

# PS R1 Precision Balances

'Standard level' measurement for most laboratory and industrial processes



PS R1, d = 1 mg



PS R1, d = 10 mg



Communication interfaces



PS R1, d = 10 mg, Max > 6000 g



Large LCD display with text information section

## Functions

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

## Features

### Ease of Use and Measurements Accuracy

Combination of weighing accuracy and robust design enables applying PS R1 balances in most of the laboratory and industrial solutions.

### Perfect Readability and Clear Information Layout

Large, easy-to-read LCD display offers not only a clear presentation of the weighing result, but also enables displaying messages related to the drying process as well as pictograms of active functions and working modes.

### Quick Access to Selected Functions

Quick access keys located on the operation panel enable you to run a given function with just one click. You can assign some of the keys with a function of your choice.

### Data Management

PS R1 information system is based on operators, products, weighings and tares databases. All saved data can be analysed, exported, imported or exchanged between weighing instruments.

### ALIBI Memory

Internal ALIBI memory guarantees safety and automatic record of measurements copies, it also offers possibility to preview, copy and archive data.

## Technical Specifications

	PS 200/2000.R1	PS 600.R1	PS 750.R1	PS 1000.R1
<b>Maximum capacity [Max]</b>	200 g / 2000 g	600 g	750 g	1000 g
<b>Minimum load</b>	—	—	—	—
<b>Readability [d]</b>	0.001 g / 0.01 g	0.001 g	0.001 g	0.001 g
<b>Verification scale interval [e]</b>	—	—	—	—
<b>Tare range</b>	-2000 g	-600 g	-750 g	-1000 g
<b>Repeatability (5% Max)*</b>	0.0005 / 0.005 g	0.0005 g	0.0005 g	0.0005 g
<b>Repeatability (Max)</b>	0.001 / 0.01 g	0.001 g	0.0015 g	0.0015 g
<b>Linearity</b>	±0.002 g / ±0.02 g	±0.002 g	±0.003 g	±0.003 g
<b>Sensitivity temperature drift**</b>	$2 \times 10^{-6} / ^\circ\text{C} \times \text{Rt}$	$2 \times 10^{-6} / ^\circ\text{C} \times \text{Rt}$	$2 \times 10^{-6} / ^\circ\text{C} \times \text{Rt}$	$2 \times 10^{-6} / ^\circ\text{C} \times \text{Rt}$
<b>Minimum weight (U=1%, k=2)</b>	—	—	—	—
<b>Minimum weight (USP)</b>	—	—	—	—
<b>Stabilization time</b>	2 s / 1.5 s	2 s	2 s	2 s
<b>Adjustment</b>	external	external	external	external
<b>Verification</b>	—	—	—	—
<b>OIML Class</b>	—	—	—	—
<b>Display</b>	LCD (with backlight)	LCD (with backlight)	LCD (with backlight)	LCD (with backlight)
<b>Keypad</b>	14 keys	14 keys	14 keys	14 keys
<b>Protection class</b>	IP 43	IP 43	IP 43	IP 43
<b>Databases</b>	5	5	5	5
<b>USB-A</b>	1	1	1	1
<b>USB-B</b>	1	1	1	1
<b>RS 232</b>	2	2	2	2
<b>Wireless connection (option)***</b>	802.11 b/g/n	802.11 b/g/n	802.11 b/g/n	802.11 b/g/n
<b>Power supply</b>	12 ÷ 16 V DC	12 ÷ 16 V DC	12 ÷ 16 V DC	12 ÷ 16 V DC
<b>Power consumption</b>	4 W	4 W	4 W	4 W
<b>Operating temperature</b>	+10 ÷ +40 °C	+10 ÷ +40 °C	+10 ÷ +40 °C	+10 ÷ +40 °C
<b>Atmospheric humidity****</b>	40 ÷ 80%	40 ÷ 80%	40 ÷ 80%	40 ÷ 80%
<b>Transport and storage temperature</b>	-20 ÷ +50 °C	-20 ÷ +50 °C	-20 ÷ +50 °C	-20 ÷ +50 °C
<b>Weighing pan dimensions</b>	128 × 128 mm	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	333 × 206 × 100 mm
<b>Net weight</b>	3.2 kg	3.2 kg	3.2 kg	3.2 kg
<b>Gross weight</b>	4.8 kg	4.8 kg	4.8 kg	4.8 kg
<b>Packaging dimensions</b>	470 × 380 × 340 mm	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

\*\*\* optional solution on purchase order

\*\*\*\* non-condensing conditions

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

	PS 3500.R1	PS 4500.R1.M	PS 6100.R1.M
Maximum capacity [Max]	3500 g	4500 g	6100 g
Minimum load	—	—	—
Readability [d]	0.01 g	0.01 g	0.01 g
Verification scale interval [e]	—	—	—
Tare range	–3500 g	–4500 g	–6100 g
Repeatability (5% Max)*	0.005 g	0.005 g	0.005 g
Repeatability (Max)	0.01 g	0.008 g	0.008 g
Linearity	±0.02 g	±0.03 g	±0.03 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)	—	—	—
Minimum weight (USP)	—	—	—
Stabilization time	1.5 s	1.5 s	1.5 s
Adjustment	external	external	external
Verification	—	—	—
OIML Class	—	—	—
Display	LCD (with backlight)	LCD (with backlight)	LCD (with backlight)
Keypad	14 keys	14 keys	14 keys
Protection class	IP 43	IP 43	IP 43
Databases	5	5	5
USB-A	1	1	1
USB-B	1	1	1
RS 232	2	2	2
Wireless connection (option)***	802.11 b/g/n	802.11 b/g/n	802.11 b/g/n
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 × 100 mm	333 × 206 × 107 mm	333 × 206 × 107 mm
Net weight	3.6 kg	4.5 kg	4.5 kg
Gross weight	5.1 kg	6.1 kg	6.1 kg
Packaging dimensions	470 × 380 × 336 mm	470 × 380 × 336 mm	470 × 380 × 336 mm

Rt net weight

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

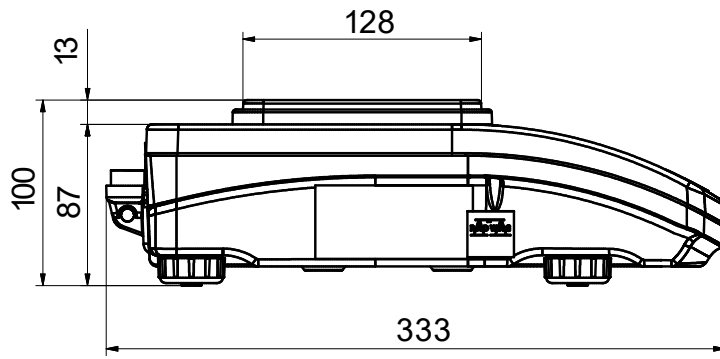
\*\* parameter determined in the following temperature range: +15 ÷ +35 °C

\*\*\* optional solution on purchase order

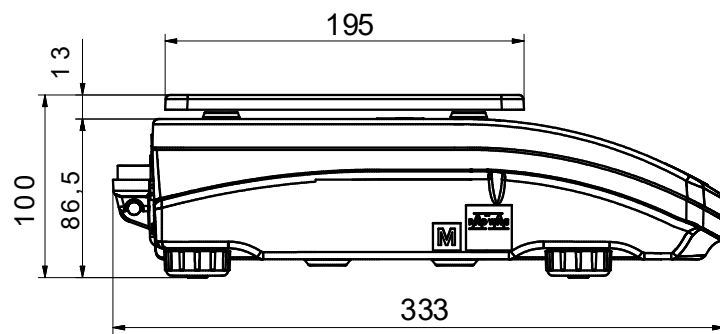
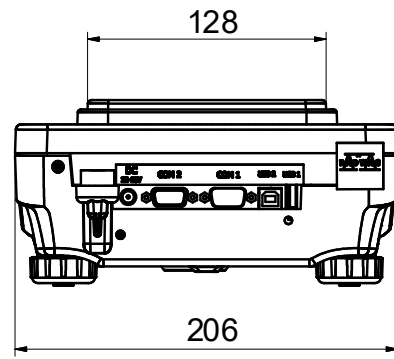
\*\*\*\* non-condensing conditions

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

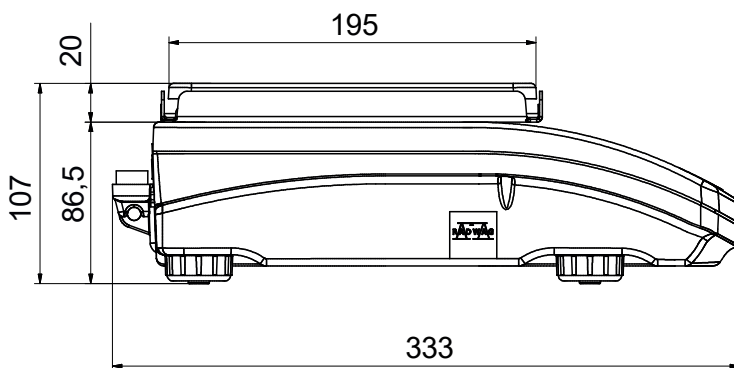
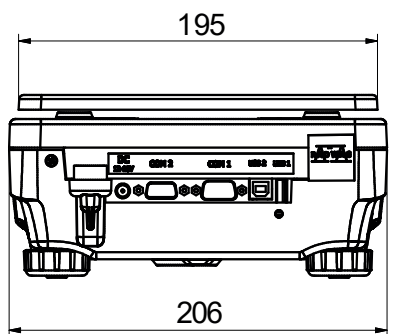
## Dimensions



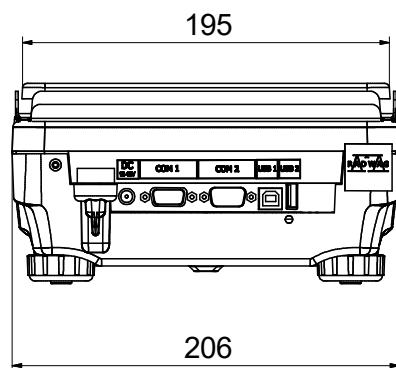
PS R1, d = 1 mg



PS R1, d = 10 mg



PS R1, d = 10 mg, Max  $\geq$  6000 g



## Accessories

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### Weighing Tables

- granite antivibration table
- antivibration tables for laboratory balances
- professional weighing table

### Professional Weighing

- KIT 195 density determination kit
- KIT 128 density determination kit
- under-hook weighing rack

### Peripheral Devices

- label printer
- receipt printer
- 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
- AP2-1 power loop output

### Electrical Accessories

- power supply with ZR-02 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
- protective cover for PS.R series indicator

### Remaining Accessories

- suitcase for PS
- panel box

## Dedicated Software

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### R-LAB

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

### E2R Weighing Records

- complete, automated databases synchronization
- fully supported processes of labelling and parts counting
- record of weighings, weighings archiving
- basic and advanced (with graphs) reports

### RAD KEY

- Establishing cooperation between a weighing instrument and a computer

### R.Barcode

- The basic function software is presentation of the data sent by barcode scanners connected to PC via USB or RS232

### Radwag Development Studio

- presentation of functions (and subfunctions) of communication protocol (Common Communication Protocol)
- possibility of connection with weighing equipment on which each function is carried out,
- library with mass control, contained within the development environment
- complete documentation of the communication protocol
- set of user manuals for different solutions addressed for programmers employed in companies using RADWAG-manufactured weighing equipment

### LabView Driver

- operation of RADWAG balances in LabView environment

### RADWAG Connect

- establishing communication with all balances, scales and weighing modules using Common Communication Protocol
- communication via local network,
- support of basic functions
- auto searching for devices
- connecting with few devices simultaneously, swapping between them
- clear list of connected platforms
- record of measurements in the program,
- export of carried out measurements to CSV file,
- work performed using freely selected device with Windows 10 operating system

### 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

### R Panel

- operator access to all keys and functions that are to be found on an operation panel
- communication via COM1, COM2 or USB,
- compatible with: Windows Vista, 7, 8, 8.1, 10, Server 2008R2, 2012, 2016.