

## radwag.com

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 82/220.R2 PLUS Analytical Balance, AS 120.R2 PLUS Analytical Balance, AS 220.R2 PLUS Analytical Balance



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



AS 310.R2 PLUS Analytical Balance AS 520.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 220.R2 PLUS Analytical Balance
- AS 310.R2 PLUS Analytical
- AS 520.R2 PLUS Analytical Balance



### Dosing:

- AS 60/220.R2 PLUS

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



#### Percent Weighing: - AS 60/220.R2 PLUS

- **Analytical Balance**
- AS 82/220.R2 PLUS Analytical Balance
- AS 220.R2 PLUS Analytical Balance
- AS 310.R2 PLUS Analytical
- AS 520.R2 PLUS Analytical



#### - AS 220.R2 PLUS Analytical Balance - AS 310.R2 PLUS Analytical

Totalizing:

- AS 60/220.R2 PLUS

**Analytical Balance** - AS 82/220.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 220.R2 PLUS Analytical
- Balance
- AS 310.R2 PLUS Analytical
- AS 520.R2 PLUS Analytical Balance



#### Peak hold:

- AS 60/220.R2 PLUS Analytical Balance - AS 82/220.R2 PLUS

Analytical Balance

- AS 220.R2 PLUS Analytical Balance
- AS 310.R2 PLUS Analytical
- AS 520.R2 PLUS Analytical Balance



### Newton unit

### measurement:

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



#### Checkweighing:

- AS 60/220.R2 PLUS
- Analytical Balance

Balance

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



#### Under-pan weighing:

- AS 60/220.R2 PLUS
- Analytical Balance
- AS 82/220.R2 PLUS Analytical Balance

Balance

- AS 220.R2 PLUS Analytical
- Balance AS 310.R2 PLUS Analytical
- AS 520.R2 PLUS Analytical Balance



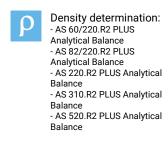
#### **GLP Procedures:**

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



# **Datasheet**

Datasileet			
	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	1	1	1
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	545×455×575 mm	545×455×575 mm	545×455×575 mm
Net weight	7 kg	7 kg	7,3 kg
Gross weight	10 kg	11 kg	11 kg
Communication interface			
Communication interface	2×RS232¹, 2×USB-A (interchangeable), USB-B, Wi-Fi (option)	2×RS232¹, 2×USB-A (interchangeable), USB-B, Wi-Fi (option)	2×RS232¹, 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
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 120.R2 PLUS Analytical Balance	AS 220.R2 PLUS Analytical Balance	AS 310.R2 PLUS Analytical Balance
Metrological parameters			
Maximum capacity [Max]	120 g	220 g	310 g
Minimum load	1 mg	10 mg	10 mg
Readability [d]	0,01 mg	0,1 mg	0,1 mg
Verification scale interval [e]	1 mg	1 mg	1 mg
Tare range	-120 g	-220 g	-310 g
Standard repeatability [5% Max]	0,012 mg	0,07 mg	0,08 mg
Standard repeatability [Max]	0,03 mg	0,08 mg	0,12 mg
Standard minimum weight (USP)	24 mg	140 mg	160 mg
Standard minimum weight (U=1%, k=2)	2,4 mg	14 mg	16 mg
Permissible repeatability [5% Max]	0,02 mg	0,09 mg	0,12 mg
Permissible repeatability [Max]	0,05 mg	0,1 mg	0,15 mg
Linearity	±0,07 mg	±0,2 mg	±0,2 mg
Stabilization time	2 s	2 s	2,5 s
Adjustment	internal (automatic)	internal (automatic)	internal (automatic)
OIML Class	1	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, bottom cover, power supply.	Balance, weighing pan, weighing pan shield, bottom cover, power supply.
Weighing pan dimensions	ø90 + ø85 (option) 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×RS232¹, 2×USB-A (interchangeable), USB-B, Wi-Fi (option)	2×RS232¹, 2×USB-A (interchangeable), USB-B, Wi-Fi (option)	2×RS232¹, 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
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 520.R2 PLUS Analytical Balance
520 g
-
0,1 mg
-
-520 g
0,08 mg
0,25 mg
160 mg
16 mg
0,12 mg
0,4 mg
±0,6 mg
2,5 s
internal (automatic)
-
manual
LCD (backlit)
IP 43
Balance, weighing pan, weighing pan shield, bottom cover,
power supply.
ø100 mm
ø100 mm
ø100 mm 495×400×515 mm
ø100 mm 495×400×515 mm 7,3 kg
ø100 mm 495×400×515 mm 7,3 kg
ø100 mm  495×400×515 mm  7,3 kg  9,3 kg  2×RS232¹, 2×USB-A (interchangeable), USB-B, Wi-Fi
ø100 mm  495×400×515 mm  7,3 kg  9,3 kg  2×RS232¹, 2×USB-A (interchangeable), USB-B, Wi-Fi
ø100 mm  495×400×515 mm  7,3 kg  9,3 kg  2×RS232¹, 2×USB-A (interchangeable), USB-B, Wi-Fi (option)  Adapter: 100 – 240V AC 50/60Hz 0,6A; 12V DC 1,2A
ø100 mm  495×400×515 mm  7,3 kg  9,3 kg  2×RS232¹, 2×USB-A (interchangeable), USB-B, Wi-Fi (option)  Adapter: 100 – 240V AC 50/60Hz 0,6A; 12V DC 1,2A Balance: 12 – 15V DC 0,4A max

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.

 $<sup>\</sup>mbox{\ensuremath{^{\star}}}\mbox{\ensuremath{Wi-Fi}}\mbox{\ensuremath{^{\otimes}}}\mbox{\ensuremath{a}}\mbox{\ensuremath{$ 



## **Accessories**

Antivibration Tables Holders for laboratory flasks Displays

Protective cover for balances

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

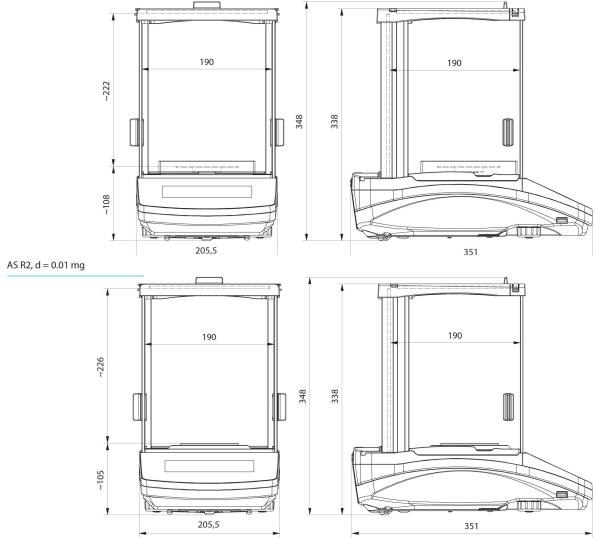
Weighing dishes
Antistatic ionizer
Receipt Printer
RPANEL BOX
RS 232, RS 485 cables
Under-Pan Weighing Rack
RS 232 cables (scale - printer)
Under-pan weighing

## **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 82/220.R2 PLUS Analytical Balance, AS 120.R2 PLUS Analytical Balance



AS R2, AS R1 d = 0.1 mg