

# UYA 4Y Ultra-Microbalances

## MYA 4Y Microbalances



Unrivalled precision and comfortable measurements of small masses carried out with the highest accuracy



UYA 4Y



MYA 4Y



Automatically opened weighing chamber



Proximity sensors

## Functions

- |                |                       |                             |                                |                   |
|----------------|-----------------------|-----------------------------|--------------------------------|-------------------|
| Parts counting | Percent weighing      | Statistical quality control | Proximity sensors              | Multilingual menu |
| Dosing         | Statistics            | Autotest                    | Ambient conditions measurement | Replaceable unit  |
| Checkweighing  | Animal weighing       | Automatic sliding door      | GLP procedures                 | Moveable range    |
| Formulations   | Differential weighing |                             |                                |                   |

## Features

### Excellent Readability Starting from 0.1 µg

Due to exceptional weighing parameters, the UYA 4Y and MYA 4Y microbalances are intended for the most demanding laboratory applications.

### Significantly Fast Measurement

Powerful processor offers new possibilities of operation assuring short indication stabilization time.

### Unequaled Repeatability and Compliance with USP

4Y microbalances 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.

### Automatic Level Control

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

### Automatic Weighing Chamber

The system controlling weighing chamber opening enables quick access to the weighing pan. Proximity sensors allow you to open and close the weighing chamber touch-free.

### Numerous Options of Data Management

Extensive storage capacity enables record of all measurement data in a form of complex reports and statistical graphs.

### ALIBI Memory

Data security and protection is provided by ALIBI memory which automatically archives all carried out measurements.

## Technical Specifications

	UYA 2.4Y	MYA 0.8/3.4Y	MYA 2.4Y
Maximum capacity [Max]	2.1 g	0.8 g / 3 g	2.1 g
Minimum load	10 µg	100 µg	100 µg
Readability [d]	0.1 µg	1 µg / 10 µg	1 µg
Verification scale interval [e]	1 mg	1 mg	1 mg
Tare range	-2.1 g	-3 g	-2.1 g
Repeatability (5% Max)*	0.25 µg	1 µg	0.5 µg
Repeatability (Max)	0.4 µg	4.1 µg	1 µg
Linearity	±1.5 µg	±3 µg / ±10 µg	±3 µg
Eccentric load deviation	1.5 µg	3 µg / 10 µg	3 µg
Sensitivity temperature drift**	$1 \times 10^{-6} / ^\circ\text{C} \times \text{Rt}$	$1 \times 10^{-6} / ^\circ\text{C} \times \text{Rt}$	$1 \times 10^{-6} / ^\circ\text{C} \times \text{Rt}$
Sensitivity time drift	$1 \times 10^{-6} / \text{Year} \times \text{Rt}$	$1 \times 10^{-6} / \text{Year} \times \text{Rt}$	$1 \times 10^{-6} / \text{Year} \times \text{Rt}$
Minimum weight (U=1%, k=2)	0.05 mg	0.2 mg	0.1 mg
Minimum weight (USP)	0.5 mg	2 mg	1 mg
Stabilization time	10 ÷ 20 s	max 8 s	max 8 s
Adjustment	internal	internal	internal
Moveable range	—	Yes	—
Verification	Yes	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
Ethernet	10 / 100 Mbit	10 / 100 Mbit	10 / 100 Mbit
RS 232	2	2	2
Wireless connection	802.11 b/g/n	802.11 b/g/n	802.11 b/g/n
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	10 W	10 W	10 W
Operating temperature	+10 ÷ +40 °C	+10 ÷ +40 °C	+10 ÷ +40 °C
Atmospheric humidity****	40 ÷ 80%	40 ÷ 80%	40 ÷ 80%
Transport and storage temperature	-10 ÷ +50 °C	-10 ÷ +50 °C	-10 ÷ +50 °C
Weighing pan dimensions	ø 16 mm	ø 60 mm (for filters), ø 16 mm	ø 16 mm
Weighing chamber dimensions	ø 90 × 90 mm	ø 90 × 90 mm	ø 90 × 90 mm
Weighing device dimensions	411 × 163 × 183 mm	411 × 163 × 183 mm	411 × 163 × 183 mm
Net weight	9.1 kg	9.1 kg	9.1 kg
Gross weight	16.6 kg	16.6 kg	16.6 kg
Packaging dimensions	660 × 660 × 455 mm	660 × 660 × 455 mm	660 × 660 × 455 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

\*\*\* 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.

	MYA 5.4Y	MYA 11.4Y	MYA 11/52.4Y
Maximum capacity [Max]	5.1 g	11 g	11 g / 52 g
Minimum load	100 µg	100 µg	100 µg
Readability [d]	1 µg	1 µg	1 µg / 10 µg
Verification scale interval [e]	1 mg	1 mg	1 mg
Tare range	-5.1 g	-11 g	-52 g
Repeatability (5% Max)*	1 µg	1.2 µg	2 µg
Repeatability (Max)	1.6 µg	2.5 µg	10 µg
Linearity	±5 µg	±6 µg	±10 µg / ±30 µg
Eccentric load deviation	5 µg	6 µg	6 µg / 10 µg
Sensitivity temperature drift**	$1 \times 10^{-6} / ^\circ\text{C} \times \text{Rt}$	$1 \times 10^{-6} / ^\circ\text{C} \times \text{Rt}$	$1 \times 10^{-6} / ^\circ\text{C} \times \text{Rt}$
Sensitivity time drift	$1 \times 10^{-6} / \text{Year} \times \text{Rt}$	$1 \times 10^{-6} / \text{Year} \times \text{Rt}$	$1 \times 10^{-6} / \text{Year} \times \text{Rt}$
Minimum weight (U=1%, k=2)	0.2 mg	0.24 mg	0.4 mg
Minimum weight (USP)	2 mg	2.4 mg	4 mg
Stabilization time	max 8 s	max 10 s	max 10 s
Adjustment	internal	internal	internal
Moveable range	—	—	—
Verification	Yes	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
Ethernet	10 / 100 Mbit	10 / 100 Mbit	10 / 100 Mbit
RS 232	2	2	2
Wireless connection	802.11 b/g/n	802.11 b/g/n	802.11 b/g/n
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	10 W	10 W	10 W
Operating temperature	+10 ÷ +40 °C	+10 ÷ +40 °C	+10 ÷ +40 °C
Atmospheric humidity****	40 ÷ 80%	40 ÷ 80%	40 ÷ 80%
Transport and storage temperature	-10 ÷ +50 °C	-10 ÷ +50 °C	-10 ÷ +50 °C
Weighing pan dimensions	ø 26 mm	ø 26 mm	ø 40 mm, ø 26 mm
Weighing chamber dimensions	ø 90 × 90 mm	ø 90 × 90 mm	ø 90 × 90 mm
Weighing device dimensions	411 × 163 × 183 mm	411 × 163 × 183 mm	411 × 163 × 183 mm
Net weight	9.1 kg	9.1 kg	9.1 kg
Gross weight	16.6 kg	16.6 kg	16.6 kg
Packaging dimensions	660 × 660 × 455 mm	660 × 660 × 455 mm	660 × 660 × 455 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

\*\*\* optional solution on purchase order

\*\*\*\* non-condensing conditions

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	MYA 21.4Y	MYA 21/52.4Y	MYA 31.4Y
Maximum capacity [Max]	21 g	21 g / 52 g	31 g
Minimum load	100 µg	100 µg	100 µg
Readability [d]	1 µg	1 µg / 10 µg	1 µg
Verification scale interval [e]	1 mg	1 mg	1 mg
Tare range	-21 g	-52 g	-31 g
Repeatability (5% Max)*	2 µg	2 µg	2 µg
Repeatability (Max)	10 µg	10 µg	5 µg
Linearity	±7 µg	±10 µg / ±30 µg	±8 µg
Eccentric load deviation	7 µg	6 µg / 10 µg	8 µg
Sensitivity temperature drift**	$1 \times 10^{-6} / ^\circ\text{C} \times \text{Rt}$	$1 \times 10^{-6} / ^\circ\text{C} \times \text{Rt}$	$1 \times 10^{-6} / ^\circ\text{C} \times \text{Rt}$
Sensitivity time drift	$1 \times 10^{-6} / \text{Year} \times \text{Rt}$	$1 \times 10^{-6} / \text{Year} \times \text{Rt}$	$1 \times 10^{-6} / \text{Year} \times \text{Rt}$
Minimum weight (U=1%, k=2)	0,24 mg	0,4 mg	0.4 mg
Minimum weight (USP)	2,4 mg	4 mg	4 mg
Stabilization time	max 10 s	max 10 s	max 10 s
Adjustment	internal	internal	internal
Moveable range	—	—	—
Verification	Yes	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
Ethernet	10 / 100 Mbit	10 / 100 Mbit	10 / 100 Mbit
RS 232	2	2	2
Wireless connection	802.11 b/g/n	802.11 b/g/n	802.11 b/g/n
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	10 W	10 W	10 W
Operating temperature	+10 ÷ +40 °C	+10 ÷ +40 °C	+10 ÷ +40 °C
Atmospheric humidity****	40 ÷ 80%	40 ÷ 80%	40 ÷ 80%
Transport and storage temperature	-10 ÷ +50 °C	-10 ÷ +50 °C	-10 ÷ +50 °C
Weighing pan dimensions	ø 26 mm	ø 40 mm, ø 26 mm	ø 26 mm
Weighing chamber dimensions	ø 90 × 90 mm	ø 90 × 90 mm	ø 90 × 90 mm
Weighing device dimensions	411 × 163 × 183 mm	411 × 163 × 183 mm	411 × 163 × 183 mm
Net weight	9.1 kg	9.1 kg	9.1 kg
Gross weight	16.6 kg	16.6 kg	16.6 kg
Packaging dimensions	660 × 660 × 455 mm	660 × 660 × 455 mm	660 × 660 × 455 mm

Rt net weight

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

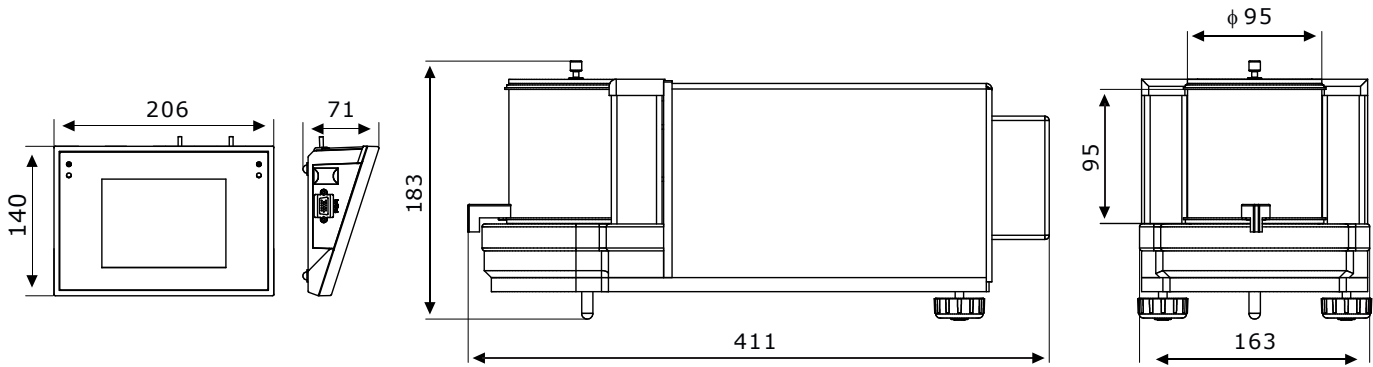
\*\* parameter determined in the following temperature range: +15 ÷ +35 °C

\*\*\* optional solution on purchase order

\*\*\*\* non-condensing conditions

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## Dimensions



## Accessories

### Weighing Tables

- granite antivibration table
- antivibration tables for laboratory balances

### Professional weighing

- Adapter for calibration of MY11 series pipettes

### Ambient Conditions

- DJ-05 anti-static ionizer
- THB-S or THB-P sensor

### Peripheral Devices

- Epson dot matrix printer

- barcode scanners

- WD-5/3Y LCD display

### 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 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

### Pipettes

- determining measurement errors of pipettes volume
- accordance with ISO 8655
- calibration of single-channel and multi-channel pipettes
- calibration of fixed-volume and variable-volume pipettes

### 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

### 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.

### 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

### Radweg 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