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 110.R1	PS 200/2000.R1	PS 210.R1	PS 360.R1
Maximum capacity [Max]	110 g	200 g / 2000 g	210 g	360 g
Minimum load	0.02 g	0.02 g	0.02 g	0.02 g
Readability [d]	0.001 g	0.001 g / 0.01 g	0.001 g	0.001 g
Verification scale interval [e]	—	—	—	—
Tare range	−110 g	−2000 g	−210 g	−360 g
Repeatability (5% Max)*	0.0005 g	0.0005 / 0.005 g	0.0005 g	0.0005 g
Repeatability (Max)	0.001 g	0.001 / 0.01 g	0.001 g	0.001 g
Linearity	±0.002 g	±0.002 g / ±0.02 g	±0.002 g	±0.002 g
Sensitivity temperature drift**	2×10^{-6} / ℃ × Rt	2×10^{-6} / ℃ × Rt	2×10^{-6} / ℃ × Rt	2×10^{-6} / ℃ × Rt
Minimum weight (U=1%, k=2)	0.1 g	0.1 g	0.1 g	0.1 g
Minimum weight (USP)	1 g	1 g	1 g	1 g
Stabilization time	2 s	2 s / 1.5 s	2 s	2 s
Adjustment	external	external	external	external
Verification	—	—	—	—
OIML Class	—	—	—	—
Display	LCD (with backlight)	LCD (with backlight)	LCD (with backlight)	LCD (with backlight)
Keypad	14 keys	14 keys	14 keys	14 keys
Protection class	IP 43	IP 43	IP 43	IP 43
Databases	5	5	5	5
USB-A	1	1	1	1
USB-B	1	1	1	1
RS 232	2	2	2	2
Wireless connection (option)***	802.11 b/g/n	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	12 ÷ 16 V DC
Power consumption	4 W	4 W	4 W	4 W
Operating temperature	+10 ÷ +40 ℃	+10 ÷ +40 ℃	+10 ÷ +40 ℃	+10 ÷ +40 ℃
Atmospheric humidity***	40 ÷ 80%	40 ÷ 80%	40 ÷ 80%	40 ÷ 80%
Transport and storage temperature	−20 ÷ +50 ℃	−20 ÷ +50 ℃	−20 ÷ +50 ℃	−20 ÷ +50 ℃
Weighing pan dimensions	128 × 128 mm	128 × 128 mm	128 × 128 mm	128 × 128 mm
Weighing device dimensions	333 × 206 × 100 mm	333 × 206 × 100 mm	333 × 206 × 100 mm	333 × 206 × 100 mm
Net weight	3.2 kg	3.2 kg	3.2 kg	3.2 kg
Gross weight	4.8 kg	4.8 kg	4.8 kg	4.8 kg
Packaging dimensions	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 ℃
***   optional solution on purchase order
****   non-condensing conditions
In accordance with type approval, the balance parameters are maintained in temperature range: +15 ÷ +35 ℃.

	PS 510.R1	PS 750.R1	PS 1000.R1
Maximum capacity [Max]	510 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]	—	—	—
Tare range	−510 g	−750 g	−1000 g
Repeatability (5% Max)*	0.0005 g	0.0005 g	0.0005 g
Repeatability (Max)	0.0015 g	0.0015 g	0.0015 g
Linearity	±0.002 g	±0.003 g	±0.003 g
Sensitivity temperature drift**	2×10^{-6} / ℃ × Rt	2×10^{-6} / ℃ × Rt	2×10^{-6} / ℃ × Rt
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	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 ℃	+10 ÷ +40 ℃	+10 ÷ +40 ℃
Atmospheric humidity***	40 ÷ 80%	40 ÷ 80%	40 ÷ 80%
Transport and storage temperature	−20 ÷ +50 ℃	−20 ÷ +50 ℃	−20 ÷ +50 ℃
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	3.2 kg	3.2 kg	3.2 kg
Gross weight	4.8 kg	4.8 kg	4.8 kg
Packaging dimensions	470 × 380 × 340 mm	470 × 380 × 340 mm	470 × 380 × 340 mm

Rt   net weight
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	PS 1200.R1	PS 2100.R1	PS 3500.R1
Maximum capacity [Max]	1200 g	2100 g	3500 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	−1200 g	−2100 g	−3500 g
Repeatability (5% Max)*	0.005 g	0.005 g	0.005 g
Repeatability (Max)	0.01 g	0.01 g	0.01 g
Linearity	±0.02 g	±0.02 g	±0.02 g
Sensitivity temperature drift**	$2 \times 10^{-6} / \,°C \times Rt$	$2 \times 10^{-6} / \,°C \times Rt$	$2 \times 10^{-6} / \,°C \times Rt$
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	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 × 100 mm	333 × 206 × 100 mm
Net weight	3.6 kg	3.6 kg	3.6 kg
Gross weight	5.1 kg	5.1 kg	5.1 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.

	PS 4500.R1	PS 6000.R1	PS 6001.R1
Maximum capacity [Max]	4500 g	6000 g	6000 g
Minimum load	0.5 g	0.5 g	0.5 g
Readability [d]	0.01 g	0.01 g	0.1 g
Verification scale interval [e]	—	—	—
Tare range	−4500 g	−6000 g	−6000 g
Repeatability (5% Max)*	0.005 g	0.05 g	0.05 g
Repeatability (Max)	0.01 g	0.1 g	0.1 g
Linearity	±0.02 g	±0.03 g	±0.1 g
Sensitivity temperature drift**	$2 \times 10^{-6} / °C \times Rt$	$2 \times 10^{-6} / °C \times Rt$	$2 \times 10^{-6} / °C \times Rt$
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	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 × 100 mm	333 × 206 × 100 mm
Net weight	3.6 kg	3.9 kg	3.9 kg
Gross weight	5.1 kg	5.4 kg	5.4 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
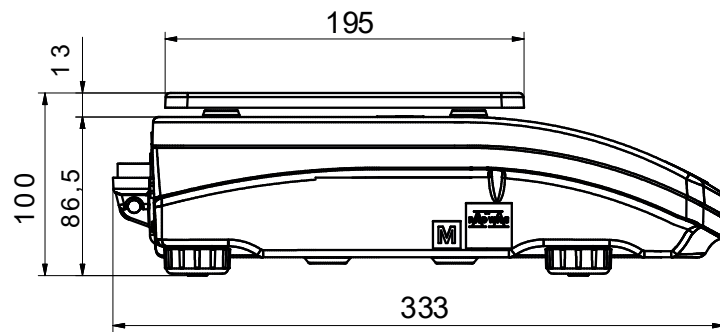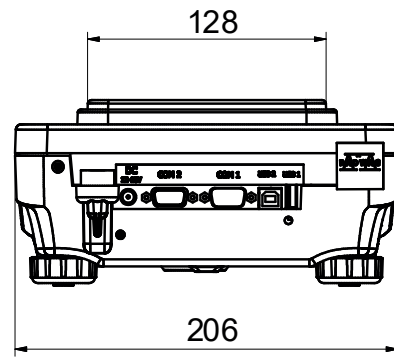***   optional solution on purchase order
****   non-condensing conditions
In accordance with type approval, the balance parameters are maintained in temperature range: +15 ÷ +35 °C.
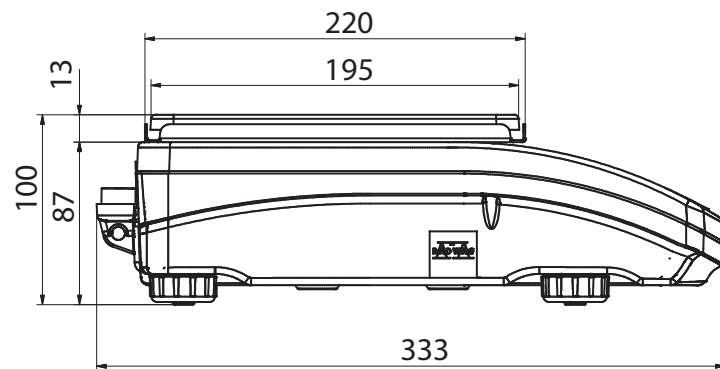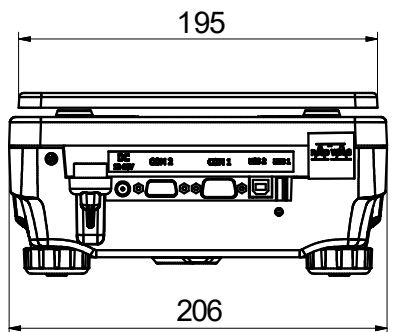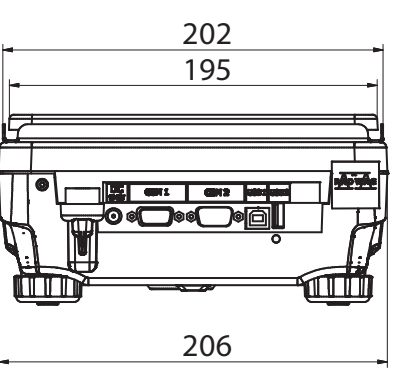
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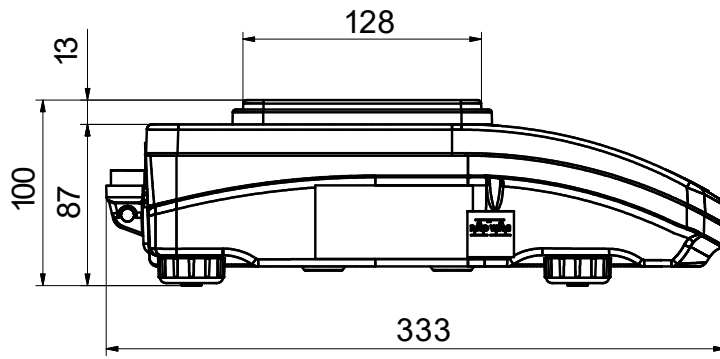
PS R1, d = 1 mg

PS R1, d = 10 mg

PS R1, d = 10 mg, Max ≥ 6000 g

Accessories

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

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.