

AS R Analytical Balances

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



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 (5% Max)* Repeatability (Max)*	0.015 mg (Rt ≤ 3 g) 0.1 mg	0.015 mg (Rt ≤ 3 g) 0.03 mg	0.015 mg (Rt ≤ 5 g) 0.1 mg	
Linearity	± 0.06 mg / ±0.2 mg	± 0.06 mg	± 0.06 mg / ±0.2 mg	
Sensitivity temperature drift**	1×10^{-6} / °C × Rt	$1 \times 10^{-6} / °C \times Rt$	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***	2 s	2 s	2 s	
Adjustment	internal	internal	internal	
Verification	Yes	Yes	Yes	
OIML Class		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	
Power supply	12 ÷ 16 V DC	12 ÷ 16 V DC	12 ÷ 16 V DC	
Power consumption	3 W	3 W	3 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 ℃	-20 ÷ +50 ℃	-20 ÷ +50 ℃	
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: $+15 \div +35$ °C

*** stabilization time depends on external conditions and dynamics of placing loads on a pan, determined for FAST profile

**** 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.

Maximum capacity [Max]10 g160 g220 g310 gMinimum load10 mg10 mg10 mg10 mg10 mgReadability [d]0.1 mg0.1 mg0.1 mg0.1 mg0.1 mgVerification scale interval [e]1mg1mg1mg1mg1mgTare range-110 g-160 g-270 g-310 gRepeatability (Max)*0.08 mg (Rt ≤ 10 g)0.08 mg (Rt ≤ 10 g)0.08 mg (Rt ≤ 10 g)0.08 mg (Rt ≤ 10 g)Repeatability (Max)*0.08 mg (Rt ≤ 10 g)0.01 mg0.02 mg±0.2 mg±0.2 mgLinearity±0.2 mg±0.2 mg±0.2 mg±0.3 mgSensitivity temperature driff**1 × 10° / °C × Rt1 × 10° / °C × Rt1 × 10° / °C × RtMinimum weight (USP)160 mg160 mg160 mg160 mgSabilization time***2 s2 s2 s2 sAdjustmentinternalinternalinternalinternalVerificationYesYesYesYesProtection class14 keys14 keys14 keys14 keysDislay1.0 (11 the schlight)1.0 (11 the schlight)1.0 (11 the schlight)USB-A11111Sa 2222555Power supply12 + 16 VDC12 + 16 VDC12 + 16 VDC12 + 16 VDCPower supply12 + 16 VDC12 + 16 VDC12 + 16 VDC12 + 16 VDCPower supply12 + 16 VDC10 + +40 °C10 + +40 °C10 + +40 °C <th></th> <th>AS 110.R2</th> <th>AS 160.R2</th> <th>AS 220.R2</th> <th>AS 310.R2</th>		AS 110.R2	AS 160.R2	AS 220.R2	AS 310.R2
Minimu load10 mg10 mg10 mg10 mgReadability (d)0.1 mg0.1 mg0.1 mg0.1 mgVerification scale interval [d]1 mg1 mg1 mg1 mgTare rang-110.0-160.0-20.0-310.0Repeatability (5% Max)*0.08 mg (Rt ≤ 10.9)0.08 mg (Rt ≤ 10.9)0.08 mg (Rt ≤ 10.9)0.08 mg (Rt ≤ 10.9)Repeatability (Max)*±0.2 mg±0.2 mg±0.2 mg±0.2 mg±0.3 mgSensitivity temperature drift*1 × 10 ⁴ /1°.X Rt1 × 10 ⁴ /1°.X Rt1 × 10 ⁴ /1°.X Rt1 × 10 ⁴ /1°.X RtMinimu weight (U=1%, k=2)16 mg160 mg160 mg160 mg160 mgStabilization time***2 s2 s2 s2 s2 sAljustmentinternalinternalinternalinternalVerificationYesYesYes14 keys14 keysPotection class1 Al 201 Al 201 Al 201 Al 20Stabilization time**2 S555USB-A1 Al 201 Al 201 Al 201 Al 20Verification1 Keys1 Al 201 Al 201 Al 20USB-A1 Al 201 Al 201 Al 201 Al 20USB-A1 Al 201 2 + 16 VDC1 2 + 16 VDC1 2 + 16 VDCVerifieds connection (option)***80.211 b/g/n80.211 b/g/n3WOperating temperature410 + 40°C10 + 40°C1 0 + 40°CVerifieds connection (option)***80.211 b/g/n40 + 80%40 + 80%	Maximum canacity [Max]				
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 Repeatability (S% Max)* 0.08 mg (Rt ≤ 10 g) 0.01 mg (Rt ≤ 10 g) 0.01 mg (Rt ≤		5	5	5	3
Verification scale interval [e] I mg I mg I mg I mg Tare range -110g -160g -220g -310g Repeatability (5% Max)* 0.08 mg (Rt ≤ 10 g) 0.18 mg Linearity ±0.2 mg ±0.2 mg ±0.2 mg ±0.3 mg Sensitivity temperature drift** 1 x 10° / °C x Rt Minimum weight (U=1%, k=2) 16 mg 16 mg 16 mg 16 mg Stabilization time*** 2 s 2 s 2 s 2 s Aljustment internal internal internal 1 c0 mg Verification Yes Yes Yes 1 keys OlML Class I I I I Display LCD (with backlight) LCD (with backlight) LCD (with backlight) LCD (with backlight) USB-A 1 1 1 1 1 Stabises 5 5 5		3	5	3	5
Tare range -110 g -160 g -220 g -310 g Repeatability (5% Max)* 0.08 mg (Rt ≤ 10 g) 0.18 mg Repeatability (Max)* ± 0.2 mg ± 0.2 mg ± 0.2 mg ± 0.3 mg Sensitivity temperature drift** 1 × 10 ⁴ / ¹ C × Rt 1 × 10 ⁴ / ¹ C × Rt 1 × 10 ⁴ / ¹ C × Rt 1 × 10 ⁴ / ¹ C × Rt Minimum weight (U=1%, k=2) 16 mg 16 mg 160 mg 160 mg 160 mg Stabilization time*** 2 s 2 s 2 s 2 s 2 s 2 s OlML class 1 1 1 1 1 1 Display LCD (with backlight) Verse 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		Ū	3	2	Ū
Repeatability (5% Max)* 0.08 mg (Rt ≤ 10 g) 0.15 mg Linearity ± 0.2 mg ± 0.2 mg ± 0.2 mg ± 0.2 mg ± 0.3 mg Sensitivity temperature drift*** 1 × 10 °/ °C × Rt Minimum weight (U=1%, k=2) 16 mg 160 mg 160 mg 160 mg 160 mg Stabilization time*** 2 s 2 s 2 s 2 s 2 s 2 s Adjustment internal internal internal internal internal Verifaction Yes Yes Yes Yes 14 keys 14 keys OIML class I I I I I I Bipslay LCD (with backlight) LCD (with backlight) LCD (with backlight) LCD (with backlight) LCD (with		3	3	3	3
Repeatability (Max)*0,1 mg0,1 mg0,1 mg0,1 mg0,1 s mgLinearity±0.2 mg±0.2 mg±0.2 mg±0.3 mgSensitivity temperature drift**1 × 10 ⁶ / ¹ < × Rt1 × 10 ⁶ / ¹ < × Rt1 × 10 ⁶ / ¹ < × RtMinimu weight (U=196, k=2)160 mg160 mg160 mg160 mgStabilization time***2 s2 s2 s2, sAdjustmentinternalinternalinternalinternalVerificationYesYesYesYesOIM ClassIIIIDisplayLCD (with backlight)LCD (with backlight)LCD (with backlight)Keypad14 keys14 keys14 keys14 keysDatabases5555USB-A1111Res 23222222Wireless connection (option)****80.11 b/g/n80.211 b/g/n80.211 b/g/nRower supply10 + 40°C10 + 40°C10 + 40°C10 + 40°CPower onsumption3W3W3W3W40 + 80%Atmospherichunidity******40 + 80%40 + 80%40 + 80%40 + 80%Weighing and imension60 + 10 mm60 + 10 + 40°C20 + 50°C20 + 50°CWeighing hard intensions60 + 10 mm60 + 10 + 40°C20 + 50°C20 + 50°CWeighing hard intensions60 + 10 mm60 + 80 × 80 × 80 × 80 × 80 × 80 × 80 × 8	5	5	2	2	2
Sensitivity temperature drift*** 1 × 10 ⁴ /*C × Rt 1 × 10 ⁴ /*C × Rt 1 × 10 ⁴ /*C × Rt Minimum weight (U=1%, k=2) 16 mg 16 mg 16 mg 16 mg 16 mg Minimum weight (USP) 160 mg 160 mg 160 mg 160 mg 160 mg Stabilization time*** 2 s 2 s 2 s 2 s 2 s 2 s Adjustment internal internal internal internal internal Verification Yes Yes Yes Yes Yes OIML Class I I I I Display LCD (with backlight)	Repeatability (5% Max)* Repeatability (Max)*	5. 5,	5. 5,	5. 5,	5.
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Minimum weight (USP) 160 mg 160 mg 160 mg 160 mg Stabilization time*** 2 s 2 s 2 s 2 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 S S S S USB-A 1 1 1 1 I RS 232 2 2 2 2 I I RS 43 12 + 16 V DC I + 10 + 40 °C I + 10 + 40 °C Power consumption 3W 3W 3W 3W 3W I + 10 + 40 °C I + 10 +	Sensitivity temperature drift**	$1 \times 10^{-6} / °C \times Rt$	1×10^{-6} / °C × Rt	$1 \times 10^{-6} / °C \times Rt$	1×10^{-6} / °C × Rt
Stabilization time***2 s2 s2 s2 s2 sAdjustmentinternalinternalinternalinternalVerificationYesYesYesYesOIML ClassIIIIDisplayLCD (with backlight)LCD (with backlight)LCD (with backlight)LCD (with backlight)Keypad14 keys14 keys14 keys14 keysProtection classIP 43IP 43IP 43IP 43Databases5555USB-A1111RS 2322222Wireless connection (option)****802.11 b/g/n802.11 b/g/n802.11 b/g/nRower supply12 ÷ 16 VDC12 ÷ 16 VDC12 ÷ 16 VDC12 ÷ 16 VDCPower consumption3W3W3W3WOperating temperature+10 ÷ +40 °C+10 ÷ +40 °C+10 ÷ +40 °CAtmospheric humidity*****40 × 80%40 ÷ 80%40 ÷ 80%40 ÷ 80%Weighing pan dimensions6100 mm6100 mm6100 mm6100 mmWeighing chamber dimensions333 × 206 × 355 mm333 × 206 × 355 mm333 × 206 × 355 mm333 × 206 × 355 mmWeighing device dimensions53 kg53 kg53 kg53 kg53 kg	Minimum weight (U=1%, k=2)	16 mg	16 mg	16 mg	16 mg
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VerificationYesYesYesYesOIML ClassIIIIDisplayLCD (with backlight)LCD (with backlight)LCD (with backlight)LCD (with backlight)Keypad14 keys14 keys14 keys14 keysProtection classIP 43IP 43IP 43Databases555USB-A111USB-B111Rs 232222Wireless connection (option)****802.11 b/g/n802.11 b/g/n802.11 b/g/nPower consumption3W3W3W3WOperating temperature+10 ÷ +40 °C+10 ÷ +40 °C+10 ÷ +40 °CHonspheric humidity******40 ÷ 80%40 ÷ 80%40 ÷ 80%40 ÷ 80%Weighing pan dimensions6100 mm6100 mm6100 mm6100 mmWeighing device dimensions333 × 206 × 355 mm333 × 206 × 355 mm333 × 206 × 355 mm333 × 206 × 355 mmNet weight5.3 kg5.3 kg5.3 kg5.3 kg5.3 kg5.3 kg	Stabilization time***	2 s	2 s	2 s	2,5 s
OML ClassIIIDisplayLCD (with backlight)LCD (with backlight)LCD (with backlight)LCD (with backlight)Keypad14 keys14 keys14 keys14 keysProtection classIP 43IP 43IP 43IP 43Databases555IUSB-A1111RS 23222222Protection (option)****802.11 b/g/n802.11 b/g/n802.11 b/g/n802.11 b/g/nPower supply12 + 16 VDC12 + 16 VDC12 + 16 VDC12 + 16 VDCPower consumption3W3W3W3WOperating temperature+10 + 40 °C+10 + 40 °C+10 + 40 °CAtmospheric humidity*****40 + 80%40 + 80%40 + 80%40 + 80%Weighing pan dimensions160 × 168 × 227 mm160 × 168 × 227 mm160 × 168 × 227 mm333 × 206 × 355 mmWeighing device dimensions338 × 206 × 355 mm333 × 206 × 355 mm333 × 206 × 355 mm333 × 206 × 355 mmNetweight53 kg53 kg53 kg53 kg53 kg	Adjustment	internal	internal	internal	internal
Display LCD (with backlight) LCD (with backlight) LCD (with backlight) LCD (with backlight) Display LCD (with backlight) LCD (with backlight) LCD (with backlight) LCD (with backlight) Keypad 14 keys 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 R5 232 2 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 802.11 b/g/n Power supply 12 ÷ 16 V DC Power consumption 3W 3W 3W 3W 3W Operating temperature +10 ÷ +40 °C +10 ÷ +40 °C +10 ÷ +40 °C +10 ÷ +40 °C Weighing pan dimensions 010 mm 010 mm<	Verification	Yes	Yes	Yes	Yes
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 Power supply 12 + 16 V DC 12 + 16 V DC 12 + 16 V DC Power consumption 3W 3W 3W 3W Operating temperature +10 + +40 °C +10 + +40 °C +10 + +40 °C +10 + +40 °C Atmospheric humidity***** 40 + 80% 40 + 80% 40 + 80% 40 + 80% Wighing pan dimensions 010 mm 010 mm 010 mm e100 mm Weighing chamber dimensions 100 x168 x 227 mm 333 x 206 x 355 mm 333 x 206 x 355 mm Weighing device dimensions 333 x 206 x 355 mm 333 x 206 x 355 mm 333 x 206 x 355 mm <	OIML Class				
Protection classIP 43IP 43IP 43IP 43Databases5555USB-A1111USB-B11111RS 23222222Wireless connection (option)***802.11 b/g/n802.11 b/g/n802.11 b/g/n802.11 b/g/nPower supply12 + 16 V DC12 + 16 V DC12 + 16 V DC12 + 16 V DCPower consumption3W3W3W3WOperating temperature+10 + +40 °C+10 + +40 °C+10 + +40 °CAtmospheric humidity*****40 + 80%40 + 80%40 + 80%40 + 80%Veighing pan dimensions610 nm100 nm610 nm610 nmWeighing chamber dimensions160 × 168 × 227 mm333 × 206 × 355 mm333 × 206 × 355 mm333 × 206 × 355 mmNetweight5.3 kg5.3 kg5.3 kg5.3 kg5.3 kgGross weight7.3 kg7.3 kg7.3 kg7.3 kg	Display	LCD (with backlight)	LCD (with backlight)	LCD (with backlight)	LCD (with backlight)
Databases 5 5 5 Databases 5 5 5 USB-A 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 Power consumption 3W 3W 3W 3W Operating temperature +10 ÷ +40 °C +10 ÷ +40 °C +10 ÷ +40 °C +10 ÷ +40 °C Atmospherichumidity***** 40 ÷ 80% 40 ÷ 80% 40 ÷ 80% 40 ÷ 80% Veighing pan dimensions 910 mm 910 mm 910 mm 910 mm Weighing chamber dimensions 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 Net weight 53 kg 53 kg 53 kg 53 kg	Keypad	14 keys	14 keys	14 keys	14 keys
USB-A 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 Power consumption 3W 3W 3W 3W Operating temperature +10 + +40 °C +10 + +40 °C +10 + +40 °C +10 + 40 °C Atmospherichumidity***** 40 + 80% 40 + 80% 40 + 80% 40 + 80% Yeighing pan dimensions >100 mm 910 mm 9100 mm 9100 mm Weighing chamber dimensions 160 × 168 × 227 mm 160 × 168 × 227 mm 333 × 206 × 355 mm 333 × 206 × 355 mm Net weight 5.3 kg 5.3 kg 5.3 kg 5.3 kg 5.3 kg	Protection class	IP 43	IP 43	IP 43	IP 43
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 Power consumption 3W 3W 3W 3W 3W Operating temperature +10 ÷ +40 °C Atmospherichumidity***** 40 ÷ 80% 40 ÷ 80% 40 ÷ 80% 40 ÷ 80% 40 ÷ 80% Weighing pan dimensions 0 100 mm Weighing chamber dimensions 160 × 168 × 227 mm 160 × 168 × 227 mm 333 × 206 × 355 mm 333 × 206 × 355 mm 333 × 206 × 355 mm Net weight 53 kg 53 kg 53 kg 53 kg 53 kg 53 kg Gross weight 73 kg 73 kg 73 kg 73 kg 73 kg	Databases	5	5	5	5
RS 232 2 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 Power consumption 3W 3W 3W 3W 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 Weighing chamber dimensions 160 × 168 × 227 mm Weighing device dimensions 333 × 206 × 355 mm Net weight 5.3 kg 5.3 kg 5.3 kg 5.3 kg 5.3 kg	USB-A	1	1	1	1
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 Power consumption 3W 3W 3W 3W 3W Operating temperature +10 ÷ +40 °C Atmospheric humidity***** 40 ÷ 80% 40 ÷ 80% 40 ÷ 80% 40 ÷ 80% 40 ÷ 80% Transport and storage temperature -20 ÷ +50 °C -20 ÷ +50 °C -20 ÷ +50 °C -20 ÷ +50 °C -20 ÷ ÷ 50	USB-B	1	1	1	1
Power supply 12 ÷ 16 V DC Power consumption 3W 40 ÷ 80% 40 ÷ 80% 40 ÷ 80% 40 ÷ 80% 40 ÷ 80% 40 ÷ 80% -20 ÷ +50 °C 33 × 206 × 355 °C 333 × 206 × 355 °C	RS 232	2	2	2	2
Power consumption 3W 3W 3W 3W Operating temperature +10 ÷ +40 °C 40 ÷ 80% 33 × 206 × 355 mm 33 × 206 × 355 mm 33	Wireless connection (option)****	802.11 b/g/n	802.11 b/g/n	802.11 b/g/n	802.11 b/g/n
Operating temperature +10 ÷ +40 °C Atmospheric humidity***** 40 ÷ 80% 40	Power supply	12 ÷ 16 V DC	12 ÷ 16 V DC	12 ÷ 16 V DC	12 ÷ 16 V DC
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 Weighing device dimensions 333 × 206 × 355 mm Net weight 5.3 kg 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 7.3 kg	Power consumption	3 W	3 W	3 W	3 W
Transport and storage temperature -20 ÷ +50 °C Weighing pan dimensions Ø 100 mm Weighing chamber dimensions 160 × 168 × 227 mm Weighing device dimensions 333 × 206 × 355 mm Net weight 5.3 kg 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 7.3 kg	Operating temperature	+10 ÷ +40 ℃	+10 ÷ +40 °C	+10 ÷ +40 °C	+10 ÷ +40 °C
temperature Weighing pan dimensions Ø 100 mm Ø 100 mm Ø 100 mm Ø 100 mm Weighing chamber dimensions 160 × 168 × 227 mm Weighing device dimensions 333 × 206 × 355 mm Net weight 5.3 kg 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 7.3 kg	Atmospheric humidity*****	40 ÷ 80%	40 ÷ 80%	40 ÷ 80%	40 ÷ 80%
Weighing chamber dimensions 160 × 168 × 227 mm Weighing device dimensions 333 × 206 × 355 mm 333 × 2	Transport and storage temperature	-20 ÷ +50 ℃	-20 ÷ +50 ℃	-20 ÷ +50 ℃	-20 ÷ +50 ℃
Weighing device dimensions 333 × 206 × 355 mm 333 × 206 × 355 mm <th< th=""><th>Weighing pan dimensions</th><th>ø 100 mm</th><th>ø 100 mm</th><th>ø 100 mm</th><th>ø 100 mm</th></th<>	Weighing pan dimensions	ø 100 mm	ø 100 mm	ø 100 mm	ø 100 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	Weighing chamber dimensions	160 × 168 × 227 mm	160 × 168 × 227 mm	160 × 168 × 227 mm	160 × 168 × 227 mm
Gross weight 7.3 kg 7.3 kg 7.3 kg 7.3 kg	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
	-	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: $+15 \div +35$ °C

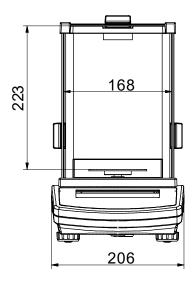
Stabilization time depends on external conditions and dynamics of placing loads on a pan, determined for FAST profile

**** optional solution on purchase order

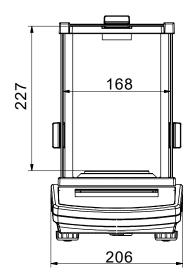
***** non-condensing conditions

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





Accessories

Weighing Tables

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

Professional Weighing

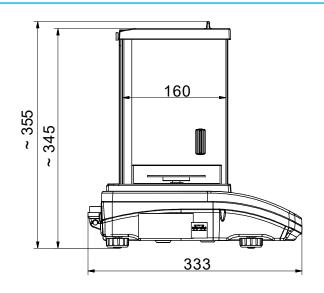
- laboratory ware holders
- KIT 85 density determination kit
- under-hook weighing rack

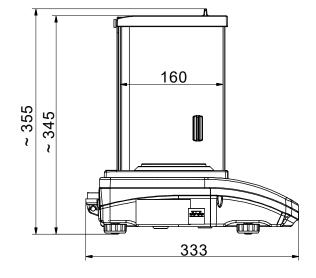
Ambient Conditions

• DJ-04 anti-static ioniser

Peripheral Devices

- 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

Draft shields and anti-draft chambers

• protective cover for R series indicator

Electrical accessories

- ZR-02 power supply with battery
- 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

Alibi Reader

- readout of data saved to Alibi memory
- $\boldsymbol{\cdot}$ export of data saved to Alibi memory
- data filtering and reports generating
- saving ALIBI database to CSV file

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

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

LabView Driver

• operation of RADWAG balances in LabView environment

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.