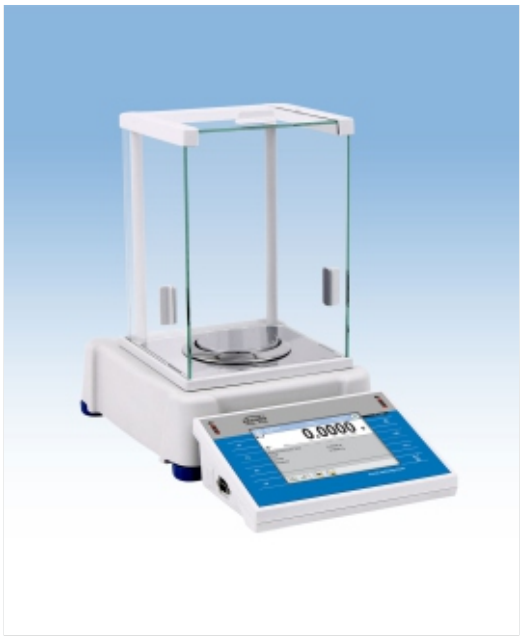
ANALYTICAL BALANCES AS 3Y

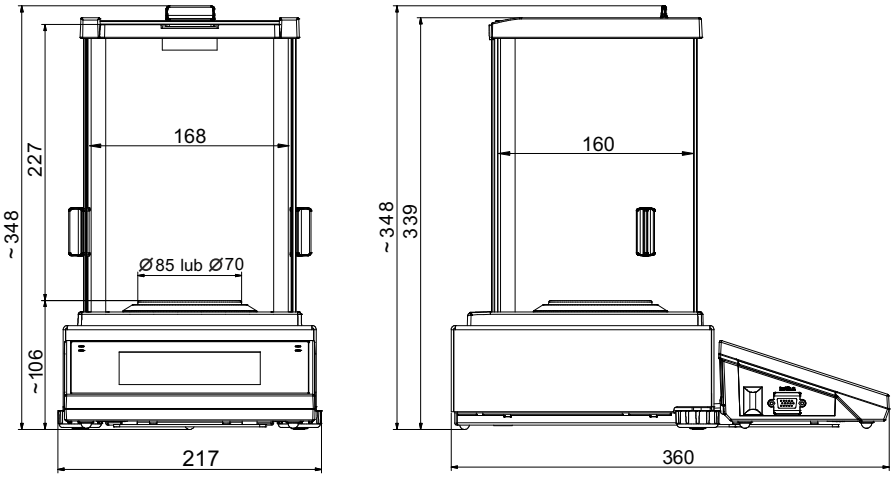
release date 20-01-2013

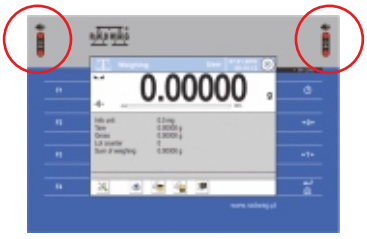


Balances AS 3Y series are laboratory weighing instruments featuring 5,7" LCD colour touch panel which provides new possibilities of balance operation and presenting measurement results.
Personalization of balance settings is carried out in extended user profiles. AS 3Y series comes standard with system of automatic adjustment using an internal mass standard. Level control is based on LevelSENSING system, RADWAG patented solution, which uses a system of an electronic level. New function of AS 3Y series is online monitoring of ambient conditions through built-in sensors or an external ambient conditions module THB 2 series.
AS 3Y series comes standard with esthetic weighing chamber protected by an anti-draft shield. Design of the weighing chamber enables easy disassembling of its glass parts, for keeping clean sterile.
Interactive formulation mode in the AS 3Y series is a reliable tool for creating various mixtures with application of databases. Differential weighing mode aids mass control of the same sample subjected to differed processes over time. Extended databases enable storing all carried out measurements, with option of printing and exporting them. Standard and user defined printouts allow for maintaining documentation complying with GLP/GMP requirements practically in any application. AS 3Y series features an independent mass control mode carried out with application of an automatic feeder PA-02/H.

- Weighing
- Parts counting
- Checkweighing
- Filling
- Percent setup
- Density determination
- Animal weighing
- Formulation
- Statistics
- Pipette calibration
- Differential weighing
- Mass control

Removable glass parts: side, top and back!





Infrared proximity sensors

- PRINT function
- TARE function
- sensors' sensitivity adjustment

Data exchange through USB storage devices

- export weighing data
- export/import databases
- export/import balance settings
- exchanging data between balances

Communication interfaces

- Ethernet 10/100Mbit
- RS 232
- 2×USB 2.0
- 4 in/out

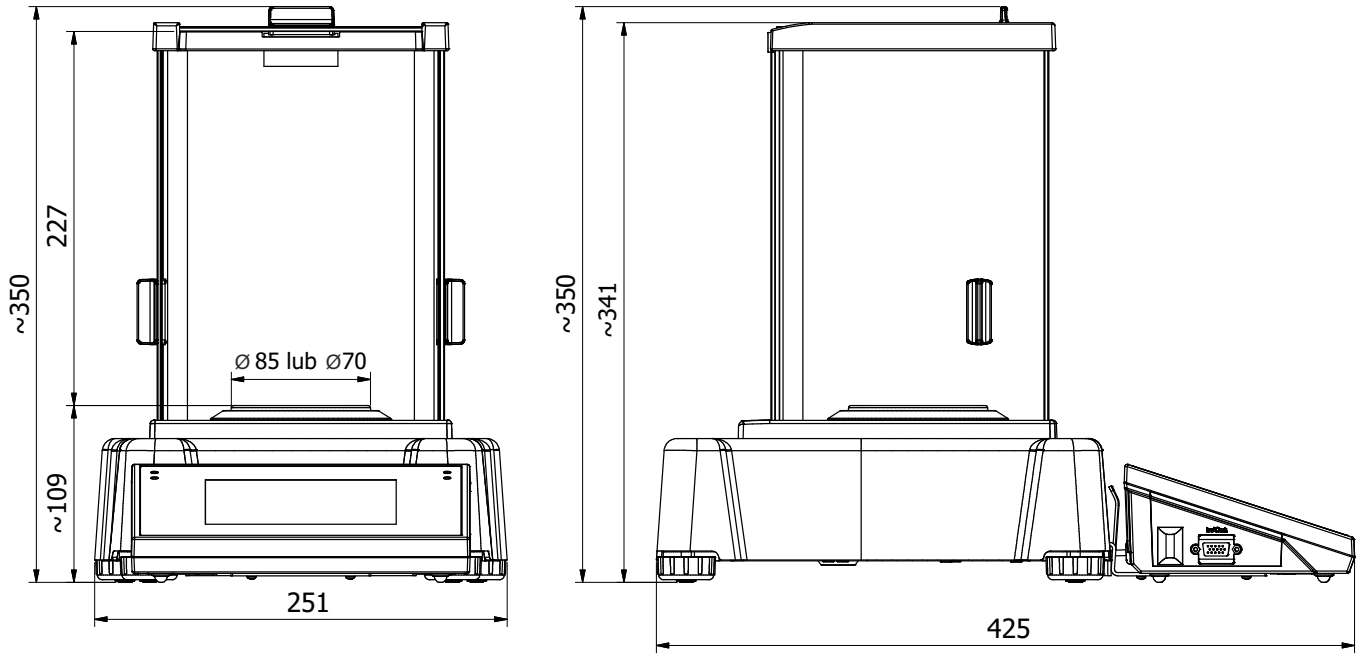
Technical data:

	AS 82/220.3Y M	AS 110.3Y M	AS 160.3Y M	AS 220.3Y M	AS 310.3Y M	AS 510.3Y -
Max capacity	82 g / 220 g	110 g	160 g	220 g	310 g	510 g
Minimal load	1 mg	10 mg	10 mg	10 mg	10 mg	10 mg
Readability	0,01 mg / 0,1 mg	0,1 mg	0,1 mg	0,1 mg	0,1 mg	0,1 mg
Tare range	-220 g	-110 g	-160 g	-220 g	-310 g	-510 g
Working temperature *	+10° ÷ +40°C					
Relative air humidity ***	40% ÷ 80%					
Repeatability **	0,02 mg (50g) 0,03 mg (50÷82g) 0,1 mg (82÷220g)	0,1 mg	0,1 mg	0,1 mg	0,1 mg (220g) 0,2 mg (220g÷310g)	0,1 mg (220g) 0,2 mg (310g) 0,3 mg (510g)
Linearity	± 0,07 mg / ± 0,2 mg	± 0,2 mg	± 0,2 mg	± 0,2 mg	± 0,3 mg	± 0,4 mg
Stabilization time	6 s / 3,5 s	3,5 s	3,5 s	3,5 s	3,5 s	3,5 s
Sensitivity drift	1 ppm/°C in temperature +15° ÷ +35°C					
Interface	2×USB, RS 232, Ethernet, 4 Inputs / 4 Outputs (digital)					
Power supply	13,5 ÷ 16 V DC / 2,1 A					
Adjustment / Calibration	internal (automatic)					
Pan size	ø70 mm	ø85 mm	ø85 mm	ø85 mm	ø85 mm	ø85 mm
Display	5,7" touch panel					

* The balance maintains its parameters in accordance with type approval in temperature 18°C ÷ 30°C

** Repeatability is expressed as a standard deviation from 10 weighing cycles (mass of 60g for balances with d=0,01mg and 220g for balnces with d=0,1mg)

*** Non-condensing conditions



Additional equipment:

Antivibration table for laboratory balances	Additional LCD display "WD-5/3Y"
Profesional weighing table	Density determination kit
Kafka thermal printer	PC USB keyboard
Dot matrix Epson printer	Automatic feeder PA-02/H
Label printer Citizen	Power adapter with battery and charger ZR-02
Holders for glass vessels	Rack for under hook weighing
Tare and "Print" foot button	Standard mass
PW-WIN computer software	Antistatic cable PA 1
RAD-KEY computer software	Bar code scanner
Antistatic ionizer DJ-02	Cable RS 232 (scale - Kafka printer) "P0136"
THB 2 ambient conditions module	Cable RS 232 (scale, Epson , Citizen printer) "P0151"

RADWAG Balances & Scales
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AS.R ANALYTICAL BALANCES

release date 01-04-2014

Removable glass parts: side, top and back!

Quick access to information

Direct access to functions and databases is possible from the level of keyboard.

Database – a direct access to databasis
Function - a direct access to the basic functions
F1 to F4 – programmable function and navigation keys on the menu

ALIBI memory

The used ALIBI memory is a data secure area and allows to record up to 100 000 weighment records. It ensures security of constant data register in the long time period.

The AS.R series represents a new standard level for analytical balances. They feature **a new, readable LCD display** which allows a clearer presentation of the weighing result. Besides, the display has a new text information line allowing to show additional messages and data, e.g. product name or tare value.

Additionally, the new R series balances by means of pictograms signal the activated working mode, connection with the Internet, the battery charge level, balance service functions. Also a number of displayed measuring units has been increased.

The balance precision and the measurement accuracy is assured by automatic internal adjustment, which takes into consideration temperature changes and time flow.
AS.R series balances feature several communication interfaces: **2 x RS 232, type A USB, type B USB and optional WiFi**. The housing is made of plastic, and the pan is made of stainless steel.

DATABASES IN R SERIES BALANCES

In new AS.R series balances the information system is based on 5 databases, which allows for several users to work with several products databases, and the registered weighing results can be subject to further analysis.

The data is registered in 5 databases:
- users (up to 10 users),
- products (up to 1000 products),
- weighments (up to 1000 weighments),
- tares (up to 10 tares),
- ALIBI memory (up to 100 000 weighments).

There is two directions **data exchange** within the system thanks to a quick USB interface. New balances allow to import and export databases using **USB pen drives**.

R series balances fulfill GLP requirements.

- Weighing
- Parts counting
- Checkweighing
- Percent setup
- Filling
- Summing function
- Statistics
- Density determination
- Animal weighing
- Caps lock of max indication

Technical data:

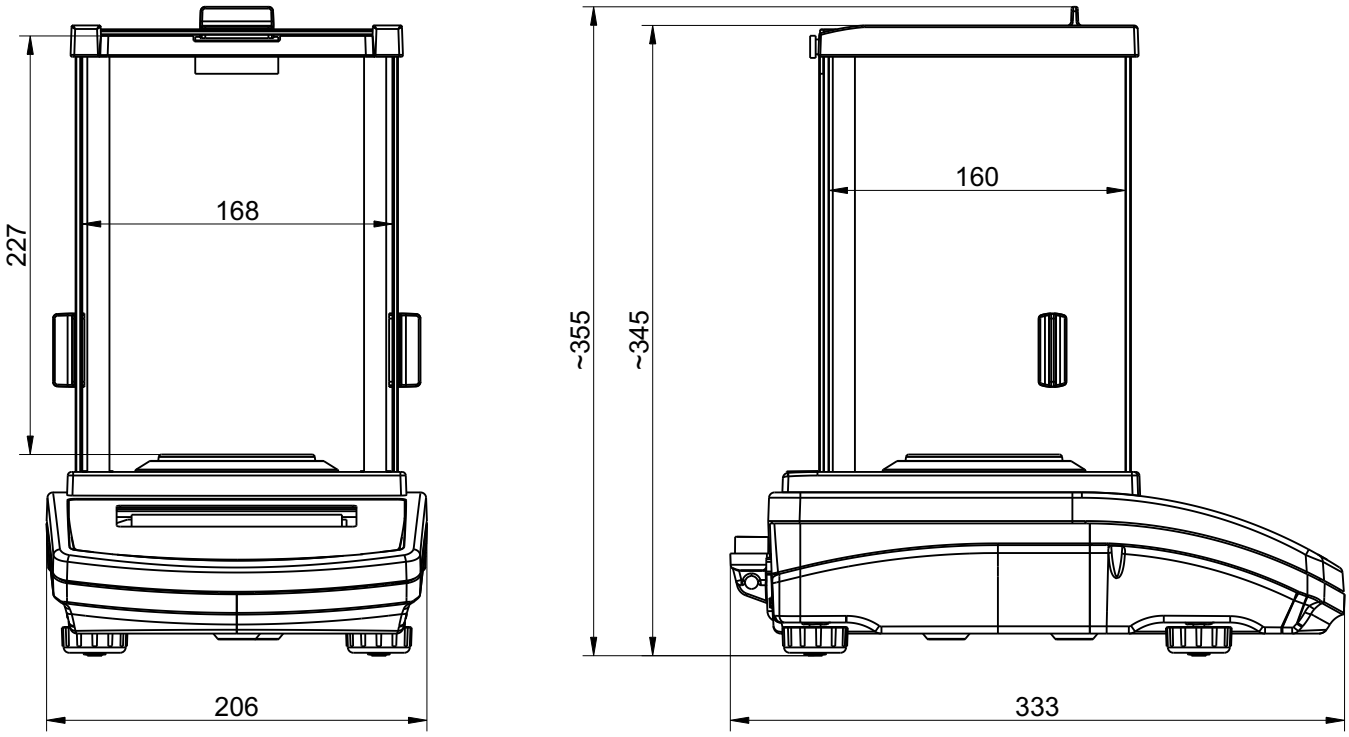
	AS 60/220.R2 M	AS 110.R2 M	AS 160.R2 M	AS 220.R2 M	AS 310.R2 M
Max capacity	60 g / 220 g	110 g	160 g	220 g	310 g
Minimum load	1 mg	10 mg	10 mg	10 mg	10 mg
Readability	0,01 mg / 0,1 mg	0,1 mg	0,1 mg	0,1 mg	0,1 mg
Tare range	-220 g	-110 g	-160 g	-220 g	-310 g
Repeatability *	0,03 mg / 0,1 mg	0,1 mg	0,1 mg	0,1 mg	0,1 mg (for 220 g) 0,2 mg (for 220g ÷ 310g)
Linearity	± 0,07 mg / ±0,2 mg	± 0,2 mg	± 0,2 mg	± 0,2 mg	± 0,3 mg
Pan size	Ø 70 mm	Ø 85 mm	Ø 85 mm	Ø 85 mm	Ø 85 mm
Working temperature	+10° ÷ +40°C				
Relative air humidity **	40% ÷ 80%				
Stabilization time	6 s / 3,5 s	3,5 s			
Sensitivity drift	1 ppm/°C in temperature +10° ÷ +40°C				
Interface	2 × RS 232, USB-A, USB-B, WiFi - option				
Power supply***	12 ÷ 16 V DC / 2,1 A				
Adjustment/calibration	internal (automatic)				
Display	LCD (backlit)				
Net weight/Gross weight	5,6 kg / 7,7 kg	5,6 kg / 7,7 kg	5,6 kg / 7,7 kg	5,6 kg / 7,7 kg	5,6 kg / 7,7 kg
Packaging size	490×400×505 mm				

* Repeatability is expressed as a standard deviation from 10 weighing cycles.

** Non-condensing conditions

*** 250 mA for balances without WiFi module, 350 mA for balances with installed WiFi module

Dimensions:



Accessories:

Antivibration table SAL/STONE	Density determination kit
Rack for under hook weighing	Additional LCD display "WD-6"
Professional weighing table	Power adapter with battery and charger ZR-02
Kafka thermal printer	PC keyboard USB
Impact printer Epson	External USB memory (FAT files format)
Label printer Citizen	Mass standard
Printer USB PCL	Adjustment weight
Holders for glass vessels	USB A- USB B cable (balance - computer, balance - PLC printer)
"PW-WIN" computer software	Cable RS 232 (scale - Kafka printer) "P0136"
"RAD-KEY" computer software	Cable RS 232 (scale - computer) "P0108"
Antistatic ionizer DJ-02	Cable RS 232 (scale, Epson, Citizen printer) "P0151"
Bar code scanner	"Tare" or "Print" foot button
Bar code scanner USB HID	

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ANALYTICAL BALANCES XA 3Y.A

release date 28-01-2014

XA 3Y.A series of analytical balances feature the new electronics and modern technology.

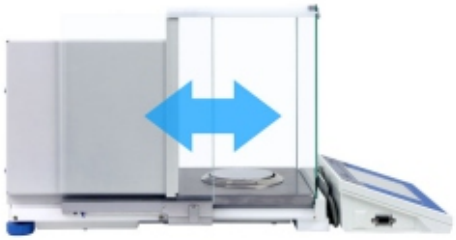
Measurement reliability and accuracy are maintained by automatic internal adjustment / calibration system triggered by time flow or temperature conditions.

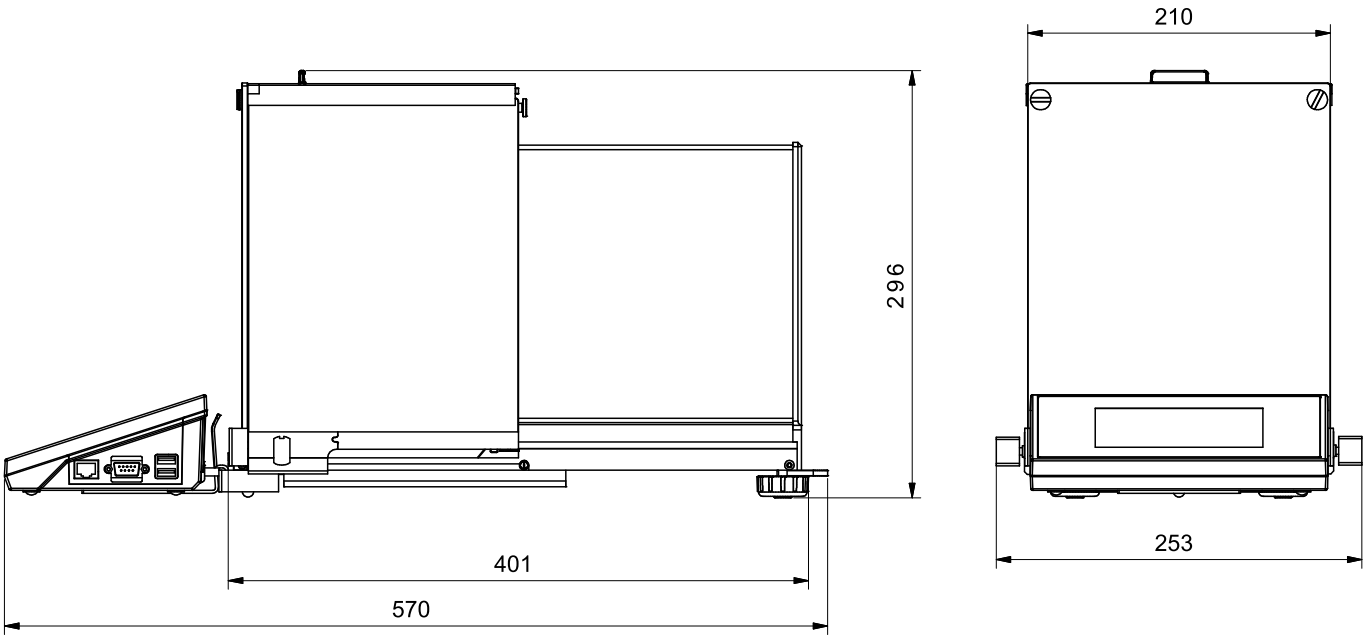
XA 3Y.A series of balances provide spacious weighing chamber with automatic opened doors. XA 3Y series features a touch panel covering a 5.7" colour graphic display, which boosts balance's operation. The balances are designed on new software version providing intuitive operation!

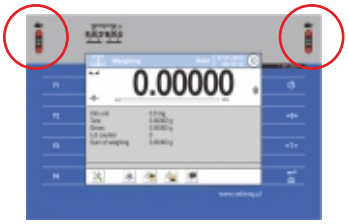
- Parts counting
- Filling
- Animal weighing
- Density determination
- Checkweighing
- Percent setup
- Statistics
- Formulation
- Pipette calibration **
- GLP procedures
- Infrared sensors

** function only available as an extra option of the software

- **Automatically opened side glass doors!**
- **New electronics and technological solutions!**
- **New software ensuring intuitive and simple operation!**
- **Removable side and top glass parts of a weighing chamber!**







Infrared proximity sensors

- PRINT function
- TARE function
- opening weighing chambers
- sensors' sensitivity

Data exchange through USB storage devices

- export weighing data
- export/import databases
- export/import balance settings
- exchanging data between balances

Communication interfaces

- Ethernet 10/100 Mbps
- RS 232
- 2×USB 2.0
- 4 in/out

Technical data:

	XA 52.3Y.A M	XA 110.3Y.A M	XA 82/220.3Y.A** M
Max capacity	52 g	100 g	82/220 g
Min load	1 mg	1 mg	1 mg
Readability	0,01 mg	0,01 mg	0,01/0,1 mg
Tare range	-52 g	-100 g	-220 g
Working temperature		+10° ÷ +40°C	
Relative air humidity ***		40% ÷ 80%	
Repeatability *	0,01 mg	0,015 mg (to 20g) 0,02 mg (to 50g) 0,03 mg (50g÷100g)	0,015 mg (to 20g) 0,02 mg (20g÷50g) 0,025 mg (50g÷82g) 0,08 mg (82g÷220g)
Linearity	±0,03 mg	±0,07 mg	±0,06/0,2 mg
Eccentric load deviation	0,03 mg	0,07 mg	0,2 mg
Sensitivity offset		$2 \times 10^{-6} \times Rt$	
Sensitivity temperature drift		1×10^{-6} / °C × Rt	
Sensitivity time drift		1×10^{-6} / Year × Rt	
Minimum weight (USP)	20 mg	40 mg	
Minimum weight (U = 1%, k = 2)	2 mg	4 mg	
Stabilization time	5 s	5 s	5 s
Interface		2×USB, RS 232, Ethernet, 4in / 4out (digital)	
Power supply		13,5 ÷ 16 V DC / 2,1 A	
Adjustment / Calibration		internal (automatic)	
Display		5,7" touch screen	
Pan size		ø 85 mm	
Weighing chamber dimensions		170×200×220 mm	
Net weight/Gross weight	12,6 / 16,3 kg	12,6 / 16,3 kg	12,7 / 16,4 kg
Packaging size		715×385×485 mm	

Rt - net weight

* Repeatability is expressed as a standard deviation from 10 weighing cycles (mass of 20g for balances with d=0,01mg and 220g for balnces with d=0,1mg)

** Balance in moveable fine range version

*** Non-condensing conditions

Technical data:

	XA 100.3Y.A M	XA 160.3Y.A M	XA 220.3Y.A M	XA 310.3Y.A M
Max capacity	100 g	160 g	220 g	310 g
Min load	10 mg	10 mg	10 mg	10 mg
Readability	0,1 mg	0,1 mg	0,1 mg	0,1 mg
Tare range	-100 g	-160 g	-220 g	-310 g
Working temperature	+10° ÷ +40°C			
Relative air humidity	40% ÷ 80%			
Repeatability *	0,08 mg	0,08 mg	0,08 mg	0,08 mg (to 220g) 0,2 mg (220g÷310g)
Linearity	±0,2 mg	±0,2 mg	±0,2 mg	±0,3 mg
Eccentric load deviation	0,2 mg	0,2 mg	0,2 mg	0,3 mg
Sensitivity offset	$2 \times 10^{-6} \times Rt$			
Sensitivity temperature drift	1×10^{-6} / °C × Rt			
Sensitivity time drift	1×10^{-6} / Year × Rt			
Minimum weight (USP)	160 mg			
Minimum weight (U = 1%, k = 2)	16 mg			
Stabilization time	3 s			
Interface	2×USB, RS 232, Ethernet, 4 in / 4 out (digital)			
Power supply	13,5 ÷ 16 V DC / 2,1 A			
Adjustment / Calibration	internal (automatic)			
Display	5,7" touch screen			
Pan size	ø 100 mm			
Weighing chamber dimensions	170×200×220 mm			
Net weight/Gross weight	12,6 / 16,3 kg	12,6 / 16,3 kg	12,7 / 16,4 kg	12,7 / 16,4 kg
Packaging size	715×385×485 mm			

Rt - net weight

* Repeatability is expressed as a standard deviation from 10 weighing cycles (mass of 20g for balances with d=0,01mg and 220g for balnces with d=0,1mg)

** Balance in moveable fine range version

*** Non-condensing conditions

Additional equipment:

Anti vibration table for laboratory balances	Density determination kit
Professional weighing table	LCD display „WD-5/3Y”
Kafka thermal printer	PC keyboard
Epson impact printer	Additional adapter for pipettes calibration
Citizen label printer	Power adapter ZR-02
Holders for laboratory vessels	Mass standard
Foot tare and print buttons	Antistatic cable
PW-WIN 2004 computer software	Barcode scanner
RAD-KEY 2000 computer software	RS 232 cable: scale - thermal printer: P0136
Pipettes computer software	RS 232 cable: scale - "Epson/Citizen" printer: P0151
Antistatic ionizer DJ-02	RS 232 cable: scale - computer: P0108
Ambient conditions module	

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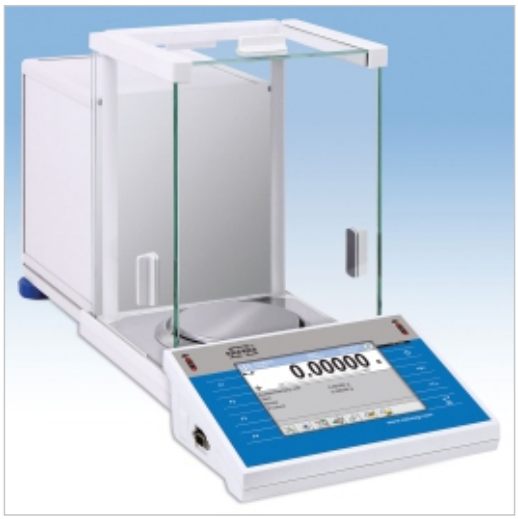
ANALYTICAL BALANCES XA 3Y

release date 11-04-2014



- **New electronics and technological solutions!**
- **New software, intuitive and comfortable operation!**
- **Removable glass side and top doors of the weighing chamber!**

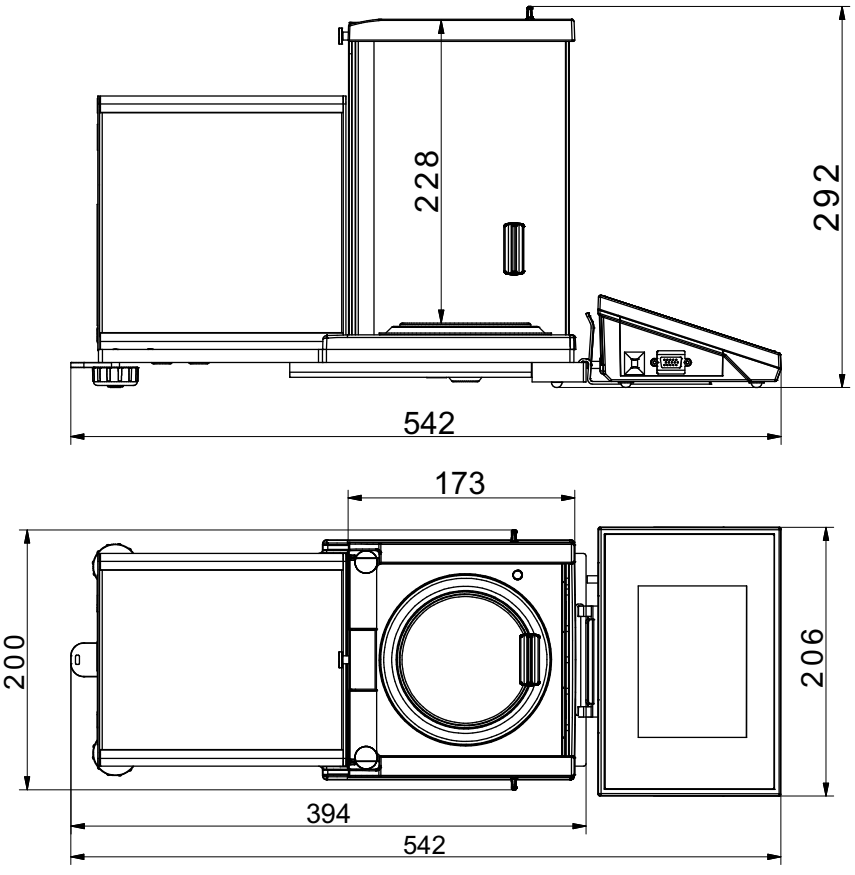
Balances XA 3Y series are laboratory weighing instruments featuring 5,7" LCD colour touch panel which provides new possibilities of balance operation and presenting measurement results.

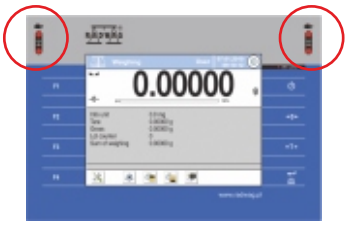
Personalization of balance settings is carried out in extended user profiles. XA 3Y series comes standard with system of automatic adjustment using an internal mass standard. Level control is based on LevelSENSING system, RADWAG patented solution, which uses a system of an electronic level. New function of XA 3Y series is online monitoring of ambient conditions through built-in sensors or an external ambient conditions module THB 2 series.

Balances with d= 0,01 mg are optionally available with openwork weighing pan which limits ambient conditions impact on the measuring result. Design of the weighing chamber enables easy disassembling its glass parts for keeping them clean and sterile. Interactive formulation mode is a reliable tool for creating various mixtures with application of databases. Differential weighing mode aids mass control of the same sample subjected to differed processes over time. Extended databases enable storing all carried out measurements, with option of printing and exporting them. New function of pipette calibration in the XA 3Y series is carried out with application of an optional adapter, which is an ergonomic tool aiding calibration and checking of piston pipettes using gravimetric measuring method.

Standard and user defined printouts allow for maintaining documentation complying with GLP/GMP requirements practically in any application.

- Weighing
- Parts counting
- Checkweighing
- Filling
- Percent setup
- Density determination
- Animal weighing
- Formulation
- Statistics
- Pipette calibration
- Differential weighing
- Mass control





Infrared proximity sensors

- PRINT function
- TARE function
- sensors' sensitivity adjustment

Data exchange through USB storage devices

- export weighing data
- export/import databases
- export/import balance settings
- exchanging data between balances

Communication interfaces

- Ethernet 10/100Mbit
- RS 232
- 2×USB 2.0
- 4 in/out

Technical data:

	XA 52.3Y M	XA 110.3Y M	XA 82/220.3Y** M
Max capacity	52 g	100 g	82/220 g
Min load	1 mg	1 mg	1 mg
Readability	0,01 mg	0,01 mg	0,01/0,1 mg
Tare range	-52 g	-100 g	-220 g
Working temperature		+10° ÷ +40°C	
Relative air humidity ***		40% ÷ 80%	
Repeatability *	0,01 mg	0,015 mg (to 20g) 0,02 mg (20g÷50g) 0,03 mg (50g÷100g)	0,015 mg (to 20g) 0,02 mg (20g÷50g) 0,025 mg (50g÷82g) 0,08 mg (82g÷220g)
Linearity	±0,03 mg	±0,07 mg	±0,06/0,2 mg
Eccentric load deviation	0,03 mg	0,07 mg	0,2 mg
Sensitivity offset		$2 \times 10^{-6} \times Rt$	
Sensitivity temperature drift		1×10^{-6} / °C × Rt	
Sensitivity time drift		1×10^{-6} / Year × Rt	
Minimum weight (USP)	20 mg	40 mg	
Minimum weight (U = 1%, k = 2)	2 mg	4 mg	
Stabilization time		5 s	
Interface		2×USB, RS 232, Ethernet, 4in / 4out (digital)	
Power supply		13,5 ÷ 16 V DC / 2,1 A	
Adjustment / Calibration		internal (automatic)	
Pan size		ø 85 mm	
Weighing chamber dimensions		170×200×220 mm	
Net weight/Gross weight		9,8 kg / 14,3 kg	
Packaging size		715×385×485 mm	

Rt - net weight

* Repeatability is expressed as a standard deviation from 10 weighing cycles (mass of 20g for balances with d=0,01mg and 220g for balnces with d=0,1mg)

** Balance in moveable fine range version

Data given in tables are values determined in typical laboratory conditions. In the actual operation conditions the values of these parameters may differ from those listed above because of the impact of ambient conditions and/or balance settings.

*** - Non-condensing conditions

Technical data:

	XA 100.3Y M	XA 160.3Y M	XA 220.3Y M	XA 310.3Y M	XA 510.3Y -
Max capacity	100 g	160 g	220 g	310 g	510 g
Min load	10 mg	10 mg	10 mg	10 mg	10 mg
Readability	0,1 mg	0,1 mg	0,1 mg	0,1 mg	0,1 mg
Tare range	-100 g	-160 g	-220 g	-310 g	-510 g
Working temperature	+10° ÷ +40°C				
Relative air humidity ***	40% ÷ 80%				
Repeatability *	0,08 mg	0,08 mg	0,08 mg	0,08 mg (to 220g) 0,2 mg (220g÷310g)	0,08 mg
Linearity	±0,2 mg	±0,2 mg	±0,2 mg	±0,3 mg	±0,3 mg
Eccentric load deviation	0,2 mg	0,2 mg	0,2 mg	0,3 mg	0,3 mg
Sensitivity offset	$2 \times 10^{-6} \times Rt$				
Sensitivity temperature drift	1×10^{-6} / °C × Rt				
Sensitivity time drift	1×10^{-6} / Rok × Rt				
Minimum weight (USP)	160 mg				
Minimum weight (U = 1%, k = 2)	16 mg				
Stabilization time	3 s				
Interface	2×USB, RS 232, Ethernet, 4in / 4out (digital)				
Power supply	13,5 ÷ 16 V DC / 2,1 A				
Adjustment / Calibration	internal (automatic)				
Pan size	ø 100 mm				
Weighing chamber dimensions	170×200×220 mm				
Net weight/Gross weight	9,8 kg / 14,3 kg				
Packaging size	715×385×485 mm				

Rt - net mass

* Repeatability is expressed as a standard deviation from 10 weighing cycles (mass of 20g for balances with d=0,01mg and 220g for balnces with d=0,1mg)

Data given in tables are values determined in typical laboratory conditions. In the actual operation conditions the values of these parameters may differ from those listed above because of the impact of ambient conditions and/or balance settings..

*** - Non-condensing conditions

Additional equipment:

Anti vibration table for laboratory balances	Density determination kit
Professional weighing table	THB 2 ambient conditions module
Kafka thermal printer	LCD display „WD-5/3Y”
Epson impact printer	PC USB keyboard
Citizen label printer	Additional adapter for pipettes calibration
Holders for laboratory vessels	Power adapter ZR-02
Foot tare and print buttons	Mass standard
PW-WIN 2004 computer software	Antistatic cable PA 1
RAD-KEY 2000 computer software	Barcode scanner
Pipettes computer software	RS 232 cable: scale - thermal printer: P0136
Antistatic ionizer DJ-02	RS 232 cable: scale - "Epson/Citizen" printer: P0151

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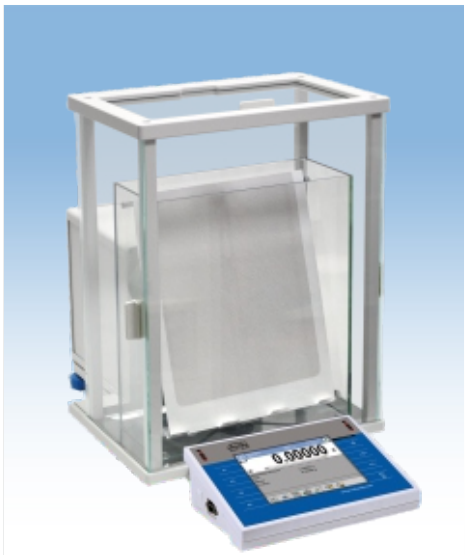
ANALYTICAL BALANCES XA 3Y.F

release date 03-01-2013



XA 3Y.F is also functions
as a standard analytical balance

Special weighing pan
for weighing large filters

- **New electronics and technological solutions!**
- **New intuitive operation and user friendly software of balances!**
- **Filter weighing!**

- Parts counting
- Filling
- Animal weighing
- Density determination
- Checkweighing
- Percent setup
- Statistics
- Formulation
- Air buoyancy correction
- GLP procedures
- Under-hook weighing

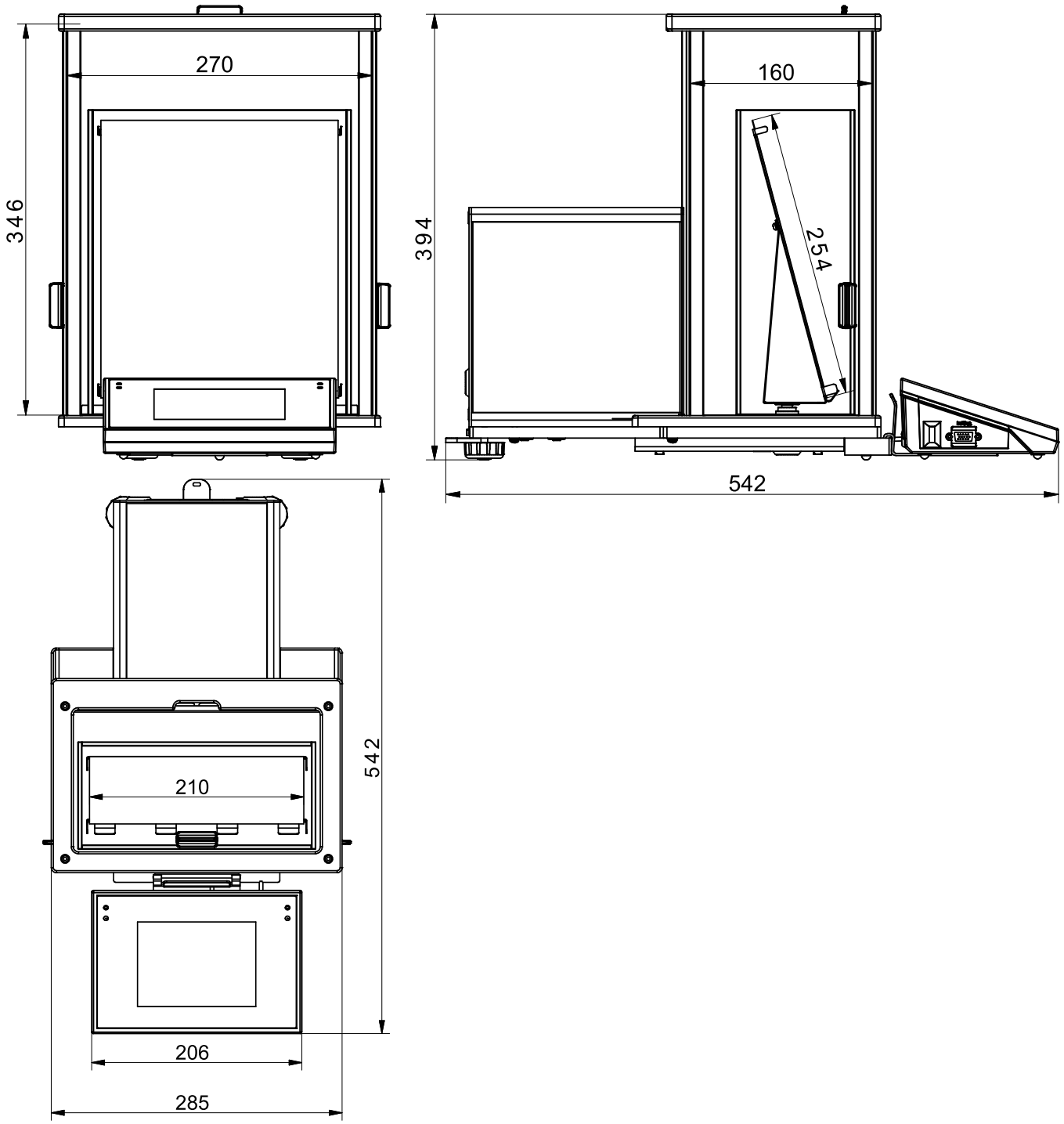
Balances XA 3Y.F series are designed for weighing large filters. The balance features a spacious weighing chamber and a weighing pan dedicated for weighing filters with maximum dimensions 210×260 mm. As replacement to the pan for weighing filters, balance user can apply a standard weighing pan for regular weighing process. In the weighing chamber and over the weighing pan there is a large draft shield made of conducting glass for discharging static electricity. In addition, it functions as a anti draft protection. The weighing chamber comprises sliding side and top glass doors. XA 3Y.F series features a touch panel covering a 5.7" colour graphic display.

Technical data:

	XA 52 3Y.F
Max capacity	52 g
Min load	1 mg
Readability	0,01 mg
Tare range	-52 g
Working temperature	+10° ÷ +40°C
Repeatability *	0,01 mg (for a concentrated mass) 0,03 mg (for filters weighing)
Linearity	±0,03 mg
Eccentric load deviation	0,03 mg
Sensitivity offset	$2 \times 10^{-6} \times Rt$
Sensitivity temperature drift	1×10^{-6} / °C × Rt
Sensitivity stability	1×10^{-6} / Year × Rt
Minimum weight (USP)	30 mg
Minimum weight (U = 1%, k = 2)	2 mg
Stabilization time	5 s (30 s for filters)
Interface	2×USB, RS 232, Ethernet, 4Inputs/4Outputs
Power supply	13,5÷16 V DC / 2,1 A
Adjustment / Calibration	internal (automatic)
Pan size	ø 85 mm (210×254 mm for filters)
Display	graphic 5,7"
Net weight/Gross weight	9 / 12 kg
Packaging size	685×405×495 mm

Rt - net weight

* Repeatability is expressed as a standard deviation from 10 weighing cycles.



Additional equipment:

Anti vibration table for laboratory balances	Ambient conditions module
Profesional weighing table	Density determination kit
Kafka thermal printer	Additional LCD display "WD-3/01"
Impact Epson printer	PC keyboard
Label printer Citizen	Additional adapter for pipettes calibration
Holders for glass vessels	Power adapter with battery and charger ZR-02
Air density determination kit	Mass standard
Tare and "Print" foot button	Antistatic cable
PW-WIN computer software	Cable RS 232 (balance - Kafka printer) "P0136"
RAD-KEY computer software	Cable RS 232 (balance - computer) "P0108"
PIPETTES computer software	Cable RS 232 (balance - Epson , Citizen printer) "P0151"
Antistatic ionizer DJ-02	

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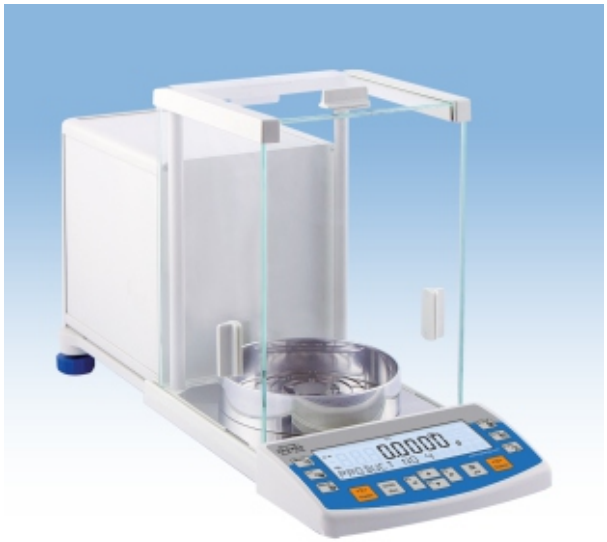
XA.R2 ANALYTICAL BALANCES

release date 07-05-2014



The **XA.R2 series** represents a new standard level for analytical balances. They feature a new, readable LCD display which allows a clearer presentation of the weighing result. Besides, the display has a new text information line allowing to show additional messages and data, e.g. product name or tare value.

The balance precision and the measurement accuracy is assured by automatic internal adjustment, which takes into consideration temperature changes and time flow.

XA.R2 series balances feature several communication interfaces: 2 x RS 232, type A USB, type B USB and optional WiFi.

The housing is made of aluminium and plastic (ABS). The pan is made of stainless steel.

- Parts counting
- Dosing
- Animal weighing
- Density determination
- Checkweighing
- Percent setup
- Statistics
- Pipettes calibration
- GLP Procedures

- **New menu structure**
- **Databases**
- **Communication interfaces**
- **Programmable buttons Hotkey**

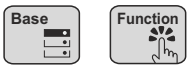
DATABASES IN R SERIES BALANCES

In new R series balances the information system is based on 5 databases, which allows for several users to work with several products databases, and the registered weighing results can be subjected to further analysis.
The data is registered in 5 databases:
- users (up to 10 users),
- products (up to 1000 products),
- weighments (up to 5000 weighments),
- tares (up to 100 tares),
- ALIBI memory (up to 100 000 weighments).

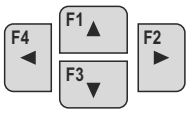
There is two directions data exchange within the system thanks to a quick USB interface. New balances allow to import and export databases using USB pen drives.

QUICK DATA ACCESS

The balance comprises 2 buttons enabling easy access to DataBase and Functions.

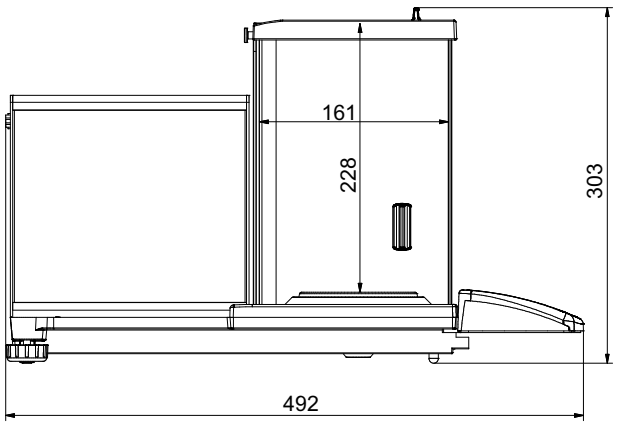


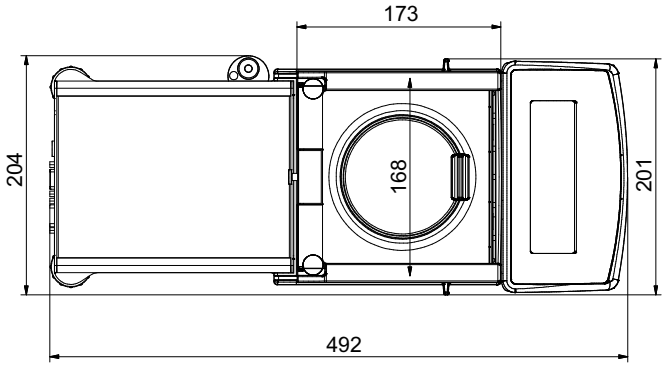
Additionally it is equipped with 4 programmable function keys F1-F4. The function keys can perform different operations for each mode:



- header printout,
- tare editing,
- footer printout,
- product selection.

Dimensions:





Technical data:

	XA 52.R2	XA 82/220.R2**
	-	-
Max capacity	52 g	82 / 220 g
Minimum load	1 mg	1 mg
Readability	0,01 mg	0,01 / 0,1 mg
Tare range	-52 g	-220 g
Working temperature	+10° ÷ +40°C	
Relative air humidity ***	40% ÷ 80%	
Repeatability *	0,015 mg (to 2 g) 0,02 mg (2 g ÷ 52 g)	0,015 mg (to 2 g) 0,02 mg (2 g ÷ 20 g) 0,025 mg (20 g ÷ 50 g) 0,035 mg (50 g ÷ 82 g) 0,09 mg (82 g ÷ 220 g)
Linearity	±0,06 mg	±0,06 / 0,2 mg
Eccentric load deviation	0,06 mg	0,2 mg
Sensitivity offset	$2 \times 10^{-6} \times Rt$	
Sensitivity temperature drift	1×10^{-6} / °C × Rt	
Sensitivity stability	1×10^{-6} / Rok × Rt	
Minimum weight (USP)	30 mg	
Minimum weight (U = 1%, k = 2)	3 mg	
Stabilization time	6 s	6 s / 3,5 s
Interface	2×RS 232, USB A, USB B, WiFi - option	
Power supply ****	13,5 ÷ 16 V DC / 300 mA	
Adjustment/calibration	internal (automatic)	
Pan size	Ø 85	
Net weigh/Gross weight	9,5 kg / 14 kg	
Packaging size	715×385×485 mm	

* Repeatability is expressed as a standard deviation from 10 weighing cycles

Rt - net weight

** Balance in movable fine range version

*** Non-condensig conditions

**** 300 mA for balances without WiFi module, 400 mA for balances with installed WiFi module

Accessories:

Antivibration weighing bench	Bar code scanner RS232
Professional weighing bench	Bar code scanner USB HID
Kafka thermal printer	Density determination kit for solids and liquids
Epson impact printer	LCD display "WD-6"
Citizen label printer	USB PC keyboard
Holders for glass vessels	Additional adapter for pipettes calibration
"Tare" or "Print" foot button	Power adapter ZR-02
"PW-WIN" computer software	Mass standard
"RAD-KEY" computer software	Cable RS 232 (balance - Kafka printer) "P0136"
"Pipettes" computer software	Cable RS 232 (balance - computer) "P0108"
Antistatic ioniser DJ-02	Cable RS 232 (balance - Epson, Citizen printer) "P0151"
USB PCL printer	Cable USB A - USB B (balance - computer, balance - PCL printer)
USB flash drive (FAT file format)	

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