



# 5Y ELLIPSIS Laboratory Balances

www.radwag.com



# UYA 5Y Ultra-microbalances MYA 5Y Microbalances

[d] down to 0.1 µg

[Max] up to 52 g



## UYA 5Y

Ultra-microbalances

## MYA 5Y

Microbalances

- World's lowest reading unit [d] 0.1 µg
- Weighing range up to [Max] 52 g
- The lowest minimum weight [USP] 0.3 mg
- Automatic, draft-proof weighing chamber
- Fully automatic levelling system
- Wide variety of applications

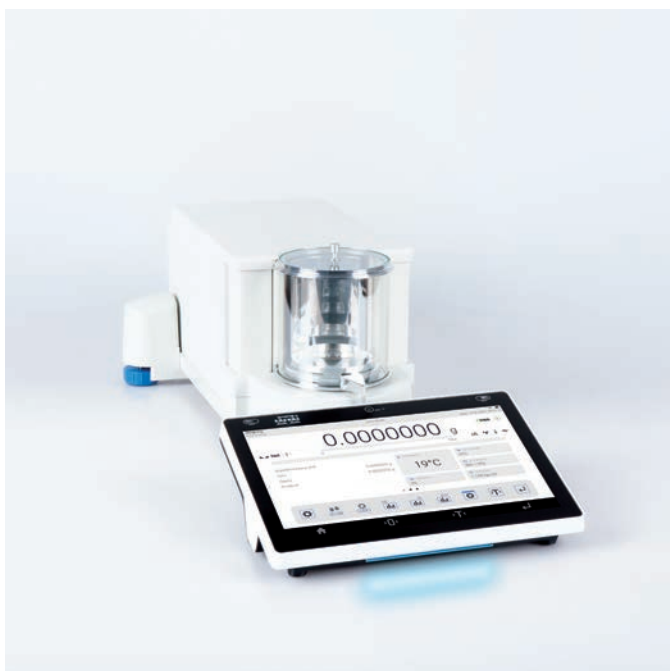


## **UYA 5Y.F**

Ultra-microbalances for filters

## **MYA 5Y.F**

Microbalances for filters



## **MYA 5Y.P**

Microbalances for pipette calibration

# XA 5Y.M.A Microbalances

[d] down  
to 1  $\mu\text{g}$   
[Max] up  
to 53 g



**XA 5Y.M.A**  
Microbalances

- Reading unit [d] 1  $\mu\text{g}$
- Spacious weighing chamber: 199 x 157 x 218 mm
- Large weighing pan:  $\varnothing$  30 mm
- Integrated ionizer
- Tool-free disassembly of the chamber



### **XA 5Y.M.A.P**

Microbalances for pipette calibration



### **XA 5Y.M.A.S**

Microbalances for stents

# XA 5Y.A Analytical Balances

[d] down  
to 0.01 mg

[Max] up  
to 520 g



## XA 5Y.A

Analytical balances

- Reading unit [d] 0.01 mg
- Minimum weight: 10 mg
- Conditioning shelf
- Open-work weighing pan
- Integrated ionizer
- Tool-free disassembly of the chamber

# AP-12.1.5Y

## Automatic Device for Multichannel Pipette Calibration

[d] = 0.001 mg

[Max] = 18 g



### AP-12.1.5Y

Automatic Device for Multichannel Pipette Calibration

- For calibration of 1-channel and multichannel pipettes starting at 10 µl
- Calibration of up to 12-channel fixed-volume and variable-volume pipettes
- Ambient conditions monitoring
- Semi-automatic levelling system
- Internal adjustment

# 5Y PM Precision Balances

[d] down to 0.01 g

[Max] up to 60 kg



## 5Y PM

Precision balances

- One of the most innovative balance in the world with [Max] = 20 kg and [d] = 0.01 g
- Large weighing pan: 200 x 185 mm
- Innovative **MONOBLOCK®** weighing module
- Diagnostic tools in accordance with metrological requirements: sensitivity test
- Wide variety of applications

# 5Y.20.PM



**The 5Y.20.PM laboratory balance by Radwag is one of the most innovative in the world that can weigh up to 20 kg with 0.01 g readability, using a large 200 x 185 mm weighing pan.**

# Two Faces

## Light mode

Fully secure login system  
(face recognition camera)

Touch-free  
operation  
(IR sensor)

16 working modes

Clear weighing  
result

Always visible  
necessary statuses

Always visible  
necessary statuses

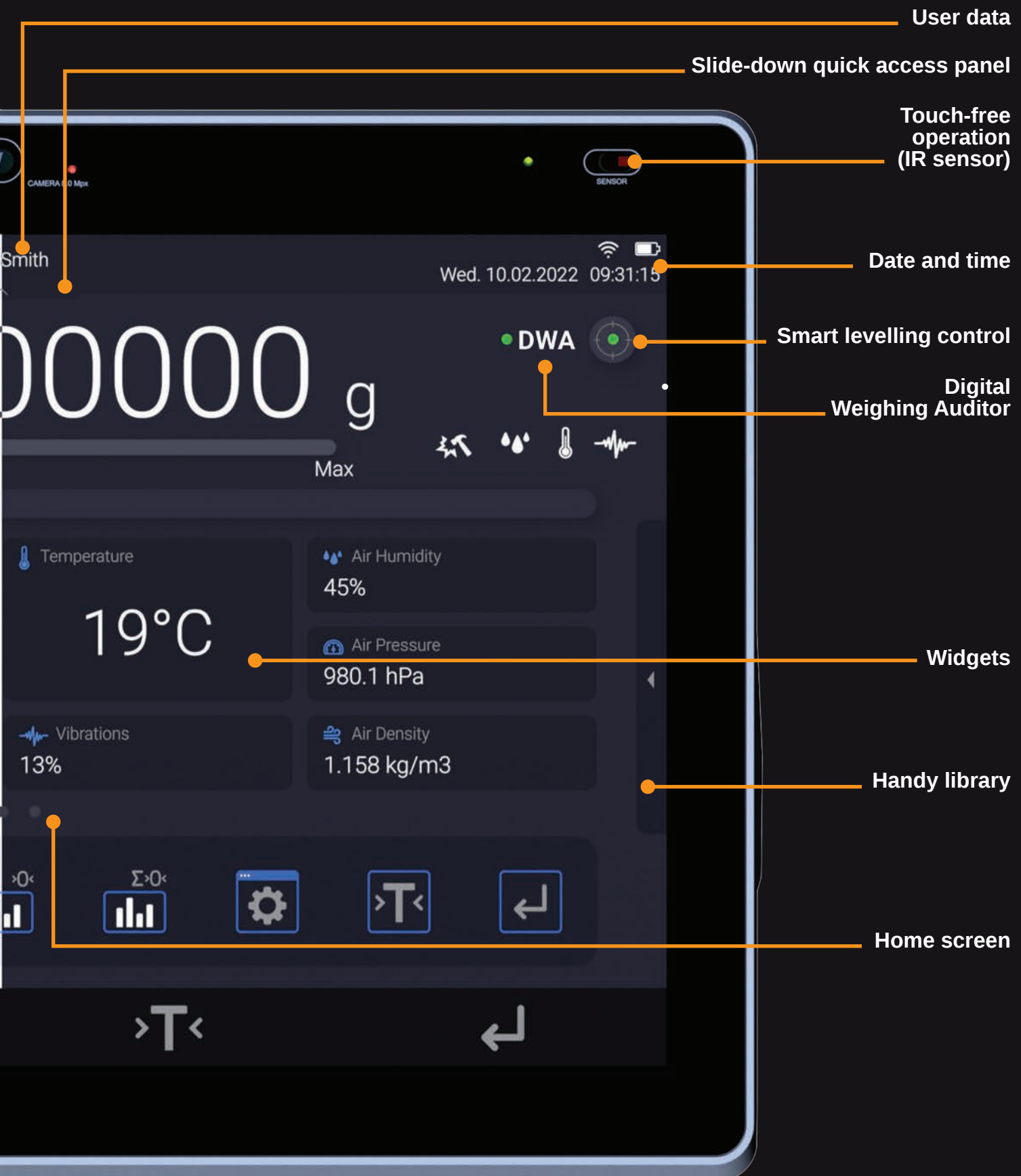
Customized data

Slide-out quick access  
panel

Quick access  
to commands

Home





Innovative way  
of user - balance  
communication.

One look  
and everything's clear.



# nt Light



It couldn't be easier: the backlight colour informs you about status, process results, procedures, or alerts.

- statuses
- process results
- procedures
- alerts



# Connecting ELLIPSIS



Media Box

HDMI  
(any large screen)

Ethernet  
(printer, computer)

USB-C (Free Link)  
(spreadsheet)

## Safety First

Audited  
login  
methods



Quick logout

**Hotspot**  
(smartphone, tablet)



**Wi-Fi®**  
(printer, computer)



**USB-A**  
(printer, computer, barcode scanner)

## Compliance confirmation

- 21 CFR Part 11
- DWA
- GMP
- Qualifications
- Validations
- Quality system
- and more



# Discover ELLIPSIS

The lowest minimum weight of 0.3 mg,  
achievable with modern weighing module.

## Such a large chamber, yet still very accurate balance

Work with different labware in a chamber  
space of 199 x 157 x 218 mm.

## Ionizer

Do you have an electrostatic sample  
that cannot be weighed? The ionizer will  
neutralize its electrostatic charge.

## Give ELLIPSIS a command, and it will carry it out

A set of actions ready to be performed  
upon detecting a voice command.

## Kensington Lock On/Off

## Sample weighed? See the measurements on your computer

Available interfaces: 2 x USB-A, USB-C  
(Free Link), Ethernet, Wi-Fi®, Hotspot.

## Uncompromising user verification

Fingerprint reader.

## One look and everything's clear

It couldn't be easier: the backlight colour informs you about status,  
process results, procedures, or alerts.

## Tool-free disassembly of the weighing chamber

Contaminated weighing chamber? You don't need any tools to disassemble and clean the ELLIPSIS weighing chamber.



## Terminal tilt adjustment





# RFID

**Always the correct choice of a product or ingredient for a formulation.**

ELLIPSIS works with RFID tags that can be used to tag your products or formulation ingredients in the database. It can also be used to identify a user.

5Y ELLIPSIS Laboratory Balances

# Hotspot

No space in your fume cupboard or access to the weighing terminal (glovebox)? Or maybe you want to operate the balance remotely?



Thanks to the hotspot, you can operate the balance on any device previously connected to it. This can be a smartphone, tablet, or computer.

# Widgets

Always at hand, grouped so that the essentials never slip away.



## Up-to-date information on ambient conditions



## Real-time statistics from a series of measurements



# Looking for More than Just Weighing?

## Working modes



### Weighing

Basic working mode that displays the mass of a sample.



### Checkweighing

Control of sample mass in the set min/max thresholds.



### Percent weighing

Percent mass control.



### Animal weighing

Control of mass change over a set period of time.



### Statistics

Real-time statistics determined from carried out weighings.



### Differential weighing

Analysing the change in mass of a single sample over time.



### Peak hold

Control of the maximum mass on the pan.



### Comparator

Control of mass standards.



### Parts counting

Quick counting of samples of similar mass.



### Dosing

Weighing to a target value.



### Density

Determining the density of solids and liquids.



### Formulations

Weighing of predefined ingredients, according to the order described in the formulation.



### Pipette calibration

Checking piston pipettes according to customer-specific requirements or ISO 8655.



### SQC

Statistical mass control with set thresholds.



### Mass control

Statistical control of samples of similar mass.



### PGC

Statistical mass measurement in accordance with Packaged Goods Control.

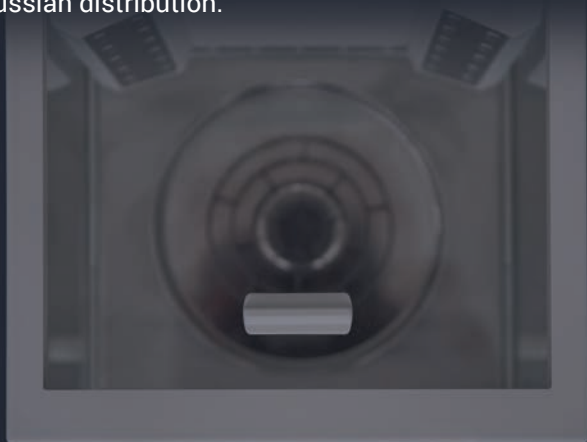
# Note Down Your Conclusions

One of ELLIPSIS' innovative features is the ability to add a voice or text note to a series of measurements or a procedure report.



# Do You Like to Analyse Data From a Series of Measurements Presented Graphically?

The balance gives you this possibility. You can choose between graphs of measurement series, ambient conditions, SQC with thresholds, and Gaussian distribution.



Weighing graph



Ambient conditions graph



Vibration graph



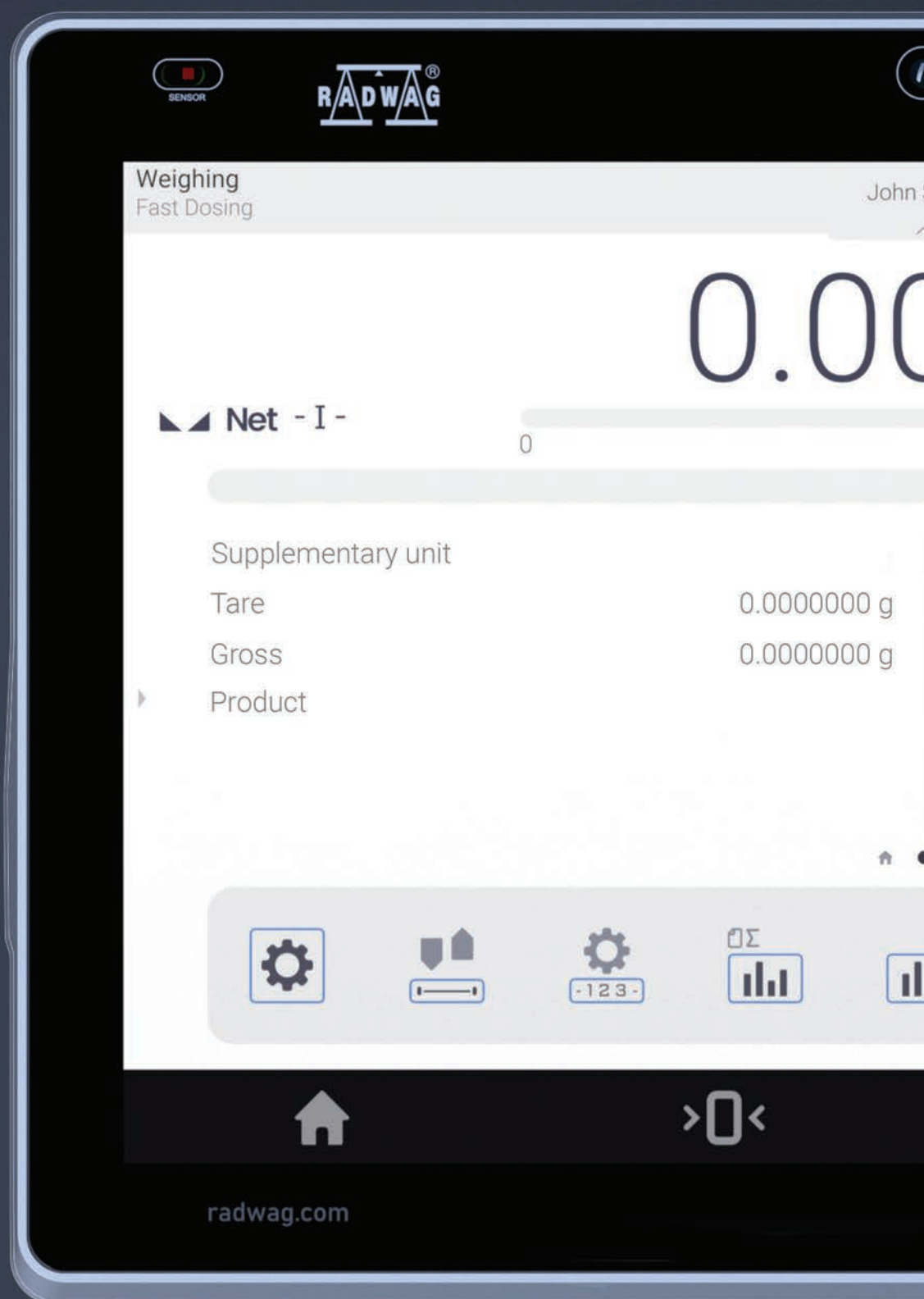
SQC graph



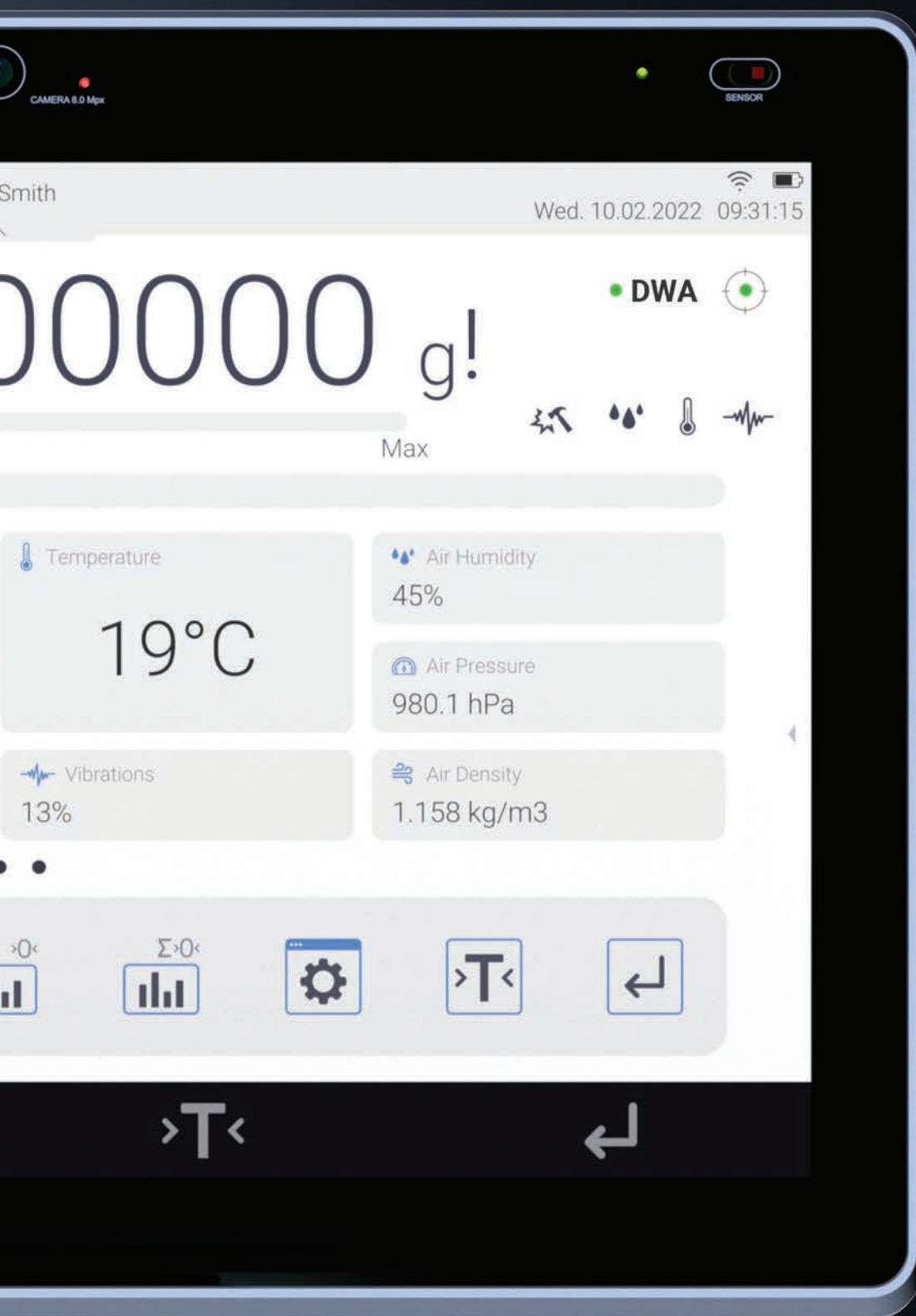
Gaussian distribution graph

# DWA - Digital Weighing Auditor

Have you ever wondered if your balance is ready for work?  
The Digital Weighing Auditor makes sure it is.



DWA is a system that monitors ambient conditions (temperature, humidity, pressure, and vibration), balance levelling, adjustment, USP compliance, and ionizer operation. It enables air buoyancy compensation in real-time. What is more, it signals the need for a balance inspection or a periodic audit of the balance's accuracy and sensitivity. ELLIPSIS signals the results of the digital audit via Ambient Light, pictograms on the home screen, or a speaker.



● DWA

● DWA

● DWA

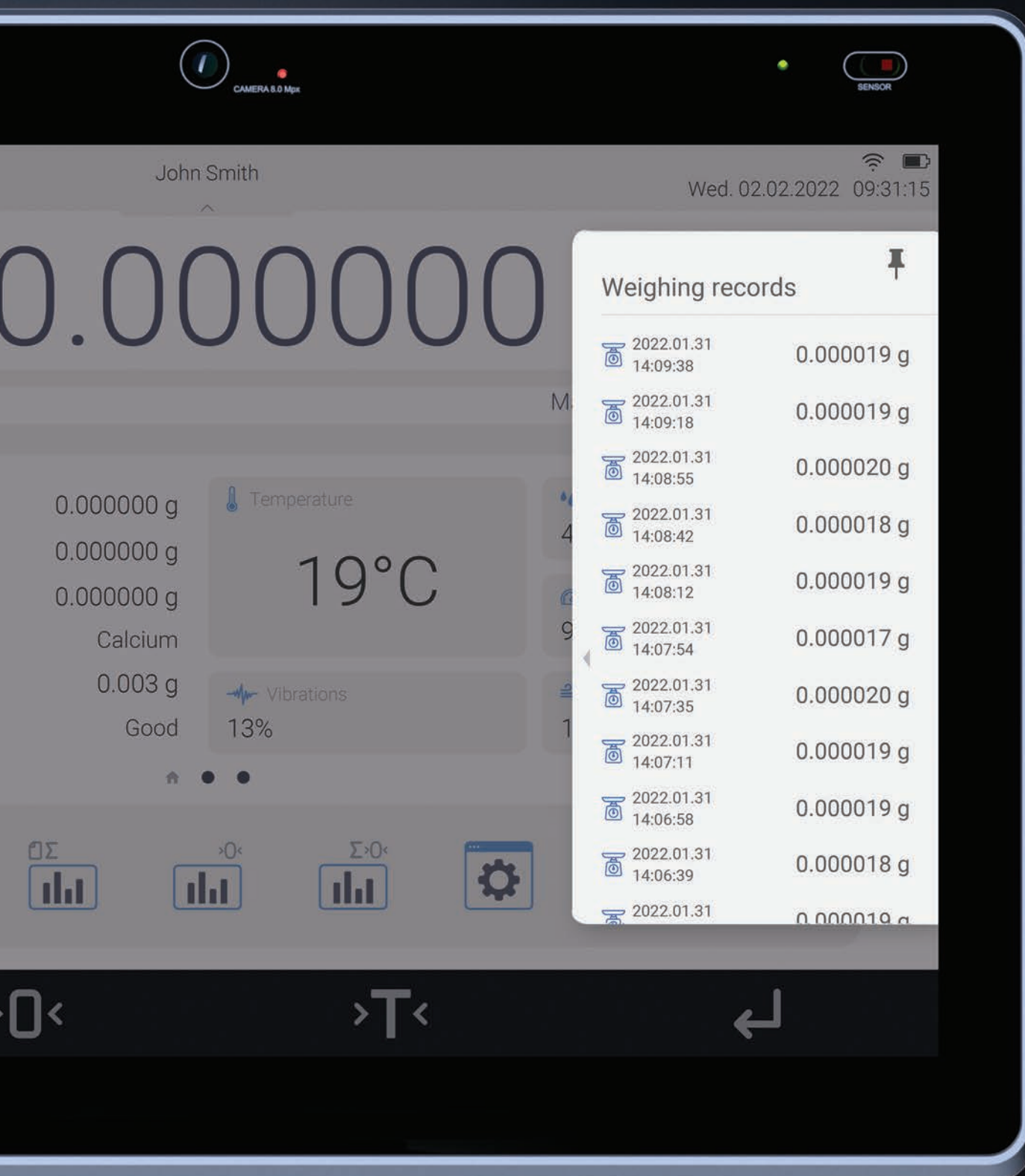
# Are the Conditions in Your Laboratory the Best for the Balance You Have?

ELLIPSIS monitors temperature, humidity, pressure, and vibration. The results are displayed as graphs or a widget on the home screen. Unsuitable conditions for the balance are signalled by DWA. And all of this is recorded in a dedicated database.



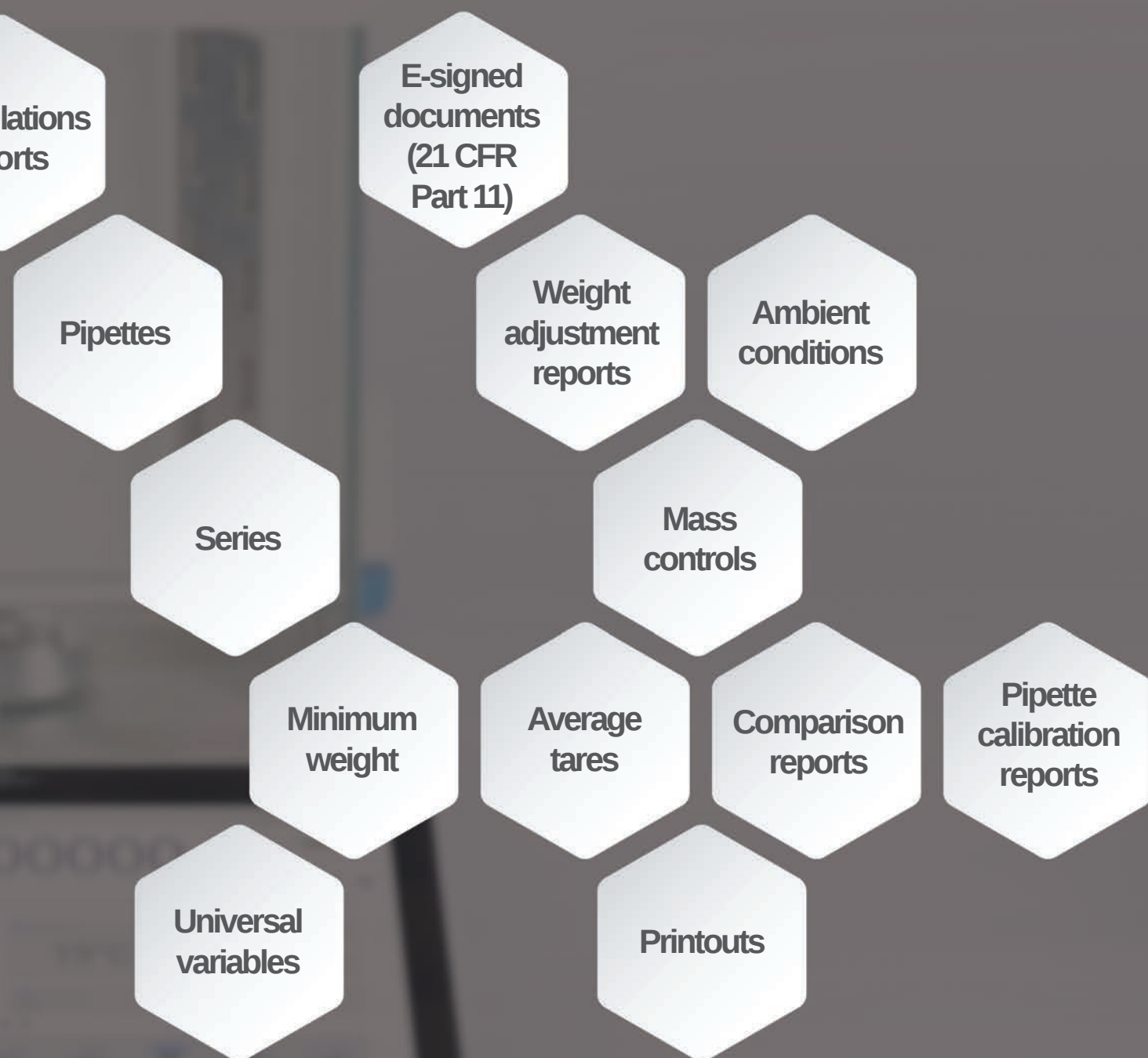
# What Was the Value of the Previous Measurement?

ELLIPSIS always displays the history of the last 20 measurements on the slide-out panel. It is also here where the measurement series ready for e-signature, in accordance with 21 CFR Part 11, can be found.



# Have You Ever Failed to Record the Weighing Result?





# Don't Take Our Word for It?

With ELLIPSIS, you can get:

- Declaration of conformity
- Calibration certificate
- IQ, OQ, PQ documents
- 21 CFR Part 11 qualification
- USP compliance qualification
- Compliance with the latest version of the Pharmacopoeia





# 21 CFR Part 11

## EU GMP Annex 11



- Password strength settings
- Maximum number of incorrect login attempts
- Auto-logout of inactive user
- Permissions for non-logged-in users
- Permissions for electronic signature
- Permissions for databases management
- Creating database backup
- Adding respectively secured users
- Adding and editing databases according to permissions granted
- Replacing paper documents with digital ones
- Highest level of report security
- Separate database with saved reports
- Signature information
- Validation of the electronically signed report
- Comments on the report
- Three validation levels
- Automatic recording of changes in databases
- Audit trail preview
- Export of audit trail data

**Do you work in the pharmaceutical industry? Do you need a digital signature?**  
**We are offering the laboratory balance which as a standalone fully meets the requirements of 21 CFR Part 11 / EU GMP Annex 11.**

# Applications

If you use labware, weigh stents or filters, or want to check your pipette, use the ELLIPSIS accessories available:



**Microscale glassware**



**Stents**



**Pipette calibration adapters**



**Filters**

# Technical Specification



|                          | UYA 5Y                                                      | UYA 5Y.F                                                    | MYA 5Y                                                      | MYA 5Y.F                                                          | MYA 5Y.P                                                    | XA 5Y.M.A                                                   | XA 5Y.M.A.P                                                 |
|--------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|
| Maximum capacity [Max]   | 2.1-6.1 g                                                   | 2.1 g                                                       | 0.8-52 g                                                    | 5.1 g                                                             | 21 g                                                        | 6.1 - 53 g                                                  | 6 - 53 g                                                    |
| Readability [d]          | 0.1 µg                                                      | 0.1 µg                                                      | 1-10 µg                                                     | 1 µg                                                              | 1 µg                                                        | 1-5 µg                                                      | 1-5 µg                                                      |
| Repeatability (5% Max)*  | 0.15-0.2 µg                                                 | 0.15 µg                                                     | 0.6-1.5 µg                                                  | 0.6 µg                                                            | 1 µg                                                        | 1.3-2.2 µg                                                  | 1.3-2.2 µg                                                  |
| Minimum weight (USP)     | 0.3-0.4 mg                                                  | 0.3 mg                                                      | 1.2-3 mg                                                    | 1.2 mg                                                            | 2 mg                                                        | 2.6-4.4 mg                                                  | 2,6-4,4 mg                                                  |
| Linearity                | ±1.5 µg                                                     | ±1.5 µg                                                     | ±3-30 µg                                                    | ±5 µg                                                             | ±7 µg                                                       | ±9-20 µg                                                    | ±9-20 µg                                                    |
| Stabilization time       | 10-20 s                                                     | 10-20 s                                                     | 8-10 s                                                      | max 8 s                                                           | max 10 s                                                    | ~3.5 s                                                      | ~3.5 s                                                      |
| Adjustment               | 2-point internal                                            | 2-point internal                                            | 2-point internal                                            | 2-point internal                                                  | 2-point internal                                            | 2-point internal                                            | 2-point internal                                            |
| Weighing pan dimensions  | ø 16 mm                                                     | ø 16 mm<br>ø 70 mm for filters                              | ø 16 mm<br>ø 26 mm<br>ø 40 mm                               | ø 16 mm<br>ø 16 mm<br>ø 70 mm for filters<br>ø 160 mm for filters | ø 26 mm                                                     | ø 30 mm                                                     | ø 26 mm                                                     |
| Communication interfaces | USB-A × 2<br>USB-C<br>HDMI<br>Ethernet<br>Wi-Fi®<br>Hotspot | USB-A × 2<br>USB-C<br>HDMI<br>Ethernet<br>Wi-Fi®<br>Hotspot | USB-A × 2<br>USB-C<br>HDMI<br>Ethernet<br>Wi-Fi®<br>Hotspot | USB-A × 2<br>USB-C<br>HDMI<br>Ethernet<br>Wi-Fi®<br>Hotspot       | USB-A × 2<br>USB-C<br>HDMI<br>Ethernet<br>Wi-Fi®<br>Hotspot | USB-A × 2<br>USB-C<br>HDMI<br>Ethernet<br>Wi-Fi®<br>Hotspot | USB-A × 2<br>USB-C<br>HDMI<br>Ethernet<br>Wi-Fi®<br>Hotspot |

## Accessories

- Label Printers
- Professional Weighing Table
- Antivibration Tables
- Audit Trail Reader
- E2R System
- Label Editor R02
- R.Barcode
- R-LAB
- RAD-KEY
- RADWAG Development Studio
- RADWAG Remote Deskop
- LabVIEW Driver
- Under-Pan Weighing Rack
- Density Determination KIT
- Receipt Printer
- THBR 2.0 System - Ambient Conditions Monitoring
- USB Hubs
- RS 232 Cables (scale-printer)
- RS 232, RS 485 Cables
- RS 232 - USB Converter
- Barcode Scanners
- Holders for test tubes and filters
- Displays
- Fingerprint Reader

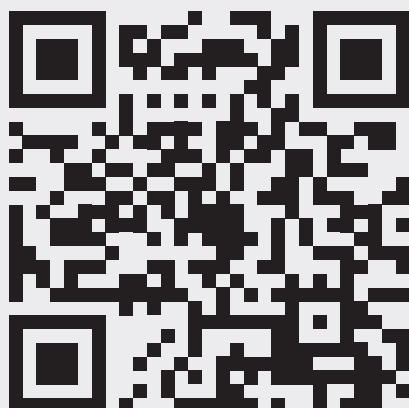


| XA 5Y.M.A.S                                                 | XA 5Y.A                                                     | XA 5Y.F                                                     | 5Y PM                                                       | AP-12.5Y                                                    |
|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|
| 6 g                                                         | 52-520 g                                                    | 52-110 g                                                    | 10-120 kg                                                   | 18-52 g                                                     |
| 1 µg                                                        | 0.01-0.1 mg                                                 | 0.01 mg                                                     | 0.01-0.2 g                                                  | 1-10 µg                                                     |
| 1.3 µg                                                      | 0.005-0.07 mg                                               | 0.007 mg                                                    | 0.004-0.06 g                                                | 2.8-5 µg                                                    |
| 2.6 mg                                                      | 10-140 mg                                                   | 14 mg                                                       | 0.82-12 g                                                   | 2-10 µg                                                     |
| ±9 µg                                                       | ±0.06-0.1 mg                                                | ±0.03-0.06 mg                                               | ±0.03-0.6 mg                                                | ±0.01-0.03 mg                                               |
| ~3.5 s                                                      | 1.3-4 s                                                     | max 5 s                                                     | max 3 s                                                     | 4-10 s                                                      |
| 2-point internal                                            | 2-point internal                                            | 2-point internal                                            | 2-point internal                                            | 2-point internal                                            |
| Intended for stents                                         | ø 90 mm + ø 85mm<br>ø 100 mm                                | 210×254 mm for filters<br>ø90 mm<br>ø85 mm                  | 200 × 185 mm<br>350 × 260 mm<br>400 × 500 mm                | 12-channel and 1-channel case with evaporation ring         |
| USB-A × 2<br>USB-C<br>HDMI<br>Ethernet<br>Wi-Fi®<br>Hotspot | USB-A × 2<br>USB-C<br>HDMI<br>Ethernet<br>Wi-Fi®<br>Hotspot | USB-A × 2<br>USB-C<br>HDMI<br>Ethernet<br>Wi-Fi®<br>Hotspot | USB-A × 2<br>USB-C<br>HDMI<br>Ethernet<br>Wi-Fi®<br>Hotspot | USB-A × 2<br>USB-C<br>HDMI<br>Ethernet<br>Wi-Fi®<br>Hotspot |

| PMV 50.5Y                    |                                                             |
|------------------------------|-------------------------------------------------------------|
| Maximum capacity [Max]       | 50 g                                                        |
| Readability [d]              | 0.1 mg                                                      |
| Moisture content readability | 0.0001%                                                     |
| Heating module power         | 800 W                                                       |
| Finish mode                  | 4 modes                                                     |
| Maximum sample weight        | 50 g                                                        |
| Adjustment                   | external                                                    |
| Weighing pan dimensions      | glass fibre filter<br>ø 90 mm                               |
| Communication interfaces     | USB-A × 2<br>USB-C<br>HDMI<br>Ethernet<br>Wi-Fi®<br>Hotspot |

# Scan the QR code

to see the ELLIPSIS offer



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

*Wi-Fi® is a registered trademark of Wi-Fi® Alliance.*



## Scan the QR code

to see the ELLIPSIS offer

