Balance**
  - The down trance is needed.
- **Interface for comparator IFB-RY1**
  - **Comparator lamps 100V** *(needs IFB-RY1 and RY1 Connection Cable)*
  - **Comparator buzzer** *(needs IFB-RY1 and RY1 Connection Cable)*

*1 USB serial adaptor and RS-232C cable for MOC are needed.
*2 Not available in EU.