AS R Analytical Balances

Versatility of solutions along with accuracy and reliability of the measurements for instruments of economic class

AS.R, d = 0,01 mg

AS.R, d = 0,1 mg

Communication interfaces

Large LCD display with text information section

Functions

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

Features

Ease of Use and Measurements Accuracy
Combination of operation simplicity, measurement accuracy and robust design enables applying AS R balances in majority of the universal laboratory solutions.

Measurements Precision and Repeatability
Automatic adjustment in R series balances is an advanced control and correction system that enables accurate weighing under any conditions.

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.

Spacious Weighing Chamber
Large weighing chamber enables convenient operation using laboratory vessels of different dimensions.

Data Management
AS.R 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.

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.

Technical Specifications

	AS 60/220.R2	AS 62.R2	AS 82/220.R2
Maximum capacity [Max]	60 g / 220 g	62 g	82 g / 220 g
Minimum load	1 mg	1 mg	1 mg
Readability [d]	0.01 mg / 0.1 mg	0.01 mg	0.01 mg / 0.1 mg
Verification scale interval [e]	1 mg	1 mg	1 mg
Tare range	–220 g	–62 g	–220 g
Repeatability*	0.015 mg (Rt ≤ 2 g) 0.02 mg (2 g < Rt ≤ 50 g) 0.03 mg (50 g < Rt ≤ 60 g) 0.1 mg (60 g < Rt ≤ 220 g)	0.015 mg (Rt ≤ 2 g) 0.02 mg (2 g < Rt ≤ 50 g) 0.03 mg (50 g < Rt ≤ 62 g)	0.015 mg (Rt ≤ 2 g) 0.02 mg (2 g < Rt ≤ 50 g) 0.03 mg (50 g < Rt ≤ 82 g) 0.1 mg (82 g < Rt ≤ 220 g)
Linearity	± 0.06 mg / ±0.2 mg	± 0.06 mg	± 0.06 mg / ±0.2 mg
Sensitivity temperature drift**	1×10^{-6} / °C × Rt	1×10^{-6} / °C × Rt	1×10^{-6} / °C × Rt
Minimum weight (U=1%, k=2)	3 mg	3 mg	3 mg
Minimum weight (USP)	30 mg	30 mg	30 mg
Stabilization time	6 s / 3.5 s	6 s	6 s / 3.5 s
Adjustment	internal	internal	internal
Verification	Yes	Yes	Yes
OIML Class	I	I	I
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
IN/OUT	4 × IN, 4 × OUT	4 × IN, 4 × OUT	4 × IN, 4 × OUT
Power supply	12 ÷ 16 V DC	12 ÷ 16 V DC	12 ÷ 16 V DC
Power consumption	10 W	10 W	10 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	ø 90 mm open-work ø 85 mm standard (option)*******	ø 90 mm open-work ø 85 mm standard (option)*******	ø 90 mm open-work ø 85 mm standard (option)*******
Weighing chamber dimensions	160 × 168 × 227 mm	160 × 168 × 227 mm	160 × 168 × 227 mm
Weighing device dimensions	333 × 206 × 325 mm	333 × 206 × 325 mm	333 × 206 × 325 mm
Net weight	5.3 kg	5.3 kg	5.3 kg
Gross weight	7.3 kg	7.3 kg	7.3 kg
Packaging dimensions	495 × 400 × 515 mm	495 × 400 × 515 mm	495 × 400 × 515 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
***** ø 85 mm standard weighing pan on purchase order

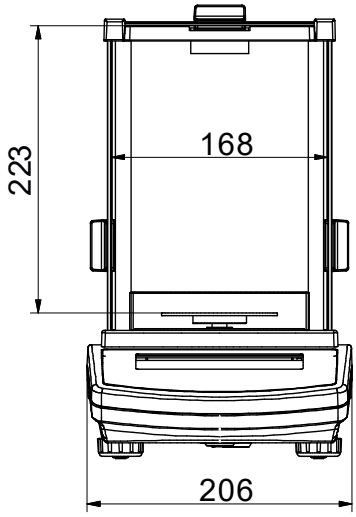
Values of parameters provided in Technical Specifications table, have been determined under stable laboratory conditions. Due to ambient conditions impact or/and balance setup, the above parameters may vary for environments other than laboratory.

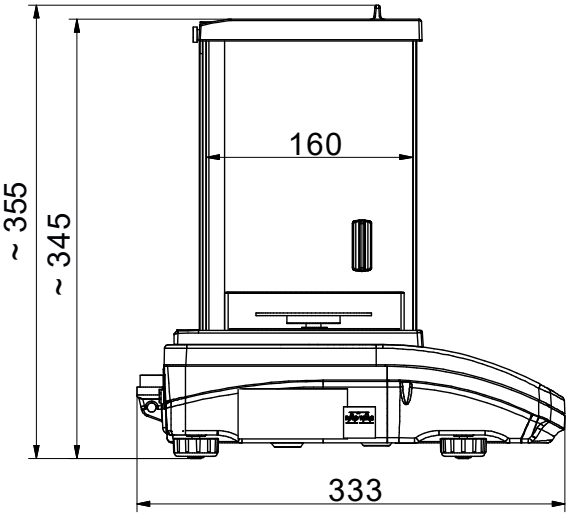
	AS 110.R2	AS 160.R2	AS 220.R2	AS 310.R2
Maximum capacity [Max]	110 g	160 g	220 g	310 g
Minimum load	10 mg	10 mg	10 mg	10 mg
Readability [d]	0.1 mg	0.1 mg	0.1 mg	0.1 mg
Verification scale interval [e]	1 mg	1 mg	1 mg	1 mg
Tare range	–110 g	–160 g	–220 g	–310 g
Repeatability*	0.1 mg (Rt ≤ 110 g)	0.1 mg (Rt ≤ 160 g)	0.1 mg (Rt ≤ 220 g)	0.1 mg (Rt ≤ 220 g) 0.2 mg (220 g < Rt ≤ 310 g)
Linearity	± 0.2 mg	± 0.2 mg	± 0.2 mg	± 0.3 mg
Sensitivity temperature drift**	1×10^{-6} / °C × Rt	1×10^{-6} / °C × Rt	1×10^{-6} / °C × Rt	1×10^{-6} / °C × Rt
Minimum weight (U=1%, k=2)	20 mg	20 mg	20 mg	20 mg
Minimum weight (USP)	200 mg	200 mg	200 mg	200 mg
Stabilization time	3.5 s	3.5 s	3.5 s	3.5 s
Adjustment	internal	internal	internal	internal
Verification	Yes	Yes	Yes	Yes
OIML Class	I	I	I	I
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
IN/OUT	4 × IN, 4 × OUT	4 × IN, 4 × OUT	4 × IN, 4 × OUT	4 × IN, 4 × OUT
Power supply	12 ÷ 16 V DC	12 ÷ 16 V DC	12 ÷ 16 V DC	12 ÷ 16 V DC
Power consumption	10 W	10 W	10 W	10 W
Operating temperature	+10 ÷ +40 °C	+10 ÷ +40 °C	+10 ÷ +40 °C	+10 ÷ +40 °C
Atmospheric humidity****	40 ÷ 80%	40 ÷ 80%	40 ÷ 80%	40 ÷ 80%
Transport and storage temperature	–20 ÷ +50 °C	–20 ÷ +50 °C	–20 ÷ +50 °C	–20 ÷ +50 °C
Weighing pan dimensions	ø 100 mm	ø 100 mm	ø 100 mm	ø 100 mm
Weighing chamber dimensions	160 × 168 × 227 mm	160 × 168 × 227 mm	160 × 168 × 227 mm	160 × 168 × 227 mm
Weighing device dimensions	333 × 206 × 355 mm	333 × 206 × 355 mm	333 × 206 × 355 mm	333 × 206 × 355 mm
Net weight	5.3 kg	5.3 kg	5.3 kg	5.3 kg
Gross weight	7.3 kg	7.3 kg	7.3 kg	7.3 kg
Packaging dimensions	495 × 400 × 515 mm	495 × 400 × 515 mm	495 × 400 × 515 mm	495 × 400 × 515 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

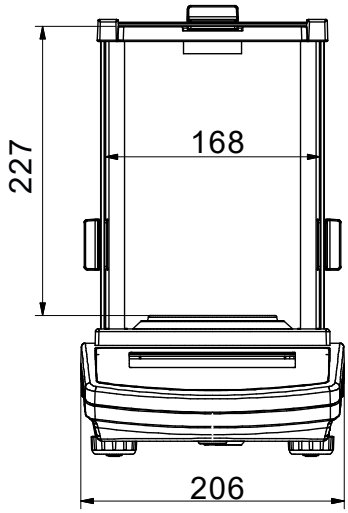
Values of parameters provided in Technical Specifications table, have been determined under stable laboratory conditions. Due to ambient conditions impact or/and balance setup, the above parameters may vary for environments other than laboratory.

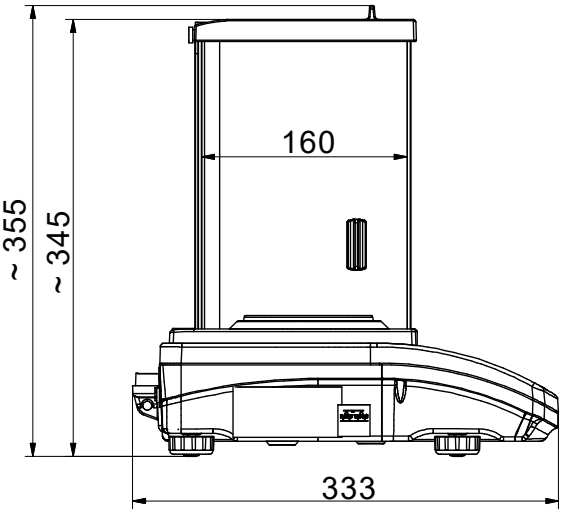
Dimensions





AS R, d = 0.01 mg





AS R, d = 0.1 mg

Accessories

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

Professional Weighing
- laboratory ware holders
- KIT 85 density determination kit
- under-hook weighing rack

Ambient Conditions
- DJ-04 anti-static ioniser

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
- AP2-1 power loop output

Electrical accessories
- ZR-02 power supply with battery

Dedicated Software

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