

# PS X2 Precision Balances

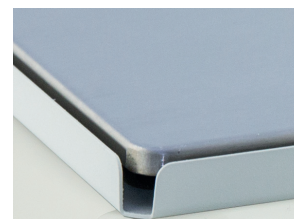
Advanced weighing under laboratory and less challenging industrial conditions



PS X2, d = 1 mg



PS X2, d = 10 mg



Draft shield for balances with Max > 6000 g



PS X2, d = 10 mg, Max > 6000 g



Single-point support for balance with Max > 6000 g

## Functions

- |                |                  |                       |                   |                                |
|----------------|------------------|-----------------------|-------------------|--------------------------------|
| Parts counting | Percent weighing | Density determination | Peak hold         | Ambient conditions measurement |
| Dosing         | Statistics       | Under hook weighing   | GLP procedures    | Replaceable unit               |
| Checkweighing  | Animal weighing  | Autotest              | Proximity sensors | Multilingual menu              |
| Formulations   |                  |                       |                   |                                |

## Features

### Reliable Results and High Measurement Precision

Excellent measurement parameters and performance enable applying PS X2 balances in laboratories and various branches of industry.

### Weighing Heavy Loads with the Maximum Accuracy

Due to an exceptionally wide range of capacities it is possible to work with samples of different weight, from few grams to even over one hundred kilograms.

### Ease of Use and Maximum Comfort of Operation

Thanks to a clear and intuitive menu layout and 5" colour touch screen, maximum comfort and incredibly easy operation are both ensured.

### Customization via Widgets

PS X2 software enables designing screen widgets layout. Display customization allows you to run any selected function directly from the home screen.

### Automatic Adjustment

Internal adjustment system guarantees the highest accuracy and reliable measurements results.

### Touch-Free Operation

Two programmable proximity sensors can be assigned with any function or application. The given function when assigned is both run and operated touch-free.

### Numerous Options of Data Management

The instrument enables saving all data of carried out measurements as reports and graphs.

## Technical Specifications

	PS 200/2000.X2	PS 210.X2	PS 360.X2
<b>Maximum capacity [Max]</b>	200 g / 2000 g	210 g	360 g
<b>Minimum load</b>	0.02 g	0.02 g	0.02 g
<b>Readability [d]</b>	0.001 g / 0.01 g	0.001 g	0.001 g
<b>Verification scale interval [e]</b>	0.01 g / 0.1 g	0.01 g	0.01 g
<b>Tare range</b>	- 2000 g	- 210 g	- 360 g
<b>Repeatability*</b>	0.001 g / 0.01 g	0.001 g	0.001 g
<b>Linearity</b>	±0.002 g / ±0.02 g	±0.002 g	±0.002 g
<b>Sensitivity temperature drift**</b>	$2 \times 10^{-6} / ^\circ\text{C} \times \text{Rt}$	$2 \times 10^{-6} / ^\circ\text{C} \times \text{Rt}$	$2 \times 10^{-6} / ^\circ\text{C} \times \text{Rt}$
<b>Minimum weight (U=1%, k=2)</b>	0.1 g	0.1 g	0.1 g
<b>Minimum weight (USP)</b>	1 g	1 g	1 g
<b>Stabilization time</b>	2 s / 1.5 s	2 s	2 s
<b>Adjustment</b>	internal	internal	internal
<b>Verification</b>	Yes	Yes	Yes
<b>OIML Class</b>	II	II	II
<b>Display</b>	5" capacitive colour touch screen	5" capacitive colour touch screen	5" capacitive colour touch screen
<b>Keypad</b>	6 keys	6 keys	6 keys
<b>Protection class</b>	IP 43	IP 43	IP 43
<b>Databases</b>	7	7	7
<b>Touch-free operation</b>	2 programmable proximity sensors	2 programmable proximity sensors	2 programmable proximity sensors
<b>USB-A</b>	1	1	1
<b>USB-B</b>	1	1	1
<b>RS 232</b>	2	2	2
<b>Wireless connection</b>	802.11 b/g/n	802.11 b/g/n	802.11 b/g/n
<b>IN/OUT</b>	10 / 100 Mbit	10 / 100 Mbit	10 / 100 Mbit
<b>Power supply</b>	12 ÷ 16 V DC	12 ÷ 16 V DC	12 ÷ 16 V DC
<b>Power consumption</b>	4 W	4 W	4 W
<b>Operating temperature</b>	+10 ÷ +40 °C	+10 ÷ +40 °C	+10 ÷ +40 °C
<b>Atmospheric humidity***</b>	40 ÷ 80%	40 ÷ 80%	40 ÷ 80%
<b>Transport and storage temperature</b>	-20 ÷ +50 °C	-20 ÷ +50 °C	-20 ÷ +50 °C
<b>Weighing pan dimensions</b>	128 × 128 mm	128 × 128 mm	128 × 128 mm
<b>Weighing device dimensions</b>	333 × 206 × 100 mm	333 × 206 × 100 mm	333 × 206 × 100 mm
<b>Net weight</b>	3.9 kg	3.7 kg	3.7 kg
<b>Gross weight</b>	5.5 kg	5.3 kg	5.3 kg
<b>Packaging dimensions</b>	470 × 380 × 340 mm	470 × 380 × 336 mm	470 × 380 × 340 mm

Rt net weight

\* repeatability is expressed as a standard deviation from 10 weighing cycles

\*\* parameter determined in the following temperature range: +15 ÷ +35 °C

\*\*\* non-condensing conditions

In accordance with type approval, the balance parameters are maintained in temperature range: +15 ÷ +35 °C.

	PS 600.X2	PS 750.X2	PS 1000.X2
Maximum capacity [Max]	600 g	750 g	1000 g
Minimum load	0.02 g	0.02 g	0.02 g
Readability [d]	0.001 g	0.001 g	0.001 g
Verification scale interval [e]	0.01 g	0.01 g	0.01 g
Tare range	-600 g	-750 g	-1000 g
Repeatability*	0.0015 g	0.0015 g	0.0015 g
Linearity	±0.003 g	±0.003 g	±0.003 g
Sensitivity temperature drift**	$2 \times 10^{-6} / ^\circ\text{C} \times R_t$	$2 \times 10^{-6} / ^\circ\text{C} \times R_t$	$2 \times 10^{-6} / ^\circ\text{C} \times R_t$
Minimum weight (U=1%, k=2)	0.1 g	0.1 g	0.1 g
Minimum weight (USP)	1 g	1 g	1 g
Stabilization time	2 s	2 s	2 s
Adjustment	internal	internal	internal
Verification	Yes	Yes	Yes
OIML Class	II	II	II
Display	5" capacitive colour touch screen	5" capacitive colour touch screen	5" capacitive colour touch screen
Keypad	6 keys	6 keys	6 keys
Protection class	IP 43	IP 43	IP 43
Databases	7	7	7
Touch-free operation	2 programmable proximity sensors	2 programmable proximity sensors	2 programmable proximity sensors
USB-A	1	1	1
USB-B	1	1	1
RS 232	2	2	2
Wireless connection	802.11 b/g/n	802.11 b/g/n	802.11 b/g/n
IN/OUT	10 / 100 Mbit	10 / 100 Mbit	10 / 100 Mbit
Power supply	12 ÷ 16 V DC	12 ÷ 16 V DC	12 ÷ 16 V DC
Power consumption	4 W	4 W	4 W
Operating temperature	+10 ÷ +40 °C	+10 ÷ +40 °C	+10 ÷ +40 °C
Atmospheric humidity***	40 ÷ 80%	40 ÷ 80%	40 ÷ 80%
Transport and storage temperature	-20 ÷ +50 °C	-20 ÷ +50 °C	-20 ÷ +50 °C
Weighing pan dimensions	128 × 128 mm	128 × 128 mm	128 × 128 mm
Weighing device dimensions	333 × 206 × 100 mm	333 × 206 × 100 mm	333 × 206 × 100 mm
Net weight	3.9 kg	3.9 kg	3.9 kg
Gross weight	5.5 kg	5.5 kg	5.5 kg
Packaging dimensions	470 × 380 × 340 mm	470 × 380 × 340 mm	470 × 380 × 340 mm

Rt net weight

\* repeatability is expressed as a standard deviation from 10 weighing cycles

\*\* parameter determined in the following temperature range: +15 ÷ +35 °C

\*\*\* non-condensing conditions

In accordance with type approval, the balance parameters are maintained in temperature range: +15 ÷ +35 °C.

	PS 1200.X2	PS 2100.X2	PS 3500.X2
<b>Maximum capacity [Max]</b>	1200 g	2100 g	3500 g
<b>Minimum load</b>	0.5 g	0.5 g	0.5 g
<b>Readability [d]</b>	0.01 g	0.01 g	0.01 g
<b>Verification scale interval [e]</b>	0.1 g	0.1 g	0.1 g
<b>Tare range</b>	-1200 g	-2100 g	-3500 g
<b>Repeatability*</b>	0.01 g	0.01 g	0.01 g
<b>Linearity</b>	±0.02 g	±0.02 g	±0.02 g
<b>Sensitivity temperature drift**</b>	$2 \times 10^{-6} / ^\circ\text{C} \times R_t$	$2 \times 10^{-6} / ^\circ\text{C} \times R_t$	$2 \times 10^{-6} / ^\circ\text{C} \times R_t$
<b>Minimum weight (U=1%, k=2)</b>	1 g	1 g	1 g
<b>Minimum weight (USP)</b>	10 g	10 g	10 g
<b>Stabilization time</b>	1.5 s	1.5 s	1.5 s
<b>Adjustment</b>	internal	internal	internal
<b>Verification</b>	Yes	Yes	Yes
<b>OIML Class</b>	II	II	II
<b>Display</b>	5" capacitive colour touch screen	5" capacitive colour touch screen	5" capacitive colour touch screen
<b>Keypad</b>	6 keys	6 keys	6 keys
<b>Protection class</b>	IP 43	IP 43	IP 43
<b>Databases</b>	7	7	7
<b>Touch-free operation</b>	2 programmable proximity sensors	2 programmable proximity sensors	2 programmable proximity sensors
<b>USB-A</b>	1	1	1
<b>USB-B</b>	1	1	1
<b>RS 232</b>	2	2	2
<b>Wireless connection</b>	802.11 b/g/n	802.11 b/g/n	802.11 b/g/n
<b>IN/OUT</b>	10 / 100 Mbit	10 / 100 Mbit	10 / 100 Mbit
<b>Power supply</b>	12 ÷ 16 V DC	12 ÷ 16 V DC	12 ÷ 16 V DC
<b>Power consumption</b>	4 W	4 W	4 W
<b>Operating temperature</b>	+10 ÷ +40 °C	+10 ÷ +40 °C	+10 ÷ +40 °C
<b>Atmospheric humidity***</b>	40 ÷ 80%	40 ÷ 80%	40 ÷ 80%
<b>Transport and storage temperature</b>	-20 ÷ +50 °C	-20 ÷ +50 °C	-20 ÷ +50 °C
<b>Weighing pan dimensions</b>	195 × 195 mm	195 × 195 mm	195 × 195 mm
<b>Weighing device dimensions</b>	333 × 206 × 100 mm	333 × 206 × 100 mm	333 × 206 × 100 mm
<b>Net weight</b>	4.3 kg	4.3 kg	4.5 kg
<b>Gross weight</b>	5.8 kg	5.8 kg	6 kg
<b>Packaging dimensions</b>	470 × 380 × 340 mm	470 × 380 × 340 mm	470 × 380 × 340 mm

Rt net weight

\* repeatability is expressed as a standard deviation from 10 weighing cycles

\*\* parameter determined in the following temperature range: +15 ÷ +35 °C

\*\*\* non-condensing conditions

In accordance with type approval, the balance parameters are maintained in temperature range: +15 ÷ +35 °C.

	PS 4500.X2	PS 6000.X2	PS 6001.X2
<b>Maximum capacity [Max]</b>	4500 g	6000 g	6000 g
<b>Minimum load</b>	0.5 g	0.5 g	0.5 g
<b>Readability [d]</b>	0.01 g	0.01 g	0.1 g
<b>Verification scale interval [e]</b>	0.1 g	0.1 g	0.1 g
<b>Tare range</b>	-4500 g	-6000 g	-6000 g
<b>Repeatability*</b>	0.01 g	0.015 g	0.1 g
<b>Linearity</b>	±0.2 g	±0.3 g	±0.1 g
<b>Sensitivity temperature drift**</b>	$2 \times 10^{-6} / ^\circ\text{C} \times R_t$	$2 \times 10^{-6} / ^\circ\text{C} \times R_t$	$2 \times 10^{-6} / ^\circ\text{C} \times R_t$
<b>Minimum weight (U=1%, k=2)</b>	1 g	1 g	1 g
<b>Minimum weight (USP)</b>	10 g	10 g	10 g
<b>Stabilization time</b>	1.5 s	1.5 s	1.5 s
<b>Adjustment</b>	internal	internal	internal
<b>Verification</b>	Yes	Yes	Yes
<b>OIML Class</b>	II	II	II
<b>Display</b>	5" capacitive colour touch screen	5" capacitive colour touch screen	5" capacitive colour touch screen
<b>Keypad</b>	6 keys	6 keys	6 keys
<b>Protection class</b>	IP 43	IP 43	IP 43
<b>Databases</b>	7	7	7
<b>Touch-free operation</b>	2 programmable proximity sensors	2 programmable proximity sensors	2 programmable proximity sensors
<b>USB-A</b>	1	1	1
<b>USB-B</b>	1	1	1
<b>RS 232</b>	2	2	2
<b>Wireless connection</b>	802.11 b/g/n	802.11 b/g/n	802.11 b/g/n
<b>IN/OUT</b>	10 / 100 Mbit	10 / 100 Mbit	10 / 100 Mbit
<b>Power supply</b>	12 ÷ 16 V DC	12 ÷ 16 V DC	12 ÷ 16 V DC
<b>Power consumption</b>	4 W	4 W	4 W
<b>Operating temperature</b>	+10 ÷ +40 °C	+10 ÷ +40 °C	+10 ÷ +40 °C
<b>Atmospheric humidity***</b>	40 ÷ 80%	40 ÷ 80%	40 ÷ 80%
<b>Transport and storage temperature</b>	-20 ÷ +50 °C	-20 ÷ +50 °C	-20 ÷ +50 °C
<b>Weighing pan dimensions</b>	195 × 195 mm	195 × 195 mm	195 × 195 mm
<b>Weighing device dimensions</b>	333 × 206 × 100 mm	333 × 206 × 100 mm	333 × 206 × 100 mm
<b>Net weight</b>	4.5 kg	4.8 kg	4.8 kg
<b>Gross weight</b>	6 kg	6.4 kg	6.4 kg
<b>Packaging dimensions</b>	470 × 380 × 340 mm	470 × 380 × 340 mm	470 × 380 × 340 mm

Rt net weight

\* repeatability is expressed as a standard deviation from 10 weighing cycles

\*\* parameter determined in the following temperature range: +15 ÷ +35 °C

\*\*\* non-condensing conditions

In accordance with type approval, the balance parameters are maintained in temperature range: +15 ÷ +35 °C.

	PS 6100.X2	PS 8100.X2	PS 10100.X2
Maximum capacity [Max]	6100 g	8100 g	10100 g
Minimum load	0.5 g	0.5 g	0.5 g
Readability [d]	0.01 g	0.01 g	0.01 g
Verification scale interval [e]	—	—	—
Tare range	– 6100 g	– 8100 g	– 10100 g
Repeatability*	0.01 g	0.012 g	0.015 g
Linearity	±0.3 g	±0.3 g	±0.3 g
Sensitivity temperature drift**	$2 \times 10^{-6} / ^\circ\text{C} \times R_t$	$2 \times 10^{-6} / ^\circ\text{C} \times R_t$	$2 \times 10^{-6} / ^\circ\text{C} \times R_t$
Minimum weight (U=1%, k=2)	1 g	1 g	1 g
Minimum weight (USP)	10 g	10 g	10 g
Stabilization time	1.5 s	1.5 s	1.5 s
Adjustment	internal	internal	internal
Verification	—	—	—
OIML Class	—	—	—
Display	5" capacitive colour touch screen	5" capacitive colour touch screen	5" capacitive colour touch screen
Keypad	6 keys	6 keys	6 keys
Protection class	IP 43	IP 43	IP 43
Databases	7	7	7
Touch-free operation	2 programmable proximity sensors	2 programmable proximity sensors	2 programmable proximity sensors
USB-A	1	1	1
USB-B	1	1	1
RS 232	2	2	2
Wireless connection	802.11 b/g/n	802.11 b/g/n	802.11 b/g/n
IN/OUT	10 / 100 Mbit	10 / 100 Mbit	10 / 100 Mbit
Power supply	12 ÷ 16 V DC	12 ÷ 16 V DC	12 ÷ 16 V DC
Power consumption	4 W	4 W	4 W
Operating temperature	+10 ÷ +40 °C	+10 ÷ +40 °C	+10 ÷ +40 °C
Atmospheric humidity***	40 ÷ 80%	40 ÷ 80%	40 ÷ 80%
Transport and storage temperature	–20 ÷ +50 °C	–20 ÷ +50 °C	–20 ÷ +50 °C
Weighing pan dimensions	195 × 195 mm	195 × 195 mm	195 × 195 mm
Weighing device dimensions	333 × 206 × 107 mm	333 × 206 × 107 mm	333 × 206 × 107 mm
Net weight	5.7 kg	5.7 kg	5.7 kg
Gross weight	7.3 kg	7.3 kg	7.3 kg
Packaging dimensions	470 × 380 × 340 mm	470 × 380 × 340 mm	470 × 380 × 340 mm

Rt net weight

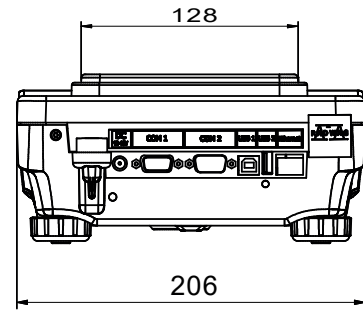
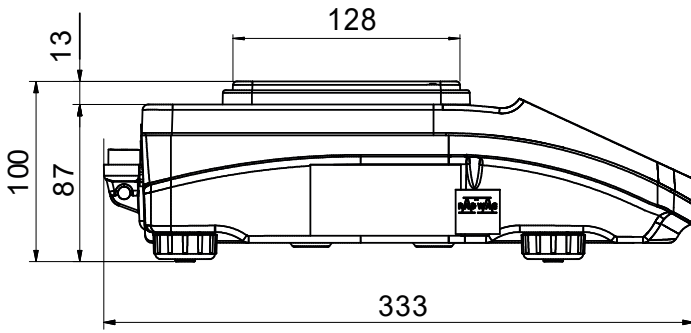
\* repeatability is expressed as a standard deviation from 10 weighing cycles

\*\* parameter determined in the following temperature range: +15 ÷ +35 °C

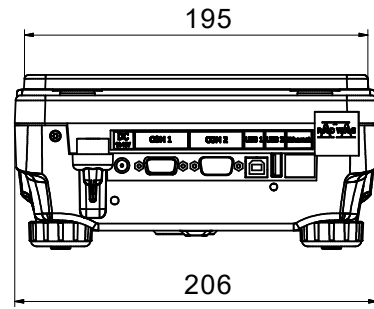
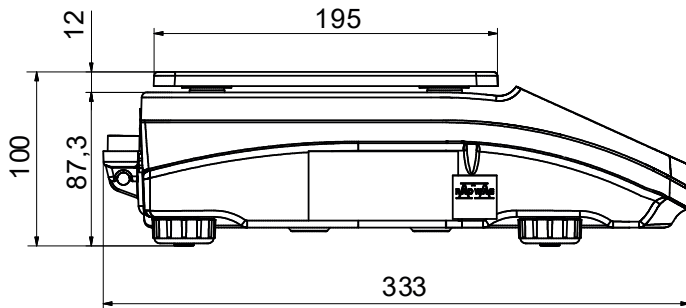
\*\*\* non-condensing conditions

In accordance with type approval, the balance parameters are maintained in temperature range: +15 ÷ +35 °C.

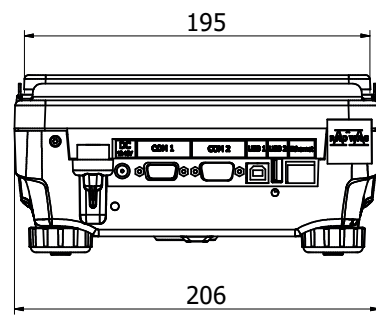
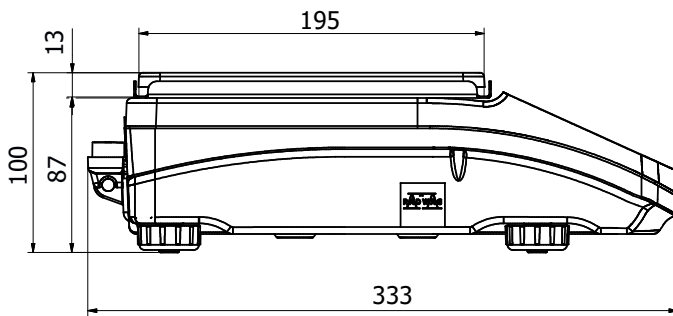
## Dimensions



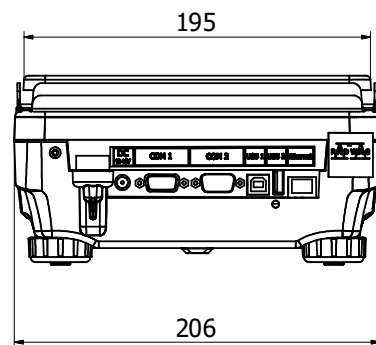
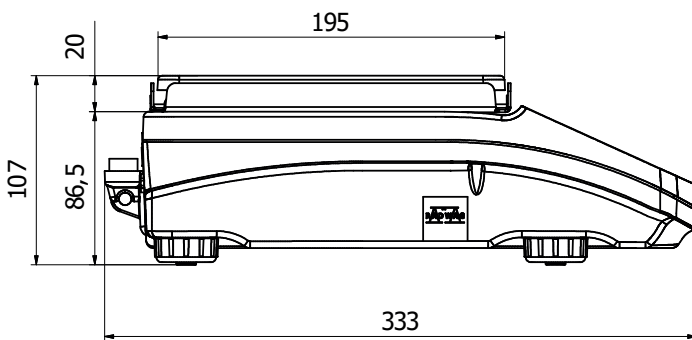
PS X2, d = 1 mg



PS X2, d = 10 mg



PS 6000.X2, PS 6001.X2



PS X2, d = 10 mg, Max  $\geq$  6100 g

## Accessories

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### **Weighing Tables**

- granite antivibration table
- antivibration tables for laboratory balances

### **Professional Weighing**

- KIT 128 density determination kit
- under-hook weighing rack

### **Ambient Conditions**

- THB-X ambient conditions module

### **Peripheral Devices**

- Epson dot matrix printer
- barcode scanners
- WD-6 LCD display

### **Cables, Converters**

- P0108: RS 232 cable (balance-computer)
- P0151: RS 232 cable (balance - Epson printer)
- USB cable type A-B

### **Electrical Accessories**

- ZR-02 power supply with battery

### **Draft Shields and Anti-Draft Chambers**

- draft shield with a weighing pan 128 x 128 mm
- anti-draft chamber with a weighing pan 128 x 128 mm

### **Remaining Accessories**

- suitcase for PS

## Dedicated Software

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### **LabView Driver**

- operation of RADWAG balances in LabView environment

### **R-LAB**

- collecting measurements
- carrying out statistical analysis of measurements
- customized graphs and reports

### **Alibi Reader**

- readout of data saved to Alibi memory
- export of data saved to Alibi memory
- data filtering and reports generating
- saving ALIBI database to CSV file