

AS 3Y Analytical Balances

Analytical weighing of the highest quality and accuracy using professional balances



Detachable terminal



Communication interfaces



Ergonomic weighing pan design

Functions

 Parts counting	 Percent weighing	 Statistical quality control	 Automatic feeder operation	 Ambient conditions measurement
 Dosing	 Statistics	 Autotest	 GLP procedures	 Replaceable unit
 Checkweighing	 Animal weighing	 Density determination	 Proximity sensors	 Multilingual menu
 Formulations	 Differential weighing	 Cooperation with titrators		

Features

Reliable Results and Excellent Weighing Parameters

The best weighing parameters enable applying AS 3Y analytical balances in majority of demanding laboratory processes.

Significantly Fast Measurement

Powerful processor offers new possibilities of operation assuring short indication stabilization time at a respective repeatability.

Second to None Repeatability and Compliance with USP

AS 3Y analytical balances feature the highest measurements accuracy, excellent repeatability and are compliant with USP requirements (Chapter 41 and 1251).

Intuitive Operation and Touch Screen

5.7" colour touch screen enables intuitive operation and easy access to numerous applications and functions of the weighing instrument.

Semi-Automatic Level Control

Leveling system facilitates adjustment of device level, it also uninterruptedly controls the level state, and informs about potential level deviations.

Spacious Weighing Chamber

Large weighing chamber enables convenient operation using laboratory vessels of different dimensions.

Numerous Options of Data Management

The instrument enables saving all data of carried out measurements as reports, and both time and statistical graphs.

Technical Specifications

	AS 220.3Y	AS 310.3Y	AS 510.3Y
Maximum capacity [Max]	220 g	310 g	510 g
Minimum load	10 mg	10 mg	10 mg
Readability [d]	0.1mg	0.1mg	0.1mg
Verification scale interval [e]	1 mg	1 mg	–
Tare range	–220 g	–310 g	–510 g
Repeatability (5% Max)*	0.08 mg	0.08mg	0.1 mg
Repeatability (Max)*	0.1 mg	0.15 mg	0.3 mg
Linearity	± 0.2 mg	± 0.3 mg	± 0.4 mg
Sensitivity temperature drift**	$1 \times 10^{-6} / ^\circ\text{C} \times \text{Rt}$	$1 \times 10^{-6} / ^\circ\text{C} \times \text{Rt}$	$1 \times 10^{-6} / ^\circ\text{C} \times \text{Rt}$
Minimum weight (U=1%, k=2)	16 mg	16 mg	20 mg
Minimum weight (USP)	160 mg	160 mg	200 mg
Stabilization time***	3.5 s	3.5 s	3.5 s
Adjustment	internal	internal	internal
Verification	Yes	Yes	—
OIML Class	I	I	I
Indicator fastening	35 cm cable, wireless connection (option)****	35 cm cable, wireless connection (option)****	35 cm cable, wireless connection (option)****
Display	5.7" colour, resistive touch screen	5.7" colour, resistive touch screen	5.7" colour, resistive touch screen
Keypad	8 keys	8 keys	8 keys
Protection class	IP 43	IP 43	IP 43
Databases	19	19	19
Touch-free operation	2 programmable proximity sensors	2 programmable proximity sensors	2 programmable proximity sensors
USB-A	2	2	2
RS 232	2	2	2
Wireless connection	802.11 b/g/n	802.11 b/g/n	802.11 b/g/n
Ethernet	10 / 100 Mbit	10 / 100 Mbit	10 / 100 Mbit
IN/OUT	4 × IN / 4 × OUT	4 × IN / 4 × OUT	4 × IN / 4 × OUT
Power supply	13.5 ÷ 16 V DC	13.5 ÷ 16 V DC	13.5 ÷ 16 V DC
Power consumption	7 W	7 W	7 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 °C	–20 ÷ +50 °C	–20 ÷ +50 °C
Weighing pan dimensions	ø 100 mm	ø 100 mm	ø 100 mm
Weighing chamber dimensions	160 × 168 × 227 mm	160 × 168 × 227 mm	160 × 168 × 227 mm
Weighing device dimensions	426 × 254 × 350 mm	426 × 254 × 350 mm	426 × 254 × 350 mm
Net weight	6.2 kg	6.2 kg	6.2 kg
Gross weight	11 kg	11 kg	11 kg
Packaging dimensions	600 × 400 × 540 mm	600 × 400 × 540 mm	600 × 400 × 540 mm

Rt net weight

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

** parameter determined in the following temperature range: +15 ÷ +35 °C

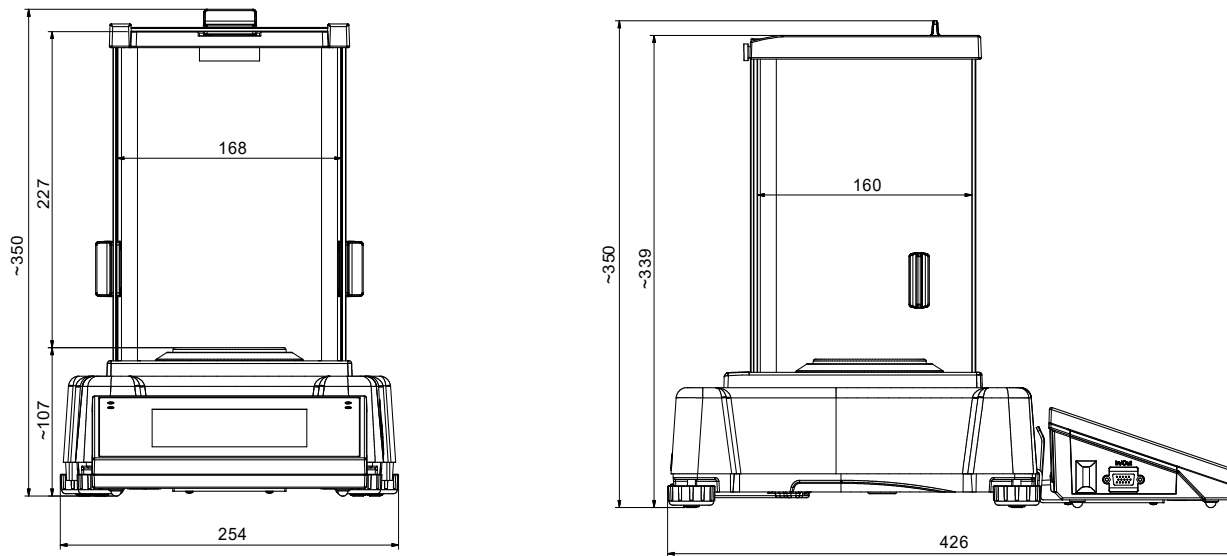
*** Stabilization time depends on external conditions and dynamics of placing loads on a pan, determined for FAST profile

**** 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



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
- THB-S or THB-P sensor

Peripheral Devices

- Epson dot matrix printer
- label printer
- receipt printer

- Epson dot matrix printer
- barcode scanners
- PA-02/H automatic feeder
- LCD display -WD-5/3Y

Cables, Converters

- P0108: RS 232 cable (balance-computer)
- P0167: RS 232 cable (balance-computer)
- P0151: RS 232 cable (balance - Epson printer)

Electrical Accessories

- ZR-02 power supply with battery

Dedicated Software

R-LAB

- collecting measurements
- carrying out statistical analysis of measurements
- customized graphs and reports

E2R PGC

- synchronization of databases, operators, products schedules
- record of measurements and PGC controls carried out on weighing instruments linked in ETHERNET network
- quality assessment of pre- packaged goods based on acquired data

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

Label Editor R02

- designing label templates
- sending graphics and fonts to label printers
- printing label templates using connected printers

Audit Trail Reader

- support of Audit Trail function available for 3Y, 4Y, HY10, WLY, WPY series weighing instruments
- record of operator's activity from the moment of logging in

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

3Y Database Editor

- databases readout
- databases editing
- databases saving - from computer software to connected weighing instrument
- connection with 3Y balances via Ethernet and 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

LabView Driver

- operation of RADWAG balances in LabView environment

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

RADWAG Remote Desktop

- remote operation via computer, mobile phone or tablet
- sending text messages
- version for Windows 10 and Android systems

Parameters Editor

- remote change of parameters
- remote on-line preview of the display
- displaying current mass indication
- software update
- file loading, editing and saving parameters to a file
- import and export of parameters
- interfaces: RS232, Ethernet and Wireless Connection.
- quick and easy edition of balance parameters using computer.