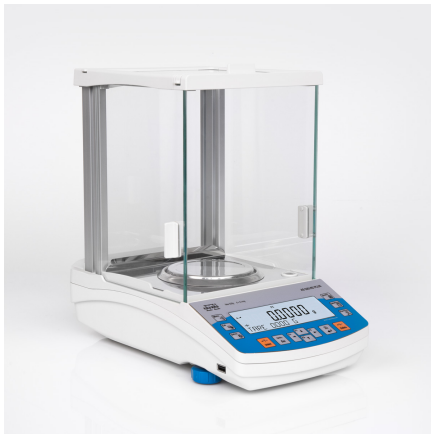


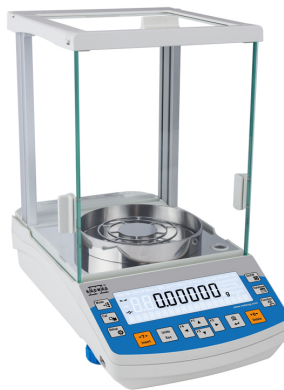


More information on the website
radwag.com/en/info,w1,NQ5

AS 310.R2 PLUS Analytical Balance, AS 62.R2 PLUS Analytical Balance, AS 520.R2 PLUS Analytical Balance, AS 60/220.R2 PLUS Analytical Balance, AS 160.R2 PLUS Analytical Balance, AS 82/220.R2 PLUS Analytical Balance, AS 110.R2 PLUS Analytical Balance, AS 120.R2 PLUS Analytical Balance, AS 220.R2 PLUS Analytical Balance



AS 310.R2 PLUS Analytical Balance
AS 520.R2 PLUS Analytical Balance
AS 160.R2 PLUS Analytical Balance
AS 110.R2 PLUS Analytical Balance
AS 220.R2 PLUS Analytical Balance



AS 62.R2 PLUS Analytical Balance
AS 60/220.R2 PLUS Analytical Balance
AS 82/220.R2 PLUS Analytical Balance
AS 120.R2 PLUS Analytical Balance

The drawings, photos and graphics used are for illustrative purposes only.

Functions



Autotest:

- AS 60/220.R2 PLUS Analytical Balance
- AS 82/220.R2 PLUS Analytical Balance
- AS 110.R2 PLUS Analytical Balance
- AS 160.R2 PLUS Analytical Balance
- AS 220.R2 PLUS Analytical Balance
- AS 310.R2 PLUS Analytical Balance
- AS 520.R2 PLUS Analytical Balance



Dosing:

- AS 60/220.R2 PLUS Analytical Balance
- AS 82/220.R2 PLUS Analytical Balance
- AS 110.R2 PLUS Analytical Balance
- AS 160.R2 PLUS Analytical Balance
- AS 220.R2 PLUS Analytical Balance
- AS 310.R2 PLUS Analytical Balance
- AS 520.R2 PLUS Analytical Balance



Percent Weighing:

- AS 60/220.R2 PLUS Analytical Balance
- AS 82/220.R2 PLUS Analytical Balance
- AS 110.R2 PLUS Analytical Balance
- AS 160.R2 PLUS Analytical Balance
- AS 220.R2 PLUS Analytical Balance
- AS 310.R2 PLUS Analytical Balance
- AS 520.R2 PLUS Analytical Balance



Totalizing:

- AS 60/220.R2 PLUS Analytical Balance
- AS 82/220.R2 PLUS Analytical Balance
- AS 110.R2 PLUS Analytical Balance
- AS 160.R2 PLUS Analytical Balance
- AS 220.R2 PLUS Analytical Balance
- AS 310.R2 PLUS Analytical Balance
- AS 520.R2 PLUS Analytical Balance



Parts counting:

- AS 60/220.R2 PLUS Analytical Balance
- AS 82/220.R2 PLUS Analytical Balance
- AS 110.R2 PLUS Analytical Balance
- AS 160.R2 PLUS Analytical Balance
- AS 220.R2 PLUS Analytical Balance
- AS 310.R2 PLUS Analytical Balance
- AS 520.R2 PLUS Analytical Balance



Peak hold:

- AS 60/220.R2 PLUS Analytical Balance
- AS 82/220.R2 PLUS Analytical Balance
- AS 110.R2 PLUS Analytical Balance
- AS 160.R2 PLUS Analytical Balance
- AS 220.R2 PLUS Analytical Balance
- AS 310.R2 PLUS Analytical Balance
- AS 520.R2 PLUS Analytical Balance



Newton unit measurement:

- AS 60/220.R2 PLUS Analytical Balance
- AS 82/220.R2 PLUS Analytical Balance
- AS 110.R2 PLUS Analytical Balance
- AS 160.R2 PLUS Analytical Balance
- AS 220.R2 PLUS Analytical Balance
- AS 310.R2 PLUS Analytical Balance
- AS 520.R2 PLUS Analytical Balance



Statistics:

- AS 60/220.R2 PLUS Analytical Balance
- AS 82/220.R2 PLUS Analytical Balance
- AS 110.R2 PLUS Analytical Balance
- AS 160.R2 PLUS Analytical Balance
- AS 220.R2 PLUS Analytical Balance
- AS 310.R2 PLUS Analytical Balance
- AS 520.R2 PLUS Analytical Balance

**Checkweighing:**

- AS 60/220.R2 PLUS Analytical Balance
- AS 82/220.R2 PLUS Analytical Balance
- AS 110.R2 PLUS Analytical Balance
- AS 160.R2 PLUS Analytical Balance
- AS 220.R2 PLUS Analytical Balance
- AS 310.R2 PLUS Analytical Balance
- AS 520.R2 PLUS Analytical Balance

**Under-pan weighing:**

- AS 60/220.R2 PLUS Analytical Balance
- AS 82/220.R2 PLUS Analytical Balance
- AS 110.R2 PLUS Analytical Balance
- AS 160.R2 PLUS Analytical Balance
- AS 220.R2 PLUS Analytical Balance
- AS 310.R2 PLUS Analytical Balance
- AS 520.R2 PLUS Analytical Balance

**GLP Procedures:**

- AS 60/220.R2 PLUS Analytical Balance
- AS 82/220.R2 PLUS Analytical Balance
- AS 110.R2 PLUS Analytical Balance
- AS 160.R2 PLUS Analytical Balance
- AS 220.R2 PLUS Analytical Balance
- AS 310.R2 PLUS Analytical Balance
- AS 520.R2 PLUS Analytical Balance

**Animal weighing:**

- AS 60/220.R2 PLUS Analytical Balance
- AS 82/220.R2 PLUS Analytical Balance
- AS 110.R2 PLUS Analytical Balance
- AS 160.R2 PLUS Analytical Balance
- AS 220.R2 PLUS Analytical Balance
- AS 310.R2 PLUS Analytical Balance
- AS 520.R2 PLUS Analytical Balance

**Density determination:**

- AS 60/220.R2 PLUS Analytical Balance
- AS 82/220.R2 PLUS Analytical Balance
- AS 110.R2 PLUS Analytical Balance
- AS 160.R2 PLUS Analytical Balance
- AS 220.R2 PLUS Analytical Balance
- AS 310.R2 PLUS Analytical Balance
- AS 520.R2 PLUS Analytical Balance

Datasheet

	AS 60/220.R2 PLUS Analytical Balance	AS 62.R2 PLUS Analytical Balance	AS 82/220.R2 PLUS Analytical Balance
Metrological parameters			
Maximum capacity [Max]	60 / 220 g	62 g	82 / 220 g
Minimum load	1 mg	1 mg	1 mg
Readability [d]	0,01 / 0,1 mg	0,01 mg	0,01 / 0,1 mg
Verification scale interval [e]	1 mg	1 mg	1 mg
Tare range	-220 g	-62 g	-220 g
Standard repeatability [5% Max]	0,012 mg	0,012 mg	0,012 mg
Standard repeatability [Max]	0,08 mg	0,02 mg	0,08 mg
Standard minimum weight (USP)	24 mg	24 mg	24 mg
Standard minimum weight (U=1%, k=2)	2,4 mg	2,4 mg	2,4 mg
Permissible repeatability [5% Max]	0,02 mg	0,02 mg	0,02 mg
Permissible repeatability [Max]	0,1 mg	0,035 mg	0,1 mg
Linearity	±0,05/0,2 mg	±0,05 mg	±0,05/0,2 mg
Stabilization time	2 s	2 s	2 s
Adjustment	internal (automatic)	internal (automatic)	internal (automatic)
OIML Class	I	I	I
Physical parameters			
Leveling system	manual	manual	manual
Display	LCD (backlit)	LCD (backlit)	LCD (backlit)
Protection class	IP 43	IP 43	IP 43
Delivery components	Balance, weighing pan, weighing pan shield, centring ring, bottom cover, power supply, fabric dust cover.	Balance, weighing pan, weighing pan shield, centring ring, bottom cover, power supply, fabric dust cover.	Balance, weighing pan, weighing pan shield, centring ring, bottom cover, power supply, fabric dust cover.
Weighing pan dimensions	ø90 + ø85 (option) mm	ø90 + ø85 (option) mm	ø90 + ø85 (option) mm
Packaging dimensions	455×575×545 mm	455×575×545 mm	455×575×545 mm
Net weight	7,3 kg	7 kg	7,3 kg
Gross weight	9,3 kg	9,3 kg	11 kg
Communication interface			
Communication interface	2×RS232 ¹ , 2×USB-A (interchangeable), USB-B, Wi-Fi (option)	2×RS232 ¹ , 2×USB-A (interchangeable), USB-B, Wi-Fi (option)	2×RS232 ¹ , 2×USB-A (interchangeable), USB-B, Wi-Fi (option)
Electrical parameters			
Power supply	Adapter: 100 – 240V AC 50/60Hz 0,6A; 12V DC 1,2A Balance: 12 – 15V DC 0,4A max	Adapter: 100 – 240V AC 50/60Hz 0,6A; 12V DC 1,2A Balance: 12 – 15V DC 0,4A max	Adapter: 100 – 240V AC 50/60Hz 0,6A; 12V DC 1,2A Balance: 12 – 15V DC 0,4A max
Power consumption max.	3 W	3 W	3 W
Overvoltage protection	—	—	—
Environmental conditions			
Operating temperature	+10 ÷ +40 °C	+10 ÷ +40 °C	+10 ÷ +40 °C

Repeatability is expressed as a standard deviation from 10 weighing cycles. Stabilization time depends on the ambient conditions and the dynamics of weighing pan loading; specified for FAST profile. 1 Barcode scanners, available as weighing instrument accessory, communicate with the instrument via RS232 interface exclusively.

Datasheet

	AS 110.R2 PLUS Analytical Balance	AS 120.R2 PLUS Analytical Balance	AS 160.R2 PLUS Analytical Balance
Metrological parameters			
Maximum capacity [Max]	110 g	120 g	160 g
Minimum load	10 mg	1 mg	10 mg
Readability [d]	0,1 mg	0,01 mg	0,1 mg
Verification scale interval [e]	1 mg	1 mg	1 mg
Tare range	-110 g	-120 g	-160 g
Standard repeatability [5% Max]	0,06 mg	0,012 mg	0,07 mg
Standard repeatability [Max]	0,08 mg	0,03 mg	0,08 mg
Standard minimum weight (USP)	120 mg	24 mg	140 mg
Standard minimum weight (U=1%, k=2)	12 mg	2,4 mg	14 mg
Permissible repeatability [5% Max]	0,09 mg	0,02 mg	0,09 mg
Permissible repeatability [Max]	0,1 mg	0,05 mg	0,1 mg
Linearity	±0,2 mg	±0,07 mg	±0,2 mg
Stabilization time	2 s	2 s	2 s
Adjustment	internal (automatic)	internal (automatic)	internal (automatic)
OIML Class	I	I	I
Physical parameters			
Leveling system	manual	manual	manual
Display	LCD (backlit)	LCD (backlit)	LCD (backlit)
Protection class	IP 43	IP 43	IP 43
Delivery components	Balance, weighing pan, weighing pan shield, centring ring, bottom cover, power supply.	Balance, weighing pan, weighing pan shield, centring ring, bottom cover, power supply, fabric dust cover.	Balance, weighing pan, weighing pan shield, centring ring, bottom cover, power supply.
Weighing pan dimensions	ø100 mm	ø90 + ø85 (option) mm	ø100 mm
Packaging dimensions	495×400×515 mm	495×400×515 mm	400×520×490 mm
Net weight	7,3 kg	7,3 kg	7 kg
Gross weight	9,3 kg	9,3 kg	9 kg
Communication interface			
Communication interface	2×RS232 ¹ , 2×USB-A (interchangeable), USB-B, Wi-Fi (option)	2×RS232 ¹ , 2×USB-A (interchangeable), USB-B, Wi-Fi (option)	2×RS232 ¹ , 2×USB-A (interchangeable), USB-B, Wi-Fi (option)
Electrical parameters			
Power supply	Adapter: 100 – 240V AC 50/60Hz 0,6A; 12V DC 1,2A Balance: 12 – 15V DC 0,4A max	Adapter: 100 – 240V AC 50/60Hz 0,6A; 12V DC 1,2A Balance: 12 – 15V DC 0,4A max	Adapter: 100 – 240V AC 50/60Hz 0,6A; 12V DC 1,2A Balance: 12 – 15V DC 0,4A max
Power consumption max.	3 W	3 W	3 W
Overvoltage protection	—	—	YES
Environmental conditions			
Operating temperature	+10 ÷ +40 °C	+10 ÷ +40 °C	+10 ÷ +40 °C

Repeatability is expressed as a standard deviation from 10 weighing cycles. Stabilization time depends on the ambient conditions and the dynamics of weighing pan loading; specified for FAST profile. 1 Barcode scanners, available as weighing instrument accessory, communicate with the instrument via RS232 interface exclusively.

Datasheet

	AS 220.R2 PLUS Analytical Balance	AS 310.R2 PLUS Analytical Balance	AS 520.R2 PLUS Analytical Balance
Metrological parameters			
Maximum capacity [Max]	220 g	310 g	520 g
Minimum load	10 mg	10 mg	-
Readability [d]	0,1 mg	0,1 mg	0,1 mg
Verification scale interval [e]	1 mg	1 mg	-
Tare range	-220 g	-310 g	-520 g
Standard repeatability [5% Max]	0,07 mg	0,08 mg	0,08 mg
Standard repeatability [Max]	0,08 mg	0,12 mg	0,25 mg
Standard minimum weight (USP)	140 mg	160 mg	160 mg
Standard minimum weight (U=1%, k=2)	14 mg	16 mg	16 mg
Permissible repeatability [5% Max]	0,09 mg	0,12 mg	0,12 mg
Permissible repeatability [Max]	0,1 mg	0,15 mg	0,4 mg
Linearity	±0,2 mg	±0,2 mg	±0,6 mg
Stabilization time	2 s	2,5 s	2,5 s
Adjustment	internal (automatic)	internal (automatic)	internal (automatic)
OIML Class	I	I	-
Physical parameters			
Leveling system	manual	manual	manual
Display	LCD (backlit)	LCD (backlit)	LCD (backlit)
Protection class	IP 43	IP 43	IP 43
Delivery components	Balance, weighing pan, weighing pan shield, bottom cover, power supply.	Balance, weighing pan, weighing pan shield, bottom cover, power supply.	Balance, weighing pan, weighing pan shield, bottom cover, power supply.
Weighing pan dimensions	ø100 mm	ø100 mm	ø100 mm
Packaging dimensions	495×400×515 mm	495×400×515 mm	495×400×515 mm
Net weight	7,3 kg	7,3 kg	7,3 kg
Gross weight	9,3 kg	9,3 kg	9,3 kg
Communication interface			
Communication interface	2×RS232 ¹ , 2×USB-A (interchangeable), USB-B, Wi-Fi (option)	2×RS232 ¹ , 2×USB-A (interchangeable), USB-B, Wi-Fi (option)	2×RS232 ¹ , 2×USB-A (interchangeable), USB-B, Wi-Fi (option)
Electrical parameters			
Power supply	Adapter: 100 – 240V AC 50/60Hz 0,6A; 12V DC 1,2A Balance: 12 – 15V DC 0,4A max	Adapter: 100 – 240V AC 50/60Hz 0,6A; 12V DC 1,2A Balance: 12 – 15V DC 0,4A max	Adapter: 100 – 240V AC 50/60Hz 0,6A; 12V DC 1,2A Balance: 12 – 15V DC 0,4A max
Power consumption max.	3 W	3 W	3 W
Overvoltage protection	—	—	—
Environmental conditions			
Operating temperature	+10 ÷ +40 °C	+10 ÷ +40 °C	+10 ÷ +40 °C

Repeatability is expressed as a standard deviation from 10 weighing cycles. Stabilization time depends on the ambient conditions and the dynamics of weighing pan loading; specified for FAST profile. 1 Barcode scanners, available as weighing instrument accessory, communicate with the instrument via RS232 interface exclusively.

* Wi-Fi® is a registered trademark of Wi-Fi® Alliance.



Accessories

Antivibration Tables
Holders for laboratory flasks
Barcode scanners
Cigarette lighter receptacle power supply cables
Density determination KIT
USB cable (scale - printer)
Professional weighing table
Holders for test tubes and filters
Workstation for Pipettes Calibration
Power Adapters

Displays
Protective cover for balances
Weighing dishes
Antistatic ionizer
Receipt Printer
RPANEL BOX
RS 232, RS 485 cables
Under-Pan Weighing Rack
RS 232 cables (scale - printer)
Under-pan weighing

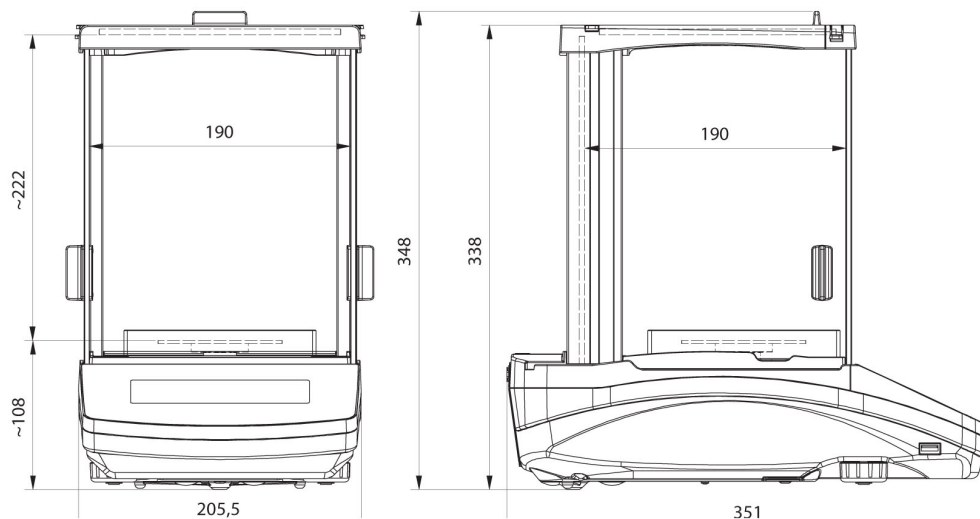
Software

RAD-KEY
R Panel
R-LAB
E2R System

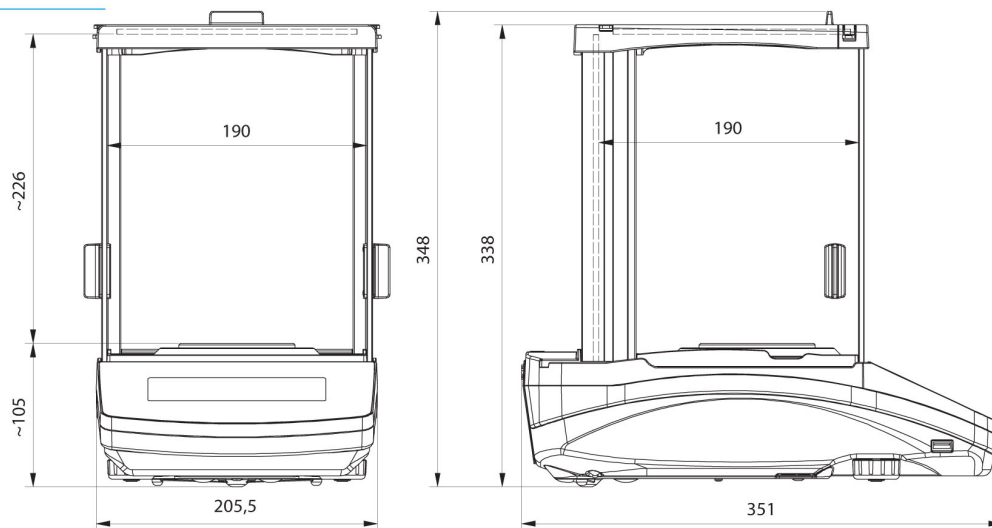
LabVIEW Driver
Alibi Reader
RADWAG Development Studio
R.Barcode

Device dimensions

AS 310.R2 PLUS Analytical Balance, AS 62.R2 PLUS Analytical Balance, AS 520.R2 PLUS Analytical Balance, AS 60/220.R2 PLUS Analytical Balance, AS 160.R2 PLUS Analytical Balance, AS 82/220.R2 PLUS Analytical Balance, AS 110.R2 PLUS Analytical Balance, AS 120.R2 PLUS Analytical Balance, AS 220.R2 PLUS Analytical Balance



AS R2, d = 0.01 mg



AS R2, AS R1 d = 0.1 mg