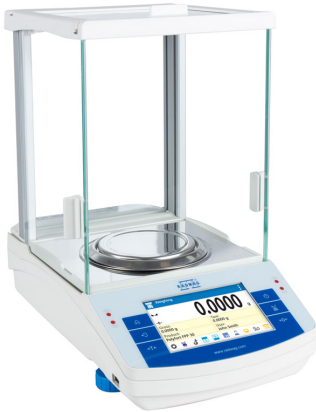




AS 520.X2 PLUS Analytical Balance, AS 82/220.X2 PLUS Analytical Balance, AS 160.X2 PLUS Analytical Balance, AS 120.X2 PLUS Analytical Balance, AS 60/220.X2 PLUS Analytical Balance, AS 3100.X2 PLUS Analytical Balance, AS 62.X2 PLUS Analytical Balance, AS 220.X2 PLUS Analytical Balance, AS 310.X2 PLUS Analytical Balance

More information on the website  
[radwag.com/en/info,w1,B6V](http://radwag.com/en/info,w1,B6V)



AS 520.X2 PLUS Analytical Balance  
 AS 160.X2 PLUS Analytical Balance  
 AS 220.X2 PLUS Analytical Balance  
 AS 310.X2 PLUS Analytical Balance



AS 82/220.X2 PLUS Analytical Balance  
 AS 120.X2 PLUS Analytical Balance  
 AS 60/220.X2 PLUS Analytical Balance  
 AS 62.X2 PLUS Analytical Balance



AS 3100.X2 PLUS Analytical Balance

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

## Functions

- |                       |                               |                         |                             |
|-----------------------|-------------------------------|-------------------------|-----------------------------|
| Autotest              | Dosing                        | Percent Weighing        | Parts counting              |
| Peak hold             | Formulation                   | Newton unit measurement | Statistics                  |
| Checkweighing         | IR sensors                    | GLP Procedures          | Animal weighing             |
| Density determination | Ambient conditions monitoring | Replaceable unit        | Statistical Quality Control |
| ALIBI Memory          | Mass for titrator             | Wi-Fi                   |                             |

# Datasheet

	AS 3100.X2 PLUS Analytical Balance	AS 60/220.X2 PLUS Analytical Balance	AS 62.X2 PLUS Analytical Balance
<b>Metrological parameters</b>			
Maximum capacity [Max]	3,1 kg	60 / 220 g	62 g
Minimum load	-	1 mg	1 mg
Readability [d]	1 mg	0,01 / 0,1 mg	0,01 mg
Verification scale interval [e]	-	1 mg	1 mg
Tare range	-3,1 kg	-220 g	-62 g
Standard repeatability [5% Max]	0,5 mg	0,01 mg	0,01 mg
Standard repeatability [Max]	0,6 mg	0,06 mg	0,017 mg
Standard minimum weight (USP)	120 mg	20 mg	20 mg
Standard minimum weight (U=1%, k=2)	1,2 g	2 mg	2 mg
Permissible repeatability [5% Max]	0,8 mg	0,02 mg	0,02 mg
Permissible repeatability [Max]	1 mg	0,1 mg	0,03 mg
Linearity	±6 mg	±0,05/0,2 mg	±0,05 mg
Stabilization time	2 s	2 s	3 s
Adjustment	internal (automatic)	internal (automatic)	internal (automatic)
OIML Class	-	I	I
<b>Physical parameters</b>			
Leveling system	manual	manual	manual
Display	5" graphic color touchscreen	5" graphic color touchscreen	5" graphic color touchscreen
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, fabric dust cover.
Weighing chamber dimensions	190×190×222 mm	190×190×222 mm	190×190×222 mm
Weighing pan dimensions	ø90 mm (open-work pan)	ø90 + ø85 (option) mm	ø90 open-work pan + ø85 (option) mm
Packaging dimensions	495×400×515 mm	550×455×565 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
<b>Features of use</b>			
Database capacity	7	7	7
Touch-free operation	2 IR Sensors	2 IR Sensors	2 IR Sensors
<b>Communication interface</b>			
Communication interface	RS232 <sup>1</sup> , 2×USB-A (interchangeable), USB-B, Wi-Fi, Ethernet	RS232 <sup>1</sup> , 2×USB-A (interchangeable), USB-B, Wi-Fi, Ethernet	RS232 <sup>1</sup> , 2×USB-A (interchangeable), USB-B, Wi-Fi, Ethernet
<b>Electrical parameters</b>			
Power supply	Adapter: 100 – 240V AC 50/60Hz 0,6A; 12V DC 1,2A Balance: 12 – 15V DC 0,8A max	Adapter: 100 – 240V AC 50/60Hz 0,6A; 12V DC 1,2A Balance: 12 – 15V DC 0,8A max	Adapter: 100 – 240V AC 50/60Hz 0,6A; 12V DC 1,2A Balance: 12 – 15V DC 0,8A max
Power consumption max.	4 W	4 W	4 W
<b>Environmental conditions</b>			
Operating temperature	+10 ÷ +40 °C	+10 ÷ +40 °C	+10 ÷ +40 °C
Relative humidity	40% ÷ 80%	40% ÷ 80%	40% ÷ 80%

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 82/220.X2 PLUS Analytical Balance	AS 120.X2 PLUS Analytical Balance	AS 160.X2 PLUS Analytical Balance
<b>Metrological parameters</b>			
Maximum capacity [Max]	82 / 220 g	120 g	160 g
Minimum load	1 mg	1 mg	10 mg
Readability [d]	0,01 / 0,1 mg	0,01 mg	0,1 mg
Verification scale interval [e]	1 mg	1 mg	1 mg
Tare range	-220 g	-120 g	-160 g
Standard repeatability [5% Max]	0,01 mg	0,01 mg	0,06 mg
Standard repeatability [Max]	0,06 mg	0,025 mg	0,07 mg
Standard minimum weight (USP)	20 mg	20 mg	120 mg
Standard minimum weight (U=1%, k=2)	2 mg	2 mg	12 mg
Permissible repeatability [5% Max]	0,02 mg	0,02 mg	0,09 mg
Permissible repeatability [Max]	0,1 mg	0,04 mg	0,1 mg
Linearity	±0,05/0,2 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
<b>Physical parameters</b>			
Leveling system	manual	manual	manual
Display	5" graphic color touchscreen	5" graphic color touchscreen	5" graphic color touchscreen
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.
Weighing chamber dimensions	190×190×222 mm	190×190×222 mm	190×190×222 mm
Weighing pan dimensions	ø90 + ø85 (option) mm	ø90 + ø85 (option) mm	ø100 mm
Packaging dimensions	550×455×565 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
<b>Features of use</b>			
Database capacity	7	7	7
Touch-free operation	2 IR Sensors	2 IR Sensors	2 IR Sensors
<b>Communication interface</b>			
Communication interface	RS232 <sup>1</sup> , 2×USB-A (interchangeable), USB-B, Wi-Fi, Ethernet	RS232 <sup>1</sup> , 2×USB-A (interchangeable), USB-B, Wi-Fi, Ethernet	RS232 <sup>1</sup> , 2×USB-A (interchangeable), USB-B, Wi-Fi, Ethernet
<b>Electrical parameters</b>			
Power supply	Adapter: 100 – 240V AC 50/60Hz 0,6A; 12V DC 1,2A Balance: 12 – 15V DC 0,8A max	Adapter: 100 – 240V AC 50/60Hz 0,6A; 12V DC 1,2A Balance: 12 – 15V DC 0,8A max	Adapter: 100 – 240V AC 50/60Hz 0,6A; 12V DC 1,2A Balance: 12 – 15V DC 0,8A max
Power consumption max.	4 W	4 W	4 W
<b>Environmental conditions</b>			
Operating temperature	+10 ÷ +40 °C	+10 ÷ +40 °C	+10 ÷ +40 °C
Relative humidity	40% ÷ 80%	40% ÷ 80%	40% ÷ 80%

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.X2 PLUS Analytical Balance	AS 310.X2 PLUS Analytical Balance	AS 520.X2 PLUS Analytical Balance
<b>Metrological parameters</b>			
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]	0,06 mg	0,07 mg	0,07 mg
Standard repeatability [Max]	0,07 mg	0,1 mg	0,2 mg
Standard minimum weight (USP)	120 mg	140 mg	140 mg
Standard minimum weight (U=1%, k=2)	12 mg	14 mg	14 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	I
<b>Physical parameters</b>			
Leveling system	manual	manual	manual
Display	5" graphic color touchscreen	5" graphic color touchscreen	5" graphic color touchscreen
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 chamber dimensions	190×190×222 mm	190×190×222 mm	190×190×222 mm
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
<b>Features of use</b>			
Database capacity	7	7	7
Touch-free operation	2 IR Sensors	2 IR Sensors	2 IR Sensors
<b>Communication interface</b>			
Communication interface	RS232 <sup>1</sup> , 2×USB-A (interchangeable), USB-B, Wi-Fi, Ethernet	RS232, 2×USB-A (interchangeable), USB-B, Wi-Fi, Ethernet	RS232 <sup>1</sup> , 2×USB-A (interchangeable), USB-B, Wi-Fi, Ethernet
<b>Electrical parameters</b>			
Power supply	Adapter: 100 – 240V AC 50/60Hz 0,6A; 12V DC 1,2A Balance: 12 – 15V DC 0,8A max	Adapter: 100 – 240V AC 50/60Hz 0,6A; 12V DC 1,2A Balance: 12 – 15V DC 0,8A max	Adapter: 100 – 240V AC 50/60Hz 0,6A; 12V DC 1,2A Balance: 12 – 15V DC 0,8A max
Power consumption max.	4 W	4 W	4 W
<b>Environmental conditions</b>			
Operating temperature	+10 ÷ +40 °C	+10 ÷ +40 °C	+10 ÷ +40 °C
Relative humidity	40% ÷ 80%	40% ÷ 80%	40% ÷ 80%

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.



## 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  
Displays  
Protective cover for balances  
Weighing dishes  
Antistatic ionizer  
RS 232, RS 485 cables  
Under-Pan Weighing Rack  
RS 232 cables (scale - printer)

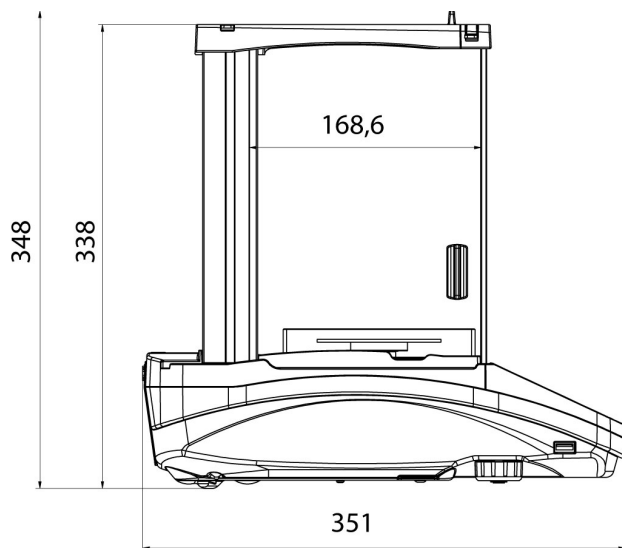
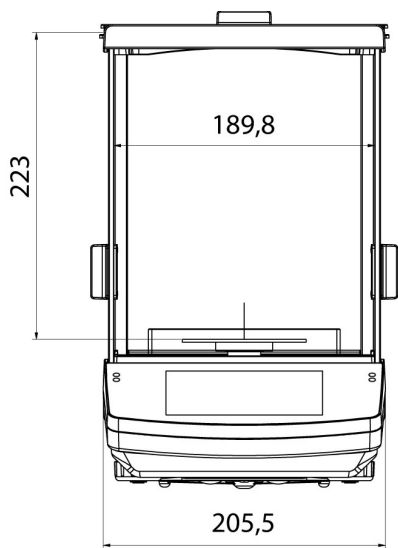
## Software

RAD-KEY  
Alibi Reader  
RADWAG Development Studio  
R.Barcode

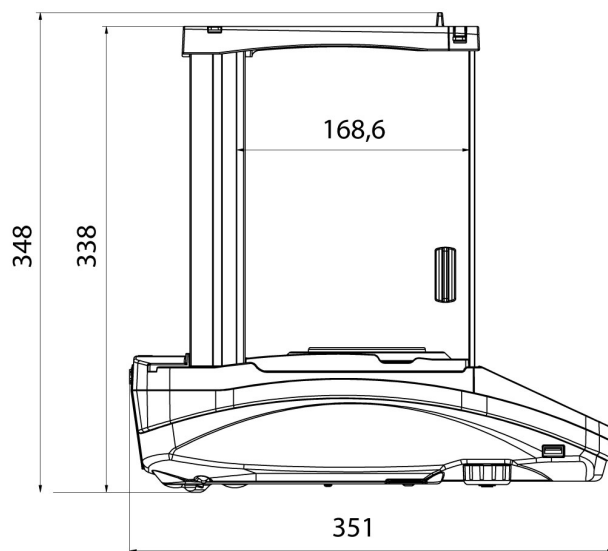
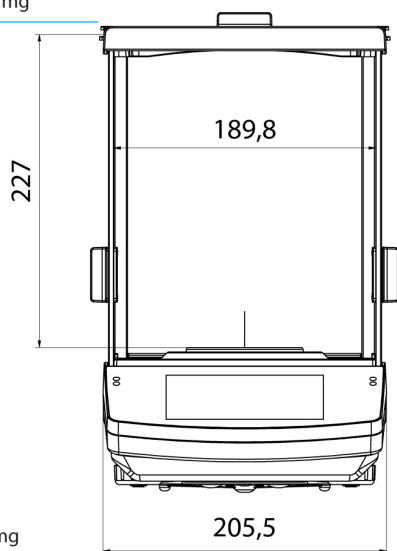
LabVIEW Driver  
R-LAB  
E2R System

## Device dimensions

AS 520.X2 PLUS Analytical Balance, AS 82/220.X2 PLUS Analytical Balance, AS 160.X2 PLUS Analytical Balance, AS 120.X2 PLUS Analytical Balance, AS 60/220.X2 PLUS Analytical Balance, AS 3100.X2 PLUS Analytical Balance, AS 62.X2 PLUS Analytical Balance, AS 220.X2 PLUS Analytical Balance, AS 310.X2 PLUS Analytical Balance



AS X2 PLUS, d = 0.01 mg



AS X2 PLUS, d = 0.1 mg