

XA 4Y.M.A.P Microbalances

Modern balance design for piston pipettes calibration



Automatic pipettes calibration adapter with an evaporation ring



Intuitive operation and touch screen



XA4Y.M.A.P balance operating without anti-draft chamber



Antistatic ionizer built into the weighing chamber

Functions

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

Features

Fast and Precise Calibration of Piston Pipettes

Automatically opened and closed weighing chamber and adapter for pipettes calibration guarantee fast and comfortable operation wherein the highest accuracy is preserved. Evaporation ring in the adapter for pipettes calibration enables maintaining respective humidity of the sample.

Integrated Antistatic Ionizer

The antistatic ionizer, with which XA 4Y.M.A.P microbalance is equipped, neutralizes electric charges inside the weighing chamber upon placing the sample in it.

The Highest Measurement Accuracy

XA 4Y.M.A.P microbalances feature the highest measurements accuracy, excellent repeatability and are compliant with USP requirements (Chapter 41 and 1251).

Intuitive Operation and Large Touch Screen

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

Touch-Free Operation

Two programmable proximity sensors can be assigned with any function or application. The given function when assigned is both run and operated touch-free.

Vibrations Sensor

Continuous monitoring of vibrations informs the operator about vibrations level during operation. The solution improves reliability of carried out measurements, this is due to elimination of an accidental error caused by ground vibrations.

New Door Opening Automatics

The innovative weighing chamber system for door opening and closing guarantees smooth and quiet door movement, and eliminates vibrations that may disturb the measurement.

Numerous Options of Data Management

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

Technical Specifications

	XA 6/21.4Y.M.A.P	XA 21.4Y.M.A.P	XA 21/52.4Y.M.A.P	XA 52.4Y.M.A.P
Maximum capacity [Max]	6 g / 21 g	21 g	21 g / 52 g	52 g
Minimum load	100 µg	100 µg	100 µg	500 µg
Readability [d]	1 µg / 2 µg	1 µg	1 µg / 5 µg	5 µg
Verification scale interval [e]	1 mg	1 mg	1 mg	1 mg
Tare range	-21 g	-21 g	-52 g	-52 g
Repeatability (5% Max)*	1.8 µg	1.8 µg	2.5 µg	3.5 µg
Repeatability (Max)	4 µg	4 µg	6 µg	6 µg
Linearity	±9 µg	±9 µg	±20 µg	±20 µg
Eccentric load deviation	15 µg	15 µg	20 µg	20 µg
Sensitivity temperature drift**	$1 \times 10^{-6} / ^\circ\text{C} \times \text{Rt}$	$1 \times 10^{-6} / ^\circ\text{C} \times \text{Rt}$	$1 \times 10^{-6} / ^\circ\text{C} \times \text{Rt}$	$1 \times 10^{-6} / ^\circ\text{C} \times \text{Rt}$
Sensitivity time drift	$1 \times 10^{-6} / \text{Year} \times \text{Rt}$	$1 \times 10^{-6} / \text{Year} \times \text{Rt}$	$1 \times 10^{-6} / \text{Year} \times \text{Rt}$	$1 \times 10^{-6} / \text{Year} \times \text{Rt}$
Minimum weight (U=1%, k=2)	0.36 mg	0.36 mg	0.5 mg	0.7 mg
Minimum weight (USP)	3,6 mg	3,6 mg	5 mg	7 mg
Stabilization time	~ 3.5s	~ 3.5s	~ 3.5 s	~ 3.5s
Adjustment	internal	internal	internal	internal
Moveable range	Yes	—	—	—
Verification	Yes	Yes	Yes	Yes
OIML Class	I	I	I	I
Indicator fastening	35 cm cable, wireless connection (option)***	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	5.7" colour, resistive touch screen
Keypad	8 keys	8 keys	8 keys	8 keys
Protection class	IP 43	IP 43	IP 43	IP 43
Databases	19	19	19	19
Touch-free operation	2 programmable proximity sensors	2 programmable proximity sensors	2 programmable proximity sensors	2 programmable proximity sensors
USB-A	2	2	2	2
Ethernet	10 / 100 Mbit	10 / 100 Mbit	10 / 100 Mbit	10 / 100 Mbit
RS 232	2	2	2	2
Wireless connection	802.11 b/g/n	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	4 × IN, 4 × OUT
Power supply	13.5 ÷ 16 V DC	13.5 ÷ 16 V DC	13.5 ÷ 16 V DC	13.5 ÷ 16 V DC
Power consumption	10 W	10 W	10 W	10 W
Operating temperature	+10 ÷ +40 °C	+10 ÷ +40 °C	+10 ÷ +40 °C	+10 ÷ +40 °C
Atmospheric humidity****	40 ÷ 80%	40 ÷ 80%	40 ÷ 80%	40 ÷ 80%
Transport and storage temperature	-20 ÷ +50 °C	-20 ÷ +50 °C	-20 ÷ +50 °C	-20 ÷ +50 °C
Weighing pan dimensions	ø 26 mm	ø 26 mm	ø 26 mm	ø 26 mm
Weighing chamber dimensions	199 × 170 × 215 mm	199 × 170 × 215 mm	199 × 170 × 215 mm	199 × 170 × 215 mm
Weighing device dimensions	570 × 253 × 301 mm	570 × 253 × 301 mm	570 × 253 × 301 mm	570 × 253 × 301 mm
Net weight	14.5 kg	14.5 kg	14.5 kg	14.5 kg
Gross weight	18.9 kg	18.9 kg	18.9 kg	18.9 kg
Packaging dimensions	720 × 385 × 485 mm	720 × 385 × 485 mm	720 × 385 × 485 mm	720 × 385 × 485 mm

Rt net weight

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

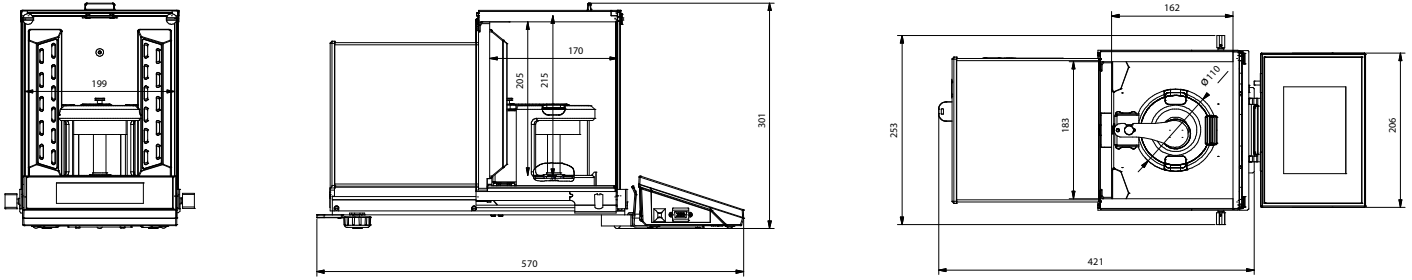
** parameter determined in the following temperature range: +15 ÷ +35 °C

*** 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.

Dimensions



Accessories

Weighing Tables

- granite antivibration table
- antivibration tables for laboratory balances
- professional weighing table

Ambient Conditions

- 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

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