

# 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	UYA 6.4Y
Maximum capacity [Max]	2.1 g	6.1 g
Minimum load	10 µg	10 µg
Readability [d]	0.1 µg	0.1 µg
Verification scale interval [e]	1 mg	1 mg
Tare range	-2.1 g	-6.1 g
Repeatability*	0.25 µg (Rt ≤ 0.2 g) 0.4 µg (0.2 g < Rt ≤ 2g)	0.25 µg (Rt ≤ 0.3 g) 0.4 µg (0.3 g < Rt ≤ 6.1 g)
Linearity	±1.5 µg	±1.5 µg
Eccentric load deviation	1.5 µg	1.5 µg
Sensitivity temperature drift**	1 × 10 <sup>-6</sup> / °C	1 × 10 <sup>-6</sup> / °C × Rt
Sensitivity time drift	1 × 10 <sup>-6</sup> / Year × Rt	1 × 10 <sup>-6</sup> / Year × Rt
Minimum weight (U=1%, k=2)	0.05 mg	0.05 mg
Minimum weight (USP)	0.5 mg	0.5 mg
Stabilization time	10 ÷ 20 s	10 ÷ 20 s
Adjustment	internal	internal
Verification	Yes	Yes
OIML Class	I	I
Indicator fastening	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
Keypad	8 keys	8 keys
Protection class	IP 43	IP 43
Databases	19	19
Touch-free operation	2 programmable proximity sensors	2 programmable proximity sensors
USB-A	2	2
Ethernet	10 / 100 Mbit	10 / 100 Mbit
RS 232	2	2
Wireless connection	802.11 b/g/n	802.11 b/g/n
IN/OUT	4 × IN, 4 × OUT	4 × IN, 4 × OUT
Power supply	13.5 ÷ 16 V DC	13.5 ÷ 16 V DC
Power consumption	10 W	10 W
Operating temperature	+10 ÷ +40 °C	+10 ÷ +40 °C
Atmospheric humidity****	40 ÷ 80%	40 ÷ 80%
Transport and storage temperature	-10 ÷ +50 °C	-10 ÷ +50 °C
Weighing pan dimensions	ø 16 mm	ø 16 mm
Weighing chamber dimensions	ø 90 × 90 mm	ø 90 × 90 mm
Weighing device dimensions	411 × 163 × 183 mm	411 × 163 × 183 mm
Net weight	9.1 kg	9.1 kg
Gross weight	16.6 kg	16.6 kg
Packaging dimensions	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 0.8/3.4Y	MYA 2.4Y	MYA 5.4Y
Maximum capacity [Max]	0.8 g / 3 g	2.1 g	5.1 g
Minimum load	100 µg	100 µg	100 µg
Readability [d]	1 µg / 10 µg	1 µg	1 µg
Verification scale interval [e]	1 mg	1 mg	1 mg
Tare range	-3 g	-2.1 g	-5.1 g
Repeatability*	1 µg (Rt ≤ 0.8 g) 4.1 µg (0.8g < Rt ≤ 3 g)	0.5 µg (Rt ≤ 0.2 g) 1 µg (0.2g < Rt ≤ 2 g)	1 µg (Rt ≤ 1 g) 1.6 µg (1g < Rt ≤ 5.1 g)
Linearity	±3 µg / ±10 µg	±3 µg	±5 µg
Eccentric load deviation	3 µg / 10 µg	3 µg	5 µg
Sensitivity temperature drift**	1 × 10 <sup>-6</sup> / °C × Rt	1 × 10 <sup>-6</sup> / °C × Rt	1 × 10 <sup>-6</sup> / °C × Rt
Sensitivity time drift	1 × 10 <sup>-6</sup> / Year × Rt	1 × 10 <sup>-6</sup> / Year × Rt	1 × 10 <sup>-6</sup> / Year × Rt
Minimum weight (U=1%, k=2)	0.2 mg	0.1 mg	0.2 mg
Minimum weight (USP)	2 mg	1 mg	2 mg
Stabilization time	max 8 s	max 8 s	max 8 s
Adjustment	internal	internal	internal
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 60 mm (for filters), ø 16 mm	ø 16 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

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 11.4Y	MYA 11/52.4Y	MYA 21.4Y
Maximum capacity [Max]	11 g	11 g / 52 g	21 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	-11 g	-52 g	-21 g
Repeatability*	1.2 µg (Rt ≤ 1 g) 2 µg (1 g < Rt ≤ 5 g) 2.5 µg (5 g < Rt ≤ 11 g)	2 µg (Rt ≤ 1 g) 2.5 µg (1 g < Rt ≤ 11 g) 3 µg (11 g < Rt ≤ 21 g) 5 µg (21 g < Rt ≤ 31 g) 10 µg (31 g < Rt ≤ 52 g)	1.2 µg (Rt ≤ 1 g) 2 µg (1 g < Rt ≤ 5 g) 2.5 µg (5 g < Rt ≤ 11 g) 3 µg (11 g < Rt ≤ 21 g)
Linearity	±6 µg	±10 µg / ±30 µg	±7 µg
Eccentric load deviation	6 µg	6 µg / 10 µg	7 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	0.24 mg
Minimum weight (USP)	2.4 mg	4 mg	2.4 mg
Stabilization time	max 10 s	max 10 s	max 10 s
Adjustment	internal	internal	internal
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

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 21/52.4Y	MYA 31.4Y	MYA 52.4Y
Maximum capacity [Max]	21 g / 52 g	31 g	52 g
Minimum load	100 µg	100 µg	100 µg
Readability [d]	1 µg / 10 µg	1 µg	1 µg
Verification scale interval [e]	1 mg	1 mg	1 mg
Tare range	-52 g	-31 g	-52 g
Repeatability*	2 µg (Rt ≤ 1 g) 2.5 µg (1 g < Rt ≤ 11 g) 3 µg (11 g < Rt ≤ 21 g) 5 µg (21 g < Rt ≤ 31 g) 10 µg (31 g < Rt ≤ 52 g)	2 µg (Rt ≤ 5 g) 2.5 µg (5 g < Rt ≤ 11 g) 3 µg (11 g < Rt ≤ 21 g) 5 µg (21 g < Rt ≤ 31 g)	2 µg (Rt ≤ 5g) 2.5 µg (5 g < Rt ≤ 11 g) 3 µg (11 g < Rt ≤ 21 g) 5 µg (21 g < Rt ≤ 31 g) 10 µg (31 g < Rt ≤ 52 g)
Linearity	±10 µg / ±30 µg	±8 µg	±10 µg
Eccentric load deviation	6 µg / 10 µg	8 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)	0.4 mg	0.4 mg	0.4 mg
Minimum weight (USP)	4 mg	4 mg	4 mg
Stabilization time	max 10 s	max 10 s	max 10 s
Adjustment	internal	internal	internal
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 40 mm. ø 26 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

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

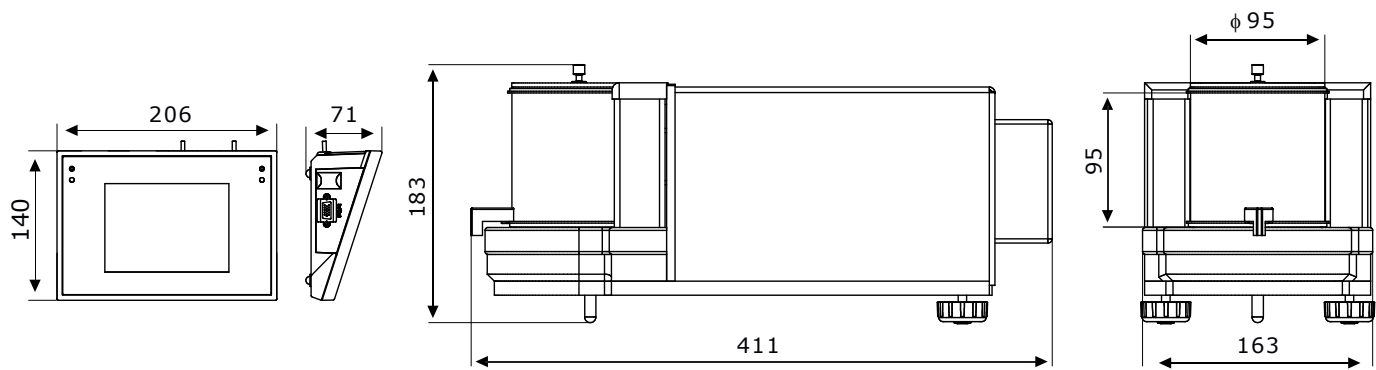
\*\*\* optional solution on purchase order

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

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## Dimensions

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## Accessories

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### 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-Y ambient conditions module

### 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

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### LabView Driver

- operation of RADWAG balances in LabView environment

### R-LAB

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

### RADWAG Remote Desktop

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