R Series Balances

Innovative Technology - Even More Possibilities

R series balances

Examine the enhanced possibilities of the innovative high-tech R series balances when it comes to balance operation and presentation of measurement results.

R series balances represent the standard level of precision balances. The series has been equipped with an easily readable LCD display providing you with even clearer result presentation. To maximize comfort of operation, the display has been enriched with an extra text line supplying you with either information or prompts on the weighing process (product name, tare value, etc.).

A pioneering innovation of R series balances is a set of symbols showing you a current working mode, type of connection with a computer, battery state, weighing and service functions. Additionally now there are even more weighing units at your disposal (g, mg, etc.). Weighing results are recorded in ALIBI memory.

The new series features plastic housing and a stainless steel weighing pan. With the possibility of weighbridge-free weighing (so called, under-pan weighing), wherein the load is suspended under the balance, the R series balances are an indispensable tool for any user.

Home screen

A Symbols

B Extra text line

C Direct access to databases

D Access to a particular working mode functions

E Working mode selection

F Direct start-up of balance adjustment procedure

G Transfer of display state to a peripheral device

H Navigation buttons

AS R2
analytical balances

Maximum capacity [Max]:	up to 310 g
Readability [d]:	from 0.01 mg
Weighing pan dimensions:	ø90 mm, ø100 mm, ø85 mm (option)

PS R1
precision balances

Maximum capacity [Max]:	up to 6000 g
Readability [d]:	from 1 mg
Weighing pan dimensions:	128 × 128 mm, 195 × 195 mm

PS R2
precision balances

Maximum capacity [Max]:	up to 10100 g
Readability [d]:	from 1 mg
Weighing pan dimensions:	128 × 128 mm, 195 × 195 mm

MA R
moisture analyzers

Maximum capacity [Max]:	up to 210 g
Readability [d]:	from 0.1 mg
Weighing pan dimensions:	ø 90 mm, h = 8 mm

RIES

Quality
and precision

Auto-Cal
automatic system of adjustment procedure

Auto-Cal system is a tool for control and correction. It provides accurate weighing regardless of temperature variation, the position of the balance or changing environmental conditions. This allows the R series balances to offer accuracy in all conditions.
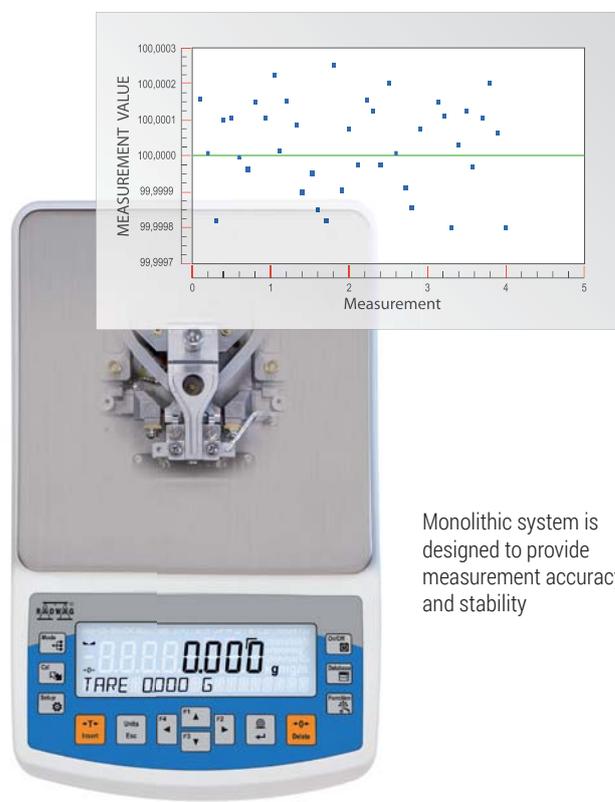

An in-built adjustment weight offers weighing accuracy in any working conditions.

The built-in adjustment weight has been designed to maintain accurate indications. Discover that with our automatic or semi-automatic adjustment procedure, performed periodically, you may grow confident about your weighing results' accuracy. The adjustment system guarantees that accurate weighing results are obtained even for challenging working conditions. It is used for GLP, GMP control procedures.

Repeatability
of indications

The monolithic system ensures even greater accuracy and repeatability of weighing due to consolidation of elements of the balance's mechanical design. Using such technology results in higher quality balances.

Monolithic system is designed to provide measurement accuracy and stability

Owing to the monolithic systems, R series balances offer fast measurement and excellent repeatability. These up-to-date design solutions, being highly resistant to transport shocks, are characterized by good metrological parameters.

Accuracy
in all conditions

Operating temperature range

Now, owing to a wider working temperature range, you don't have to monitor and adjust the room temperature, affecting your balance stability, over and over again.

+ 10 °C   **+ 40 °C**

Resistance to ambient conditions

Increased resistance to fluctuating ambient conditions such as breezes and changes in humidity provides more accurate measurements.

air drafts   **humidity**

Ambient conditions monitoring

Stable ambient temperature is a key factor when it comes to accuracy of balance indications. The R series balances feature an ergonomic diagnostic tool, namely, automatic monitoring of your balance temperature. Dynamics of balance temperature variation is registered online. When limit values have been exceeded, a thermometer symbol is displayed on the balance screen. In these cases, it is advisable to stabilize the balance.

You may find ambient conditions monitoring especially useful when installing the balance at its place of use. This solution may also turn out to be exceptionally valuable when observing ambient temperature variation.

Functionality
and ergonomics

Direct access to information

Direct access to functions and databases is possible through the quick access buttons on the display.

Database - direct access to database,
Function - direct access to basic functions,
F1 to **F4** - programmable function buttons and menu navigation.

An extra text line

An extra text line provides you with either information or prompts on the weighing process, e.g. product name or tare value.

Communication interface

The exchange of database information between the devices has become even easier thanks to two USB ports (type A and B) and Wireless Module technology.

Databases ergonomics for your weighing process

You certainly will appreciate information system of R series balances. The system is based on 5 databases: users database (10 different operators), products database (1000 different products), weighments database (1000 different measurements), tares database (10 different packaging weights). When operating the new R series balances you can analyze particular measurements in details, export or import any data and exchange.

Weighing process visualization

Symbols and units

The R series offers a priceless set of intuitive symbols signalling current working mode, computer connection type, battery status, function that is in operation and much more. The symbols add to readout clarity, they provide maximum comfort of operation and increase of ergonomics. These symbols are not only helpful but offer a wider choice of units.

Bar Graph visual representation of load capacity

The bar graph indicates the load capacity change in real time. The bar graph can be operated for various working modes with threshold markers, e.g. parts counting, dosing, percent weighing, animal weighing, statistics, totaling, peak hold or checkweighing.

Minimum value   Maximum value

Mass value lower than the value of minimum threshold

Minimum value   Maximum value

Mass value contained within thresholds

Minimum value   Maximum value

Mass value higher than the value of maximum threshold
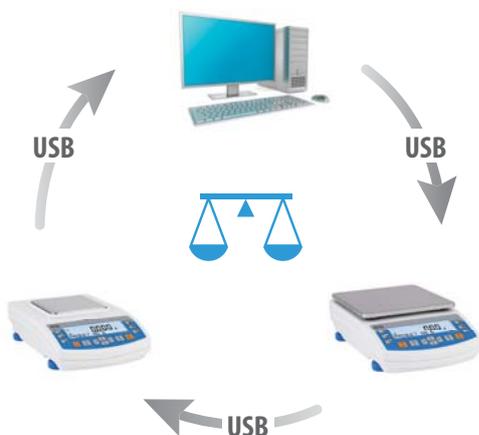
Databases security

Data protection

Access to the secured sensitive data is only possible when logged in. The access rights for each operator are set up at the administrator level.

Archiving and data exchange

Save your data and transfer reports on performed processes and partial measurements to external devices via USB interface. This interface allows you to control the working process. Not only can you restore the data but also copy your settings from one balance to another.

ALIBI memory

ALIBI memory is non-deletable storage, protecting weighing data It has the capacity of up to 100 000 weighing records. This ensures both, security and flexibility of storing data over longer periods of time.

Export of data recorded in balance Alibi memory

USB

Recording data on the USB flash drive.

Find out how useful ALIBI Reader PC software is. This application offers preview of all measurements recorded in balance Alibi memory. In addition, the software provides you with an option of printing and exporting selected data and with an option of generating reports in PDF and CSV format (MS Excel).

Reports
and printouts

Configurable printouts

In the new R series balances the weighing reports are divided into 3 configurable sections, each of which can be fully customized.

```
----------------------------------------
Working mode                    Weighing
Date                          18.09.2016
Time                            11:36:36
Balance type                   AS 220.R2
Balance ID                          2035
Product                             PILL

Tare                            0.5000 g
Gross weight                    1.3020 g
Net weight                      0.8020 g

User                           Tom Smith

----------- Calibration Report ----------
Calibration type                Internal
User                           Tom Smith
Project                     124/SGW/2016
Date                          18.09.2016
Time                            12:56:10
Balance ID                          1035
Calibration difference          0.0000 g
----------------------------------------

Signature

----------------------------------------
```
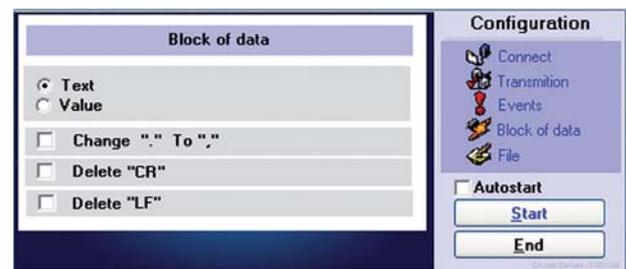
The new R series balances work with the printers that support PCL protocol. The printers are connected with the balances via USB interface.

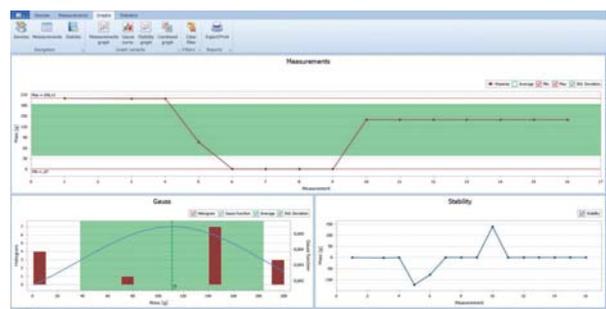## Cooperation with R-Lab / RAD-KEY PC Software

R series balances offer the possibility of sending printouts directly to R-Lab and RAD-KEY PC Software. The measurements can be transferred via Wireless Connection, RS232 or USB interface. Decide which one suits your needs the best and go.

RAD-KEY PC Software is designed to capture your balance data which is next inserted into a spreadsheet cell, for example.

R-Lab software enables scale preview and generating both weighings and statistics graphs.

Technical specification

	AS R2	PS R1	PS R2
Maximum capacity [Max]	60 g - 310 g	110 g - 6000 g	200 g - 10100 g
Readability [d]	0.01 mg - 0.1 mg	1 mg - 100 mg	1 mg - 100 mg
Weighing pan dimensions	ø90 mm, ø100 mm, ø85 mm (option)	128 × 128 mm, 195 × 195 mm	128 × 128 mm, 195 × 195 mm
Stabilization time	3.5 s - 6 s	1.5 s - 2 s	1.5 s - 2 s
Adjustment	internal (automatic)	external	internal (automatic)
Display	LCD (backlit)	LCD (backlit)	LCD (backlit)
Communication Interfaces	2 × RS 232, USB-A, USB-B, Wireless Connection (option)	2 × RS 232, USB-A, USB-B, Wireless Connection (option)	2 × RS 232, USB-A, USB-B, Wireless Connection (option)
Verification	YES	–	YES

Optional equipment

- Barcode readers,
- PLC printers,
- USB keyboards,
- Rack for under-pan weighing,
- Anti-vibration table,
- Anti-draft shield,
- LCD WD-6 display,
- Density determination kit (for solids and liquids)

Services

In order to support the R series balances, RADWAG range includes:

- balances adjustment,
- validation IQ/QQ/PQ
- periodic verification audits.

MA R

Maximum capacity [Max]	50 g - 210 g
Readability [d]	0.1 mg - 1 mg
Weighing pan dimensions	ø90 mm, h = 8 mm
Moisture readout accuracy	0,0001 % - 0,001 %
Drying temperature range	max 160°C (option: max 250°C)
Heating module	IR emitter, halogen (option), metal heater (option)
Display	LCD (backlit)
Communication Interfaces	2 × RS 232, USB-A, USB-B, Wireless Connection (option)

Functions and technical specification of device are subject to change without prior notice

PC Software

- **PW Win:**
  Scales preview, weighing graphs and statistics graphs

- **Database Editor:**
  Readout, databases editing and record of computer stored databases on balance

- **RAD Key:**
  Balance data readout carried out by means of Hot Key

READ
QR CODE

and view complete technical specification of all R series balances

RADWAG Balances and Scales