RADWAG®

PRODUCT CATALOGUE 2022

www.radwag.com

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Introduction

We are grateful that you chose RADWAG weighing solutions. Our aim is to deliver the most innovative products, offering unprecedented accuracy and reliability, ideally suited towards your needs. We realize this mission by selling the highest standards and the best cost containment in our industry.

With RADWAG worldwide network of offices and authorized dealers providing service and ongoing support in every stage of your project, we guarantee designing the most appropriate measuring systems required by your application. We are pleased to issue herein quote and are certain this solution will meet your needs and expectations.

Please do not hesitate to contact us should you have any further questions.

Please visit our website **www.radwag.com** for more information on the current product offer.

Thank you for being with us.

It is No Coincidence that We are All over the World

RADWAG means both experience and innovation: although the company has been existed since 1984, it is constantly creating new weighing devices to meet regularly changing market demands.
The company's headquarters are located in Poland, where we manufacture our balances and scales. Apart from the headquarters in Radom, there are 8 subsidiaries in the country and 6 representative offices abroad. We cooperate with over 200 dealers worldwide, who distribute our products to more than 150 countries.

Worldwide Technical Support

We have decided to establish our representative offices due to the demand for RADWAG products and the number of concluded business transactions, which are successively increasing worldwide. What we guarantee our customers is professional support (pre-sales, sales, and after-sales), installation and commissioning of the device, validation, calibration, fast response time and service.

Another convenience is our own warehouse, which offers full spare parts availability and allows products to be dispatched on the day of order if the given unit is in stock. Moreover, there is also a showroom where the customer has the opportunity to view the products in detail before making a purchase. on request, a customer can borrow a demonstration version of a selected device.

United Human Resources

We employ product managers, constructors, programmers, balance and scale assemblers, quality controllers, and many other employees. They are all equally important and could not function without one another. Just like in a jigsaw puzzle, where the absence of one single piece disturbs the whole picture.

Product managers come up with the idea, mechanical and electronic engineers design the mechanics and electronics, and programmers develop the required software. the equipment is assembled by balance and scale assemblers, and the quality of the final product is monitored by quality controllers. All these activities revolve around electronic weighing equipment.

The Days When Balances Only Weigh are Long Gone

ELLIPSIS balances talk, hear, verify user identity and…
We act when others are just getting the courage to start thinking. This is the genesis of the latest series of laboratory balances made by RADWAG. Do you dare to know more?

ELLIPSIS

5Y Series Laboratory Balances

Modernity, innovation, breakthrough – all these qualities describe ELLIPSIS, but they are just the beginning of a long list of advantages.

"Ellipsis" means a suspension point. When the dictionary lacks words to name objects, phenomena, or features, we reach for a graphic sign – it will express more or deliberately say less. "…" suggests that we have SO MUCH to say that we don't know where to start. or it means that we can't find the words to convey what we want to express. That such words do not exist. They all mean less. or they mean something else, as yet undiscovered, which we cannot compare with anything. That is why, ELLIPSIS.

With the 5Y terminal, RADWAG weighing devices gain new capabilities and functionalities, such as:

- 10-inch display,
- Digital Weighing Auditor (DWA),
- uncompromised user verification,
- Ambient Light,
- hotspot,
- RFID,
- Live Note voice and text notes,
- voice commands for the device,
- measurement history within the Handy Library,
- widgets.

AP-12.5Y

The AP-12.5Y is designed to calibrate multichannel pipettes starting at 10 µl. the device features readability [d] of 0.01 mg and can calibrate up to 12-channel fixed-volume and variable-volume pipettes.

Four times faster – that is how long it lasts to calibrate the 12-channel pipette. This means that it will take you an hour and a half instead of six hours.

PM 20.5Y

The PM 20.5Y is one of the most innovative balances in the world that enables weighing of a 20 kg load with a readability of 0.01 g, using a large 200 x 185 mm weighing pan. Quick and stable measurement (achievable within 1 second), and parameter stability over time and during transport – all of this is possible thanks to the use of an innovative measuring system based on the enhanced *MONO***BLOCK**® technology.

PMV 50.5Y

The PMV 50.5Y moisture analyzer is a cutting-edge solution for determining the moisture content of samples that contain a significant amount of moisture (up to 100%).

The drying process carried out by means of microwaves shortens the drying time from 5-40 minutes to 1-10 minutes. What is more, uniform heating of entire sample's volume, accurate moisture determination and ease of cleaning – you will find it all here.

You can read about other ELLIPSIS series devices here: ellipsis.radwag.com

PRODUCT CATALOGUE

ADVANCED WEIGHING TECHNOLOGIES

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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 Microbalances

[d] down to 1 µg

[Max] up to 53 g

XA 5Y.M
Microbalances

- Reading unit [d] 1 µg
- Spacious weighing chamber: 199 x 157 x 218 mm
- Large weighing pan: ø 30 mm
- Integrated ionizer
- Tool-free disassembly of the chamber

XA 5Y.M.P

Microbalances for pipette calibration

XA 5Y.M.S

Microbalances for stents

XA 5Y
Analytical Balances

[d] down to 0.01 mg

[Max] up to 520 g

XA 5Y
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-12.5Y
Automatic Device for Multichannel Pipette Calibration

[d] = 0.01 mg

[Max] = 52 g

AP-12.5Y

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

PM 5Y
Precision Balances

[d] down to 0.01 g

[Max] up to 60 kg

PM 5Y
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 RADWAG MONO**BLOCK**® weighing module
- Diagnostic tools in accordance with metrological requirements: sensitivity test
- Wide variety of applications

PM 20.5Y

The PM 20.5Y 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.

Light mode

Fully secure login system (face recognition camera)

Touch-free operation (IR sensor)

16 working modes

Clear weighing result

Always visible necessary statuses

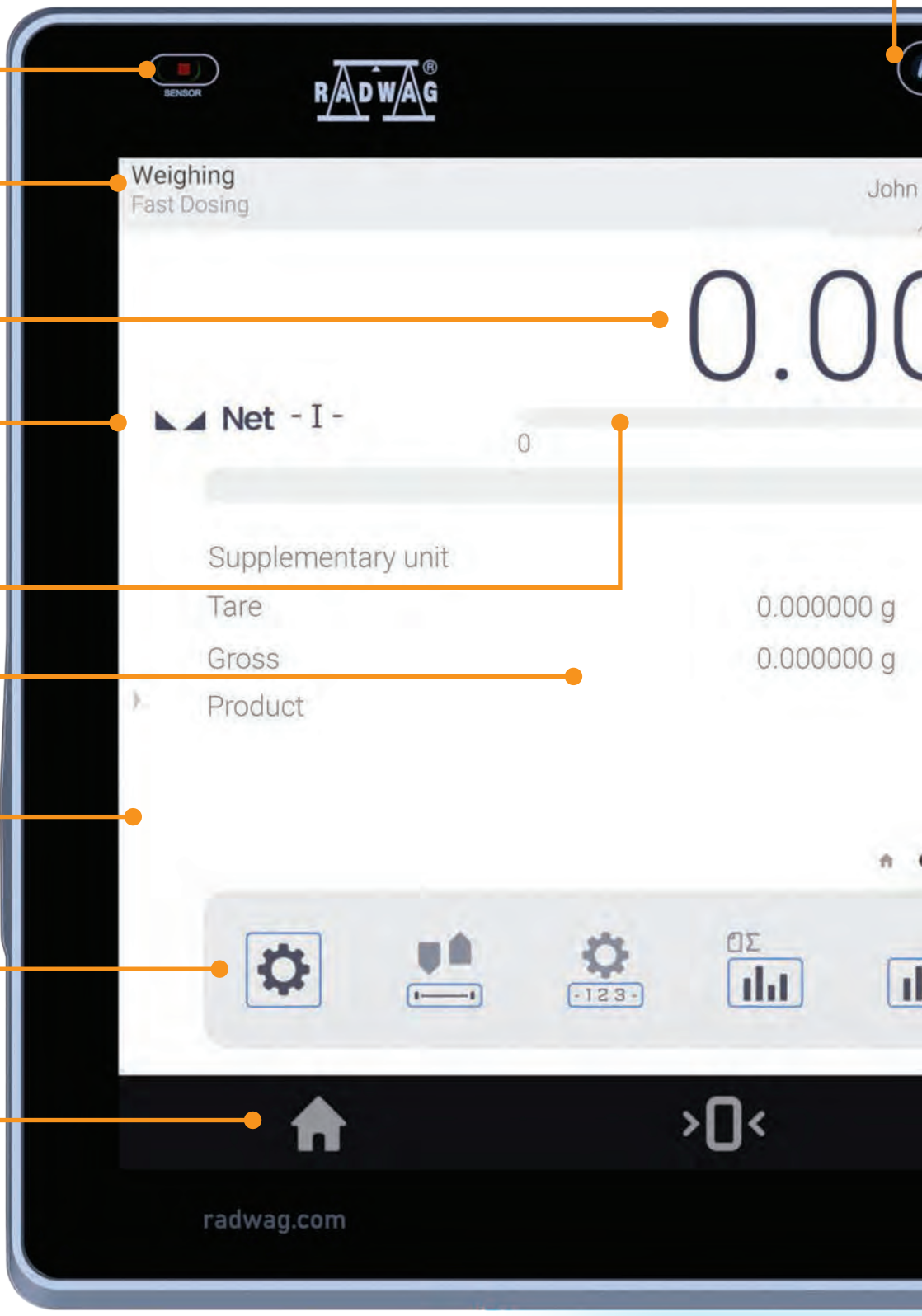
Always visible necessary statuses

Customized data

Slide-out quick access panel

Quick access to commands

Home



# of ELLIPSIS

Dark mode

User data

Slide-down quick access panel

Touch-free operation (IR sensor)

Date and time

Smart levelling control

Digital Weighing Auditor

Widgets

Handy library

Home screen

Ambien

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

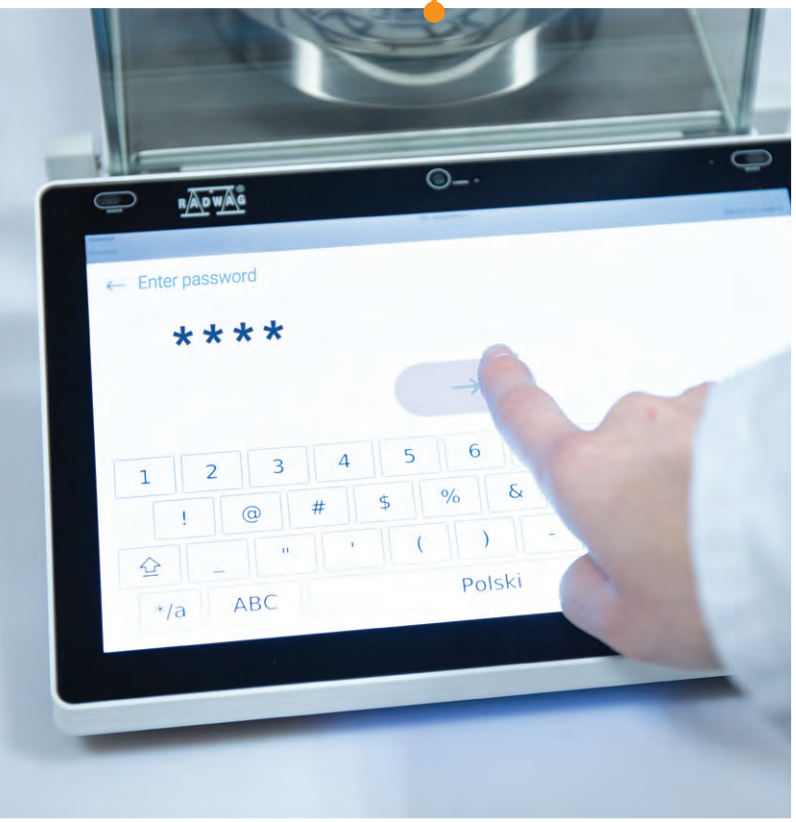
HDMI
(any large screen)

Ethernet
(printer, computer)

USB-C (Free Link)
(spreadsheet)

Safety First

Audited login methods



Quick logout

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.

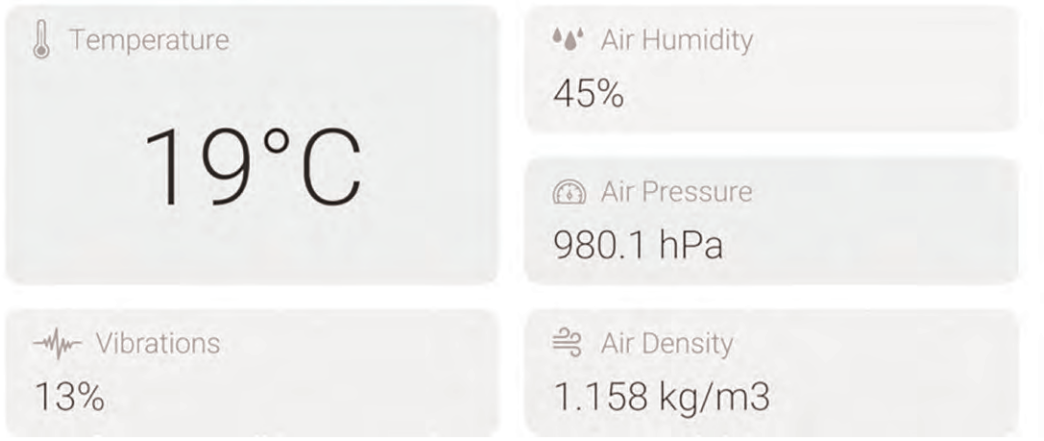
Hotspot

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.

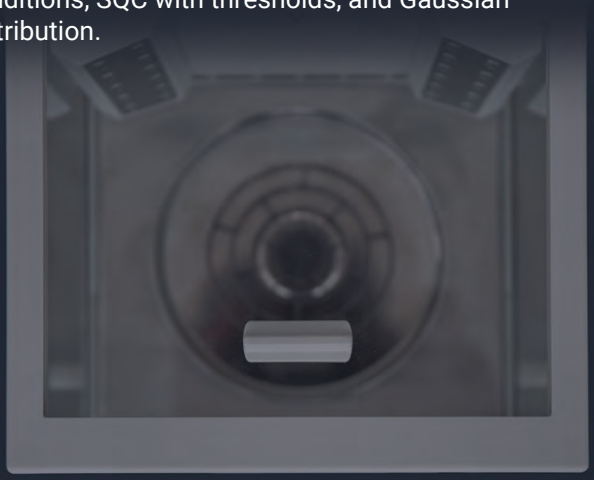
PGC
Statistical mass measurement in accordance with Packaged Goods Control.

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

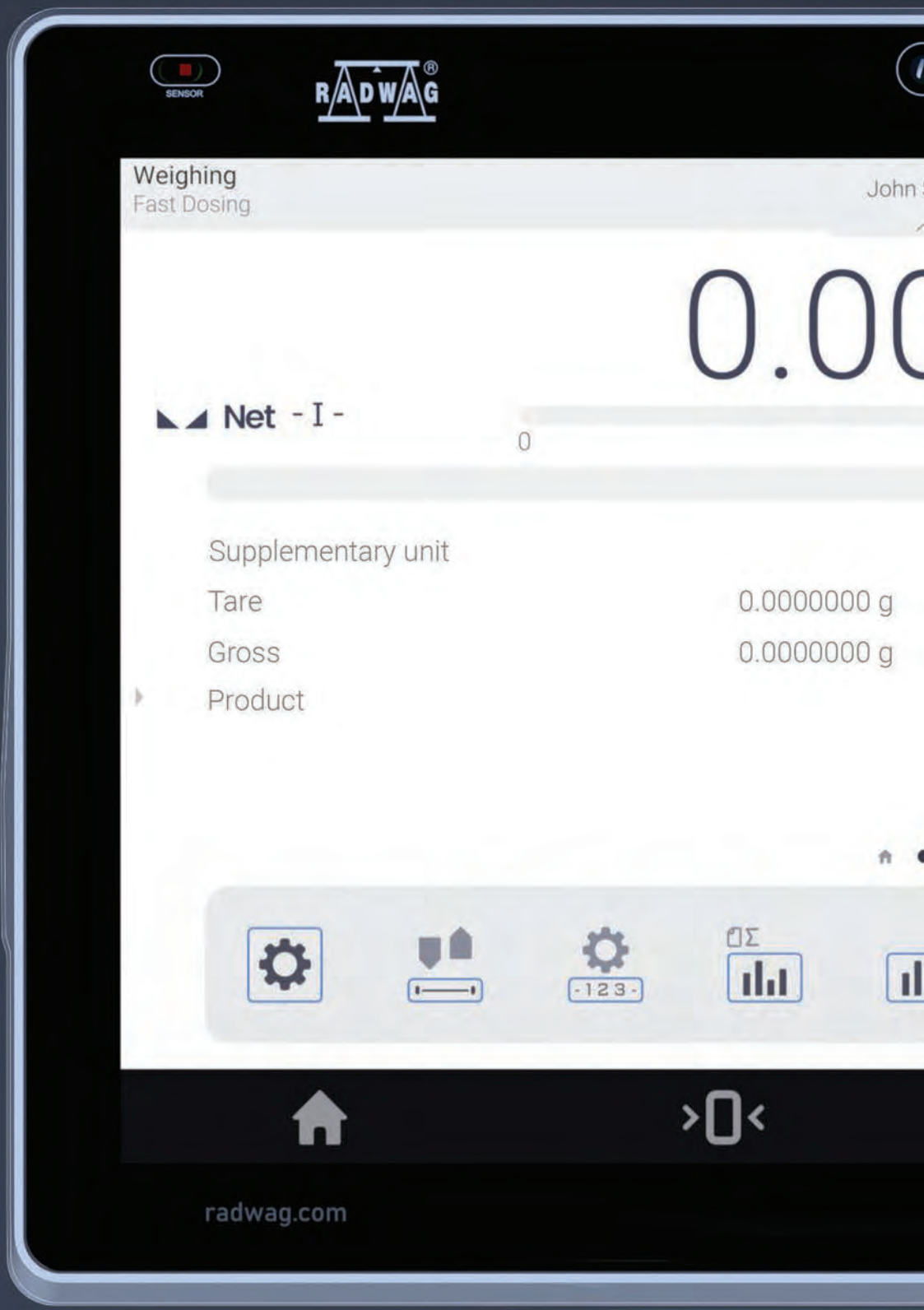
Vibration graph

SQC graph

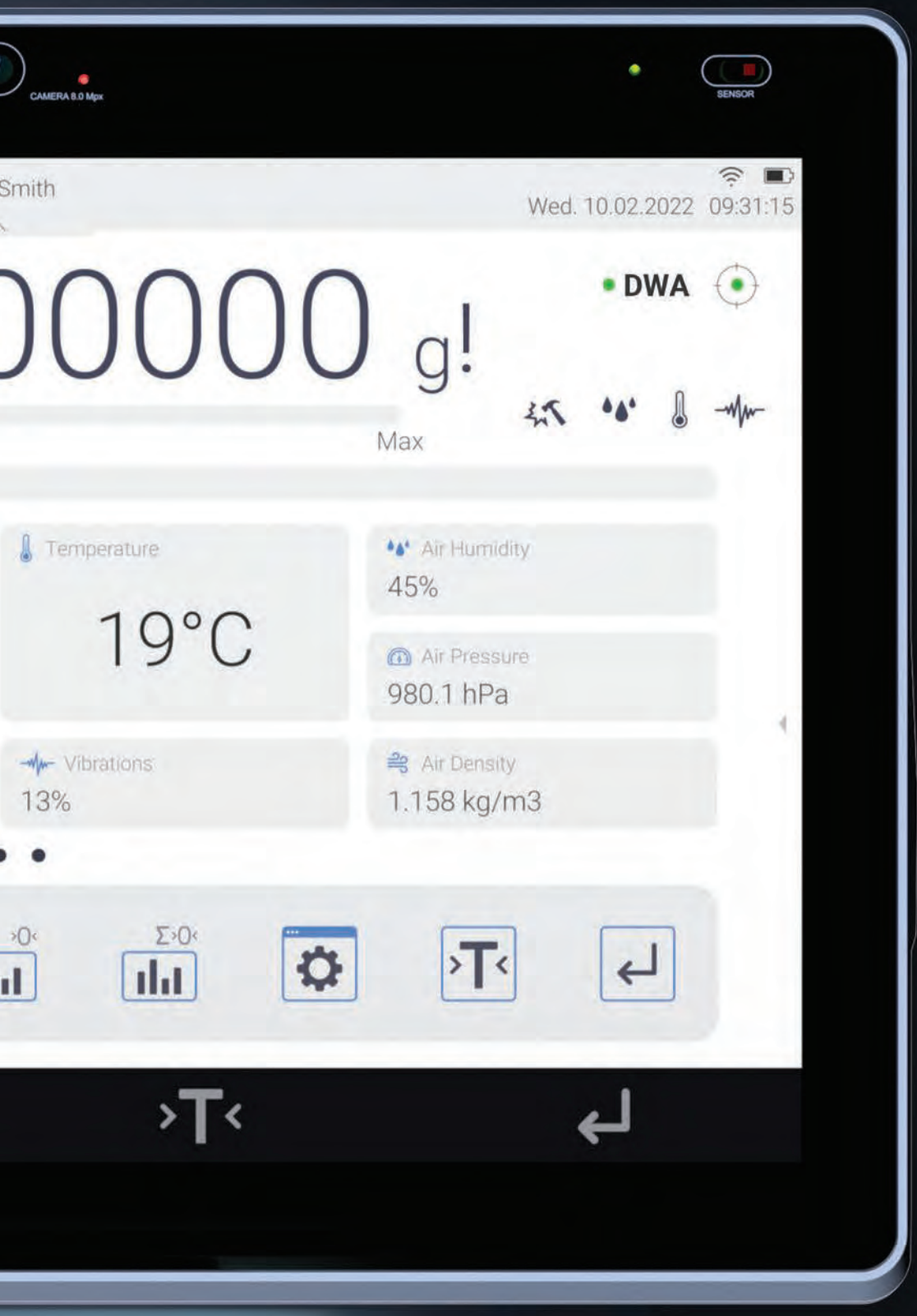
Gaussian distribution graph

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

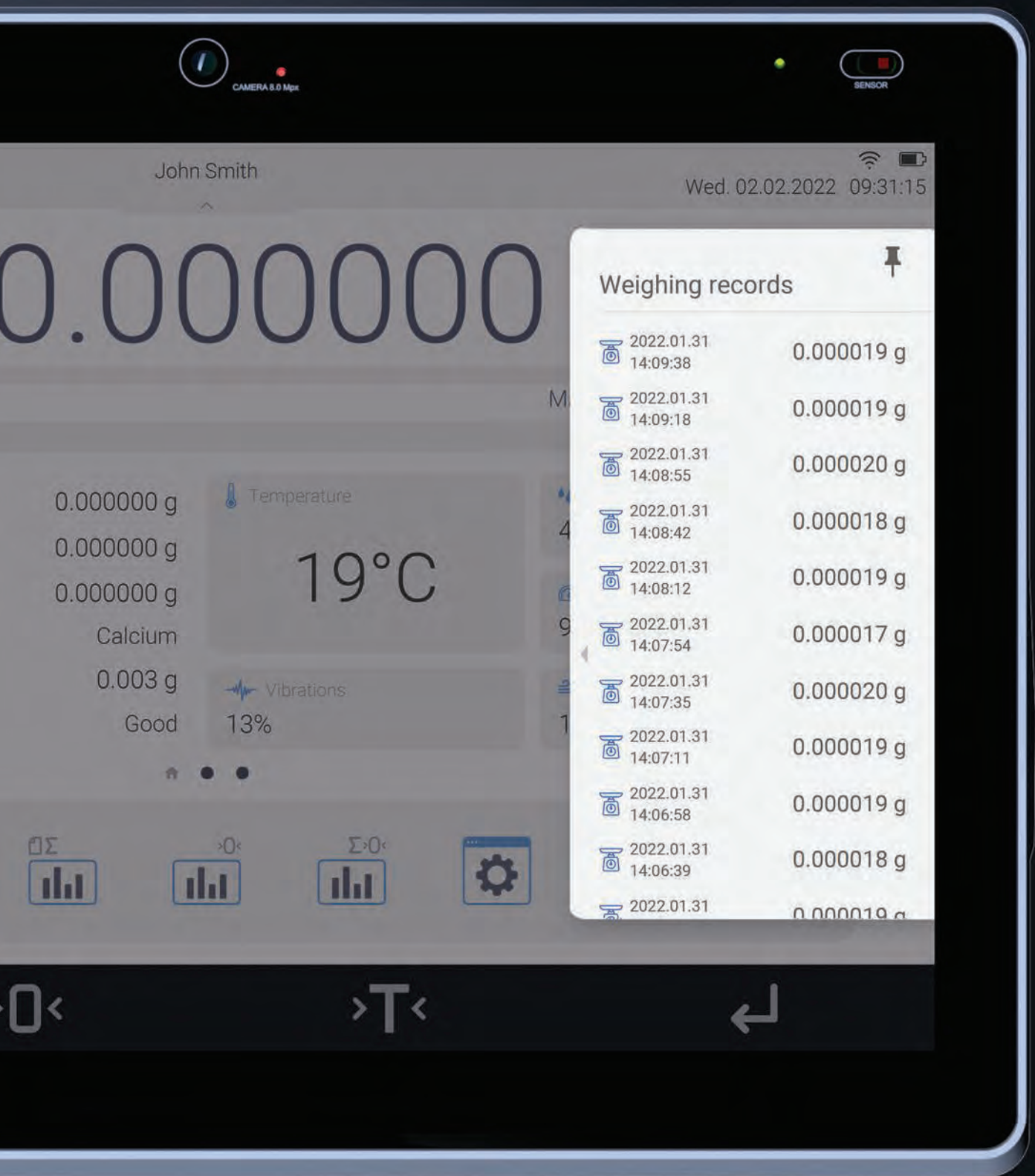
● DWA

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.



5Y ELLIPSIS Laboratory Balances

Have You Ever Failed to Record the Weighing Result?


lations
orts
E-signed documents (21 CFR Part 11)
Pipettes
Weight adjustment reports
Ambient conditions
Series
Mass controls
Minimum weight
Average tares
Comparison reports
Pipette calibration reports
Universal variables
Printouts

Don’t Take Our Word for It?

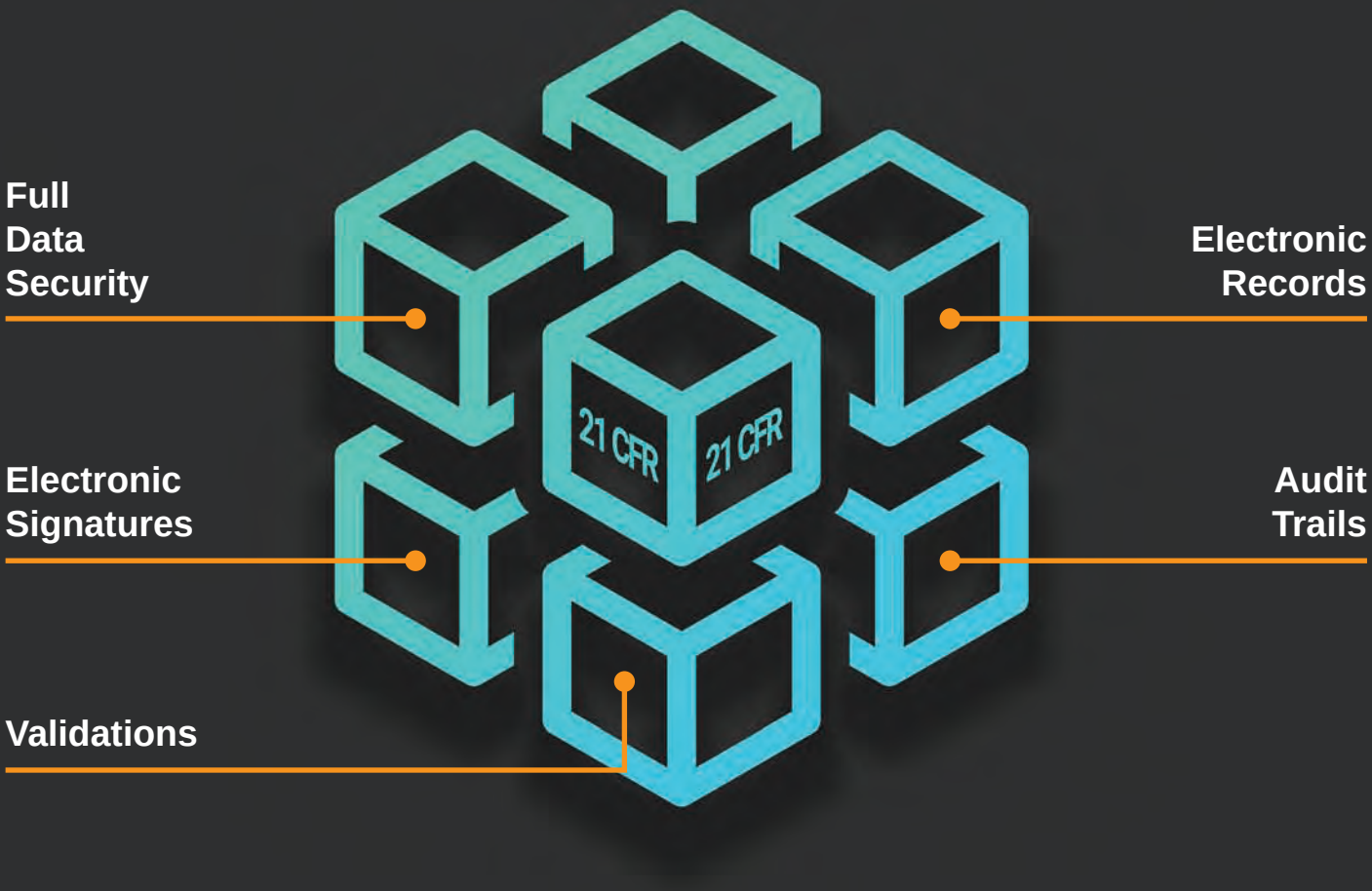
With ELLIPSIS, you can get:

- 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


RADWAG
John Smith
Weighing
Fast Dosing
0.00000 g
Max
Net - 1 -
Supplementary unit
Tare
Gross
Product
0.00000 g
0.00000 g
19°C
45%
3%
radwag.com
RFID

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

Ultra-Microbalances

Product Code	Model	Max. capacity	Readability	Repeatability	Weighing pan dimensions
WL-109-0001	UYA 2.5Y	2.1 g	0.1 µg	0.15 µg	ø 16 mm
WL-109-0002	UYA 6.5Y	6.1 g	0.1 µg	0.2 µg	ø 16 mm

Product Code	Model	Max. capacity	Readability	Repeatability	Weighing pan dimensions
WL-109-0003	UYA 2.5Y.F	2.1 g	0.1 µg	0.15 µg	ø 16 mm, ø 70 mm

Microbalances

Product Code	Model	Max. capacity	Readability	Repeatability	Weighing pan dimensions
WL-109-1000	MYA 0,8/3.5Y	0.8/3 g	1/10 µg	0.6 µg	ø16 + ø60 mm
WL-109-0004	MYA 2.5Y	2.1 g	1 µg	0.41 µg	ø16 mm
WL-109-0006	MYA 5.5Y	5.1 g	1 µg	0.6 µg	ø26 mm
WL-109-0007	MYA 6.5Y	6.1 g	1 µg	0.6 µg	ø26 mm
WL-109-0008	MYA 11.5Y	11 g	1 µg	0.45 µg	ø26 mm
WL-109-1001	MYA 11/52.5Y	11/52 g	1/10 µg	1.5 µg	ø26 + ø40 mm
WL-109-1002	MYA 21/52.5Y	21/52 g	1/10 µg	1.5 µg	ø26 + ø40 mm
WL-109-0010	MYA 21.5Y	21 g	1 µg	1 µg	ø26 mm
WL-109-0011	MYA 31.5Y	31 g	1 µg	1.2 µg	ø26 mm

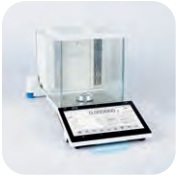
Microbalances for Pipette Calibration

Product Code	Model	Max. capacity	Readability	Repeatability	Weighing pan dimensions
WL-109-0024	MYA 5.5Y.F.A	5.1 g	1 µg	0,6 µg	ø70 + ø16 mm
WL-109-0025	MYA 5.5Y.F1	5.1 g	1 µg	0,6 µg	ø160 + ø26 mm

Microbalances for filters

Product Code	Model	Max. capacity	Readability	Repeatability	Weighing pan dimensions
WL-109-0023	MYA 21.5Y.P	21 g	1 µg	1 µg	ø26 mm

Microbalances

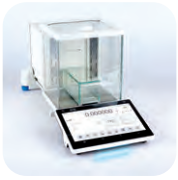


Product Code	Model	Max. capacity	Readability	Repeatability	Weighing pan dimensions
WL-109-0013	XA 6.5Y.M	6.1 g	1 µg	0.8 µg	ø30 mm
WL-109-1003	XA 6/21.5Y.M	6/21 g	1/2 µg	1.3 µg	ø30 mm
WL-109-0015	XA 21.5Y.M	21 g	1 µg	1.3 µg	ø30 mm
WL-109-1004	XA 21/52.5Y.M	21/52 g	1/5 µg	1.5 µg	ø30 mm
WL-109-0017	XA 52.5Y.M	52 g	5 µg	2.2 µg	ø30 mm
WL-109-0018	XA 53.5Y.M	53 g	1 µg	1.5 µg	ø30 mm

Microbalances for Pipettes Calibration

Product Code	Model	Max. capacity	Readability	Repeatability	Weighing pan dimensions
WL-112-1000	XA 6/21.5Y.M.A.P	6/21 g	1/2 µg	1.3 µg	ø26 mm
WL-112-0001	XA 21.5Y.M.A.P	21 g	1 µg	1.3 µg	ø26 mm
WL-112-1001	XA 21/52.5Y.M.A.P	21/52 g	1/5 µg	1.5 µg	ø26 mm
WL-112-0002	XA 52.5Y.M.A.P	52 g	5 µg	2.2 µg	ø26 mm
WL-112-0003	XA 53.5Y.M.A.P	53 g	1 µg	1.5 µg	ø26 mm

Microbalances for Stents



Product Code	Model	Max. capacity	Readability	Repeatability	Weighing pan dimensions
WL-109-0026	XA 6.5Y.M.S	6 g	1 µg	1,3 µg	Intended for Stents

Analytical Balances

Product Code	Model	Max. capacity	Readability	Repeatability	Weighing pan dimensions
WL-110-0001	XA 52.5Y	52 g	0,01 mg	0,012 mg	ø90 + ø85 mm
WL-110-0004	XA 82/220.5Y	82/200 g	0.01/0.1 mg	0,012 mg	ø90 + ø85 mm
WL-110-0002	XA 110.5Y	110 g	0.01 mg	0,012 mg	ø90 + ø85 mm
WL-110-1000	XA 120 / 250 g	120/250 g	0.01/0.1 mg	0,005 mg	ø90 + ø85 mm
WL-110-0003	XA 210.5Y	210 g	0.01 mg	0,005 mg	ø90 + ø85 mm
WL-110-0006	XA 220.5Y	220 g	0.1 mg	0,07 mg	ø100 mm
WL-110-0007	XA 310.5Y	310 g	0.1 mg	0,05 mg	ø100 mm
WL-110-0008	XA 520.5Y	520 g	0.1 mg	0,07 mg	ø100 mm
WL-109-0011	MYA 31.5Y	31 g	1 µg	1.2 µg	ø26 mm

Pecision Balances

Product Code	Model	Max. capacity	Readability	Repeatability	Weighing pan dimensions
WL-224-0001	PM 10.5Y	10 kg	0,01 g	0,004 g	200×185 mm
WL-224-0002	PM 15.5Y	15 kg	0,01 g	0,004 g	200×185 mm
WL-224-0003	PM 20.5Y	20 kg	0,01 g	0,004 g	200×185 mm
WL-224-0004	PM 25.5Y	25 kg	0,1 g	0,04 g	350×260 mm
WL-224-0005	PM 35.5Y	35 kg	0,1 g	0,04 g	350×260 mm
WL-224-0006	PM 50.5Y	50 kg	0,1 g	0,04 g	350×260 mm
WL-224-0007	PM 60.5Y	60 kg	0,1 g	0,15 g	400×500 mm
WL-224-0009	PM 120.5Y	120 kg	0,2 g	0,2 g	400×500 mm

Automatic Device for Multichannel Pipette Calibration

Product Code	Model	Max. capacity	Readability	Repeatability	Weighing pan dimensions
WL-101-0416	AP-12.5Y	52 g	0,01 mg	5 µg	12 and 1 chanel case

Moisture Analyzer

Product Code	Model	Max. capacity	Readability	Repeatability	Weighing pan dimensions
WL-307-0006	PMV 50.5Y	50 g	0,1 mg	-	ø90

PRODUCT CATALOGUE

ADVANCED WEIGHING TECHNOLOGIES

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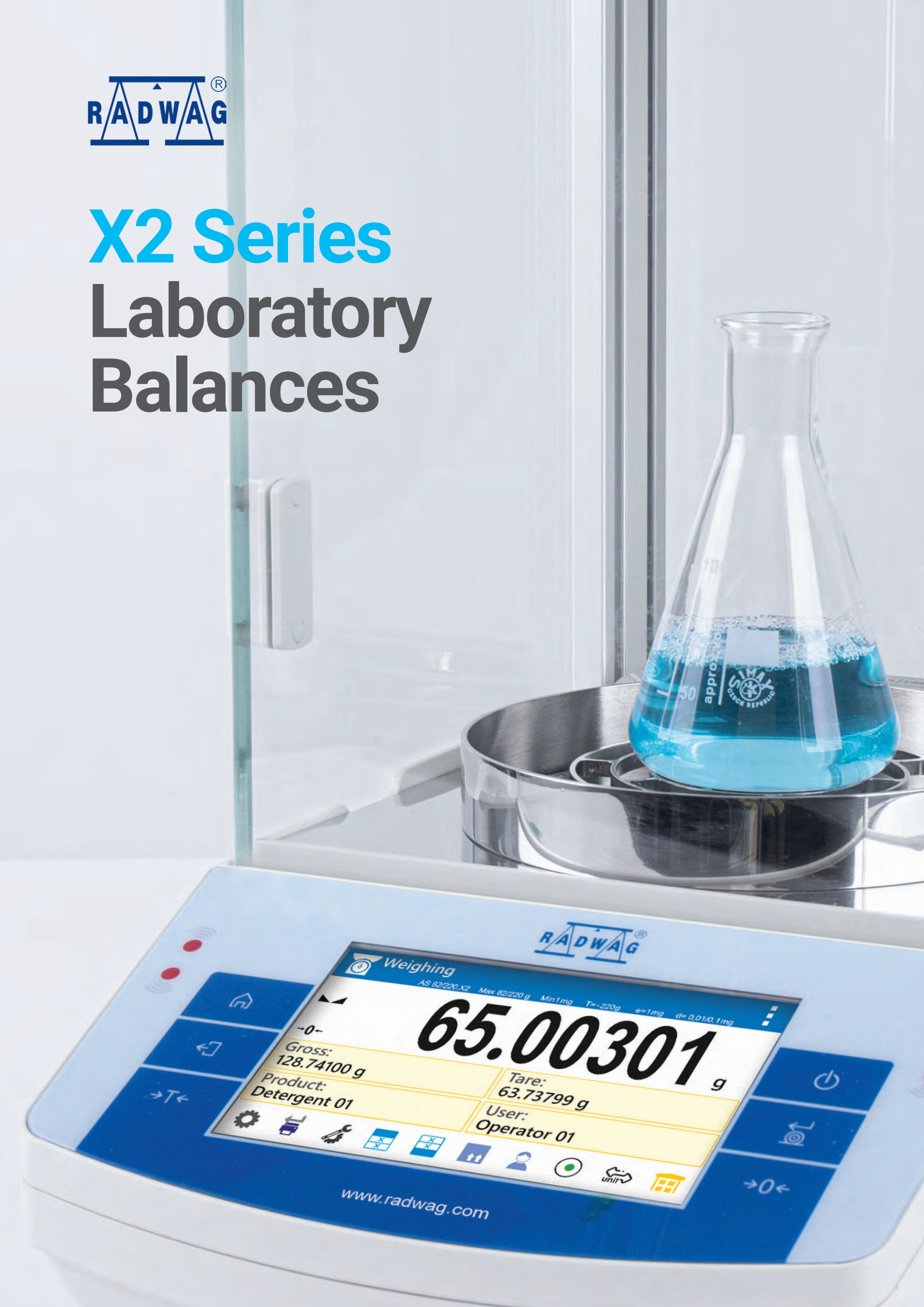
X2 Series
Laboratory Balances



X2 Series Laboratory Balances

The X2 series is a synergy between solutions typical for advanced class balances and technology intended mainly for professional devices.

The combination of the above qualities provides you with a high-tech instrument offering the utmost accuracy and maximum comfort of operation for a price typical of lower class devices.

- 5” color capacitive touchscreen
- Display customization via widgets
- Multilingual, interactive menu
- Sensors for touch-free operation
- Conformity with GLP and GMP regulations
- Dynamically controlled sample weight (bar graph)
- Statistics, formulations, reports and printouts
- Unlimited communication possibilities
- Alibi Memory with record of measurements
- Complex databases
- Maximum comfort of operation
- Internal adjustment (excluding MA X2.A)

Home screen

- **A** Set working mode and profile
- **B** Logged-in user info
- **C** Date, time, connection, battery state etc.
- **D** Weighing result window
- **E** Load bar graph
- **F** Checkweighing bar graph (thresholds)
- **G** Ambient conditions pictograms
- **H** Configurable additional information field
- **I** Quick access buttons (editing option)
- **J** Proximity sensors (operation optimization)
- **K** Setting menu for current operating mode
- **L** Proximity sensors

AS X2 PLUS Analytical balances

Maximum capacity [Max]:	up to 520 g
Readability [d]:	down to 0.01 mg
Weighing pan dimensions:	ø 90 mm, ø 100 mm, ø 85 mm (option)

PS X2 Precision balances

Maximum capacity [Max]:	up to 10.1 kg
Readability [d]:	down to 1 mg
Weighing pan dimensions:	128 × 128 mm, 195 × 195 mm

WLC X2 Precision balances

Maximum capacity [Max]:	up to 21 kg
Readability [d]:	down to 1 mg
Weighing pan dimensions:	128 × 128 mm, 195 × 195 mm, ø100 mm

MA X2.A, MA X2.IC.A Moisture analyzers

Maximum capacity [Max]:	up to 210 g
Readability [d]:	down to 0.1 mg
Weighing pan dimensions:	ø 90 mm, h = 8 mm

The X2 Series as a Standard for Quality

Accuracy in any temperature

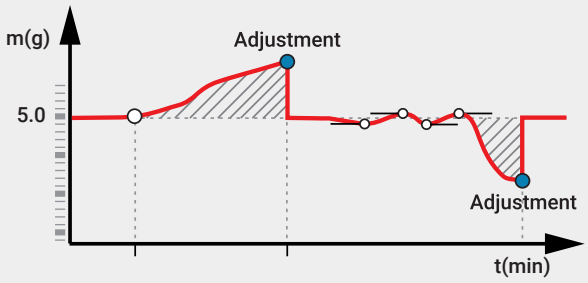
Accuracy is one of the most significant parameters influencing metrological characteristics of the weighing device. Production and control of X2 balances include monitoring and adjustment of accuracy in changeable temperatures. With minimized indication deviation, the X2 series ensures great measurement stability for a wide temperature range.

Accuracy in any conditions

The multi-shield mechanical design of X2 series balances offers effective protection against the influence of ambient conditions. With such design, the X2 series ensures fast and reliable measurement of both light and heavy loads, even when ambient conditions pose challenge.

Accuracy of each weighing indication

X2 series balances with an automatic adjustment system, using an internal adjustment weight, guarantee reliable measurement. Regardless of ambient conditions, the system provides effective elimination of any balance sensitivity deviations.



Quality begins with precision

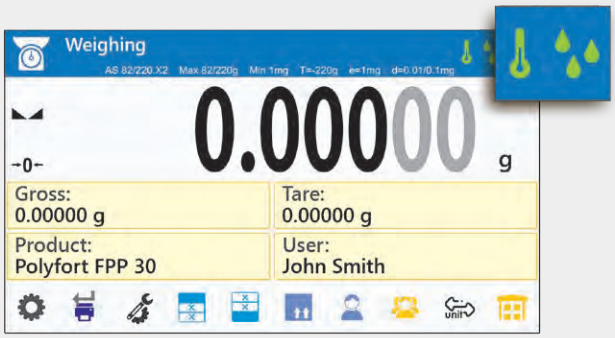
The optimization of X2 structural components provides measurement repeatability – the pivotal parameter for several analytical processes.

Speed, operation time optimization

The X2 series is a product of both measuring system development and progress when it comes to the methodology of measuring signal monitoring. X2 balances offer a wide range of settings. This provides the right sensitivity
for measurements performed within a very short time.

Ambient conditions monitoring

Information on change in ambient conditions is essential in measuring devices of high resolution. for your comfort, X2 series balances have been equipped with system that signals the dynamics of temperature changes with a special symbol. This is especially useful while installing your device (acclimatization period), and when the



Databases - weighing process ergonomics

The it structure of X2 series balances is based on structural databases. Freely programmed database content favours the creation of a dedicated information network, suiting precisely the nature of any performed process. Databases comprise the following components:

- 100 users
- 100 packaging types
- 100 warehouses
- 100 formulations
- 200 formulation reports
- 500 density reports
- 1 000 customers
- 5 000 products
- 50 000 weighings
- 500 000 Alibi records

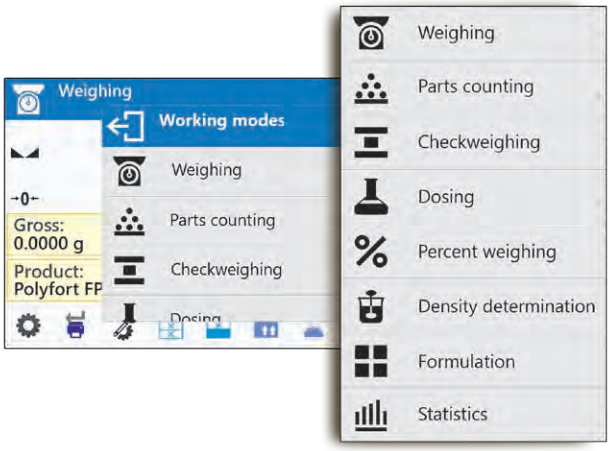
Redefined Functionality

Button customization

Customized buttons facilitate the selection of weighing units, packaging, customers, and variable tare values adding to the fast and solid performance of the weighing process. User-designed key, tailored to the user's needs, can be assigned to a particular working mode, boosting your balance's functionality.

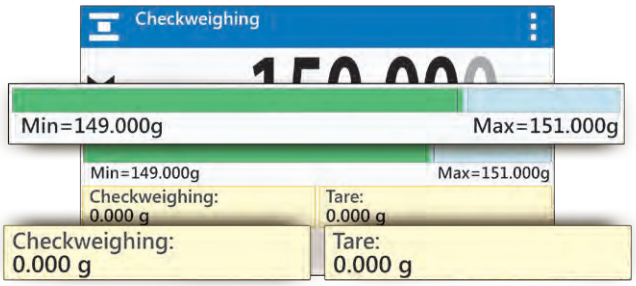
Clear information arrangement, even greater ease of operation

Priority for our X2 series balances is ease of operation and intuitive communication with the user. Clear information presented by symbols provides even more user-friendly operation.



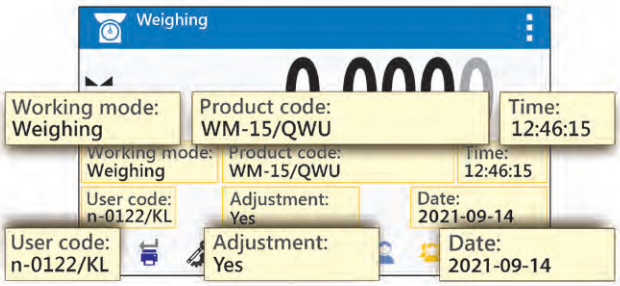
Labels selcted freely by a user

X2 balances feature labels – pre-defined information fields providing various data, e.g. product name, user, date and time or bar graph. Labels names and values are not intended for modification but it is the user who decides which labels are to be displayed.



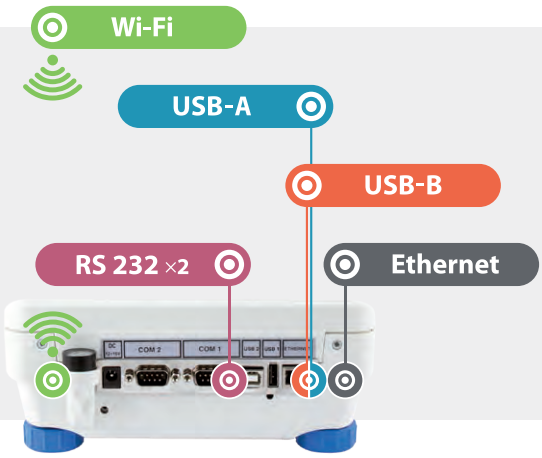
Configurable text fields

Text fields and labels feature similar characteristics, but text fields, unlike labels, can be freely created and configured by a user. it is possible to provide each text field with an individual name, function and value. in addition, you can decide on the particular text field size and location.



Communication interfaces

The X2 series balances have been equipped with various means of communication. They offer standard cable connections, realized via USB-A and USB-B or RS 232 ports, and wireless connection, realised via Wi-Fi technology. The latter is supported by all RADWAG-manufactured programs.



21 CFR Part 11

EU GMP Annex 11

Full Data Security

Electronic Records

Electronic Signatures

Audit Trails

Validations

- 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.

Technical Specification

Analytical Balance

Product Code	Model	Max. capacity	Readability	Repeatability	Weighing pan dimensions
WL-104-0183	**AS 62.X2 PLUS**	62 g	0.01 mg	0.01 mg	ø90 mm & ø85 mm (option)
WL-104-0190	**AS 120.X2 PLUS**	120 g	0.01 mg	0.01 mg	ø90 mm & ø85 mm (option)
WL-104-1053	**AS 60/220.X2 PLUS**	60 / 220 g	0.01 / 0.1 mg	0.01 mg	ø90 mm & ø85 mm (option)
WL-104-1050	**AS 82/220.X2 PLUS**	82 / 220 g	0.01 / 0.1 mg	0.01 mg	ø90 mm & ø85 mm (option)

Product Code	Model	Max. capacity	Readability	Repeatability	Weighing pan dimensions
WL-104-0181	**AS 160.X2 PLUS**	160 g	0.1 mg	0.06 mg	ø100 mm
WL-104-0169	**AS 220.X2 PLUS**	220 g	0.1 mg	0.06 mg	ø100 mm
WL-104-0182	**AS 310.X2 PLUS**	310 g	0.1 mg	0.07 mg	ø100 mm
WL-104-0184	**AS 520.X2 PLUS**	520 g	0.1 mg	0.07 mg	ø100 mm

Precision Balance

Product Code	Model	Max. capacity	Readability	Repeatability	Weighing pan dimensions
WL-218-0015	**PS 210.X2**	210 g	0.001 g	0.0005 g	128×128 mm
WL-218-0020	**PS 360.X2**	360 g	0.001 g	0.0005 g	128×128 mm
WL-218-0022	**PS 600.X2**	600 g	0.001 g	0.0005 g	128×128 mm
WL-218-0024	**PS 750.X2**	750 g	0.001 g	0.0005 g	128×128 mm
WL-218-0026	**PS 1000.X2**	1000 g	0.001 g	0.0005 g	128×128 mm
WL-218-1002	**PS 200/2000.X2**	200 / 2000 g	0.001 / 0.01 g	0.0005 / 0.005 g	128×128 mm
WL-218-0088	**PS 3000.X2**	3000 g	0.001 g	0.0005 g	128×128 mm

Product Code	Model	Max. capacity	Readability	Repeatability	Weighing pan dimensions
WL-218-0127	**PS 2100.X2.M**	2100 g	0.01 g	0.005 g	195×195 mm
WL-218-0134	**PS 3500.X2.M**	3500 g	0.01 g	0.005 g	195×195 mm
WL-218-0103	**PS 4500.X2.M**	4500 g	0.01 g	0.005 g	195×195 mm
WL-218-0104	**PS 6100.X2.M**	6100 g	0.01 g	0.005 g	195×195 mm
WL-218-0102	**PS 8100.X2.M**	8100 g	0.01 g	0.005 g	195×195 mm
WL-218-0101	**PS 10100.X2.M**	10100 g	0.01 g	0.005 g	195×195 mm

Product Code	Model	Max. capacity	Readability	Repeatability	Weighing pan dimensions
WL-222-0001	**WLC 0.2.X2**	0.2 kg	0.001 g	0.0014 g	ø100 mm

Product Code	Model	Max. capacity	Readability	Repeatability	Weighing pan dimensions
WL-222-0002	**WLC 0.6.X2**	0.6 kg	0.01 g	0.008 g	128×128 mm

Product Code	Model	Max. capacity	Readability	Repeatability	Weighing pan dimensions
WL-222-0003	**WLC 2.X2**	2 kg	0.01 g	0.015 g	195×195 mm
WL-222-0004	**WLC 6.X2**	6 kg	0.1 g	0.1 g	195×195 mm
WL-222-1001	**WLC 1/10.X2**	10 kg	0.01 / 0.1 g	0.015 / 0.08 g	195×195 mm
WL-222-0009	**WLC 10.X2**	10 kg	0.1 g	0.08 g	195×195 mm
WL-222-0011	**WLC 20.X2**	20 kg	0.1 g	0.1 g	195×195 mm
WL-222-0013	**WLC 21.X2**	21 kg	1 g	0.8 g	195×195 mm

Technical Specification for X2 Series Moisture Analyzers can be found in the Laboratory Balances section, under Moisture Analyzers.

PRODUCT CATALOGUE

ADVANCED WEIGHING TECHNOLOGIES

www.radwag.com

R Series
Laboratory Balances

R Series
Laboratory Balances

Innovative solutions of the R series, redefined operation and presentation of weighing results.

The R series balances represent the standard level of precision instruments. They have been equipped with LCD screen, providing even clearer result presentation. To maximize the comfort of operation, the display has been enriched with an extra text line supplying you with either information or prompts on the weighing process (product name, tare value, etc.).

A new feature of the R series balances is a set of symbols showing a current working mode, type of connection with a computer, battery state, weighing and service functions. Additionally, now there are even more weighing units at your disposal (g, mg, etc.). Weighing results are recorded in ALIBI memory.

The R series features a plastic housing and a stainless steel weighing pan, and enables under-pan weighing, wherein the load is suspended under the balance

Home screen

- **A** Symbols
- **B** Extra text line
- **C** Direct access to databases
- **D** Access to a particular working mode functions
- **E** Working mode selection
- **F** Direct start-uap of balance adjustment procedure
- **G** Transfer of display state to a peripheral device
- **H** Navigation buttons

AS R2 PLUS Analytical balances

Maximum capacity [Max]:	up to 520 g
Readability [d]:	down to 0,01 mg
Weighing pan dimensions:	ø 90 mm, ø 100 mm, ø 85 mm (option)

PS R1 Precision balances

Maximum capacity [Max]:	up to 6100 g
Readability [d]:	down to 1 mg
Weighing pan dimensions:	128 × 128 mm, 195 × 195 mm

PS R2 Precision balances

Maximum capacity [Max]:	up to 10100 g
Readability [d]:	down to 1 mg
Weighing pan dimensions:	128 × 128 mm, 195 × 195 mm

MA R Moisture analyzers

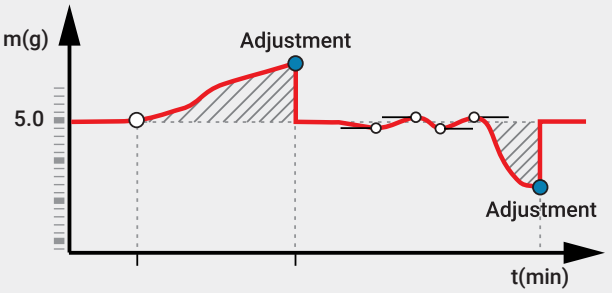
Maximum capacity [Max]:	up to 210 g
Readability [d]:	down to 0.1 mg
Weighing pan dimensions:	ø 90 mm, h = 8 mm

Quality and Precision

Auto-Cal - automatic system of adjustment procedure

Auto-Cal system is a tool for control and correction. It provides accurate weighing regardless of temperature variation, the position of the balance or changing environmental conditions. This allows the R series balances to offer accuracy in all conditions.

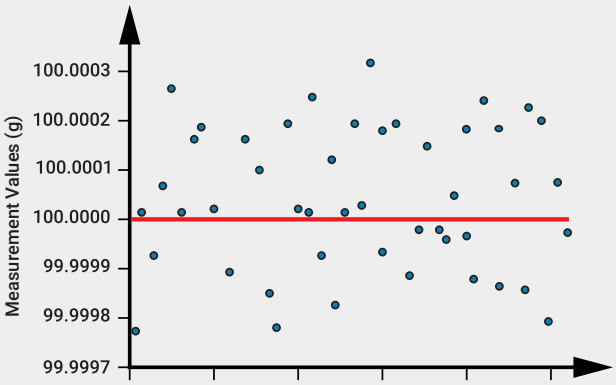
The built-in adjustment weight has been designed to maintain accurate indications. Discover that with our automatic or semiautomatic adjustment procedure, performed periodically, you may grow confident about your weighing results' accuracy. The adjustment system guarantees that accurate weighing results are obtained even for challenging working conditions. It is used for GLP, GMP control procedures.



Repeatability of indications

The monolithic system ensures even greater accuracy and repeatability of weighing due to consolidation of elements of the balance's mechanical design. Using such technology results in higher quality balances.

Owing to the monolithic systems, R series balances offer fast measurement and excellent repeatability. These up-to-date design solutions, being highly resistant to transport shocks, are characterized by good metrological parameters.

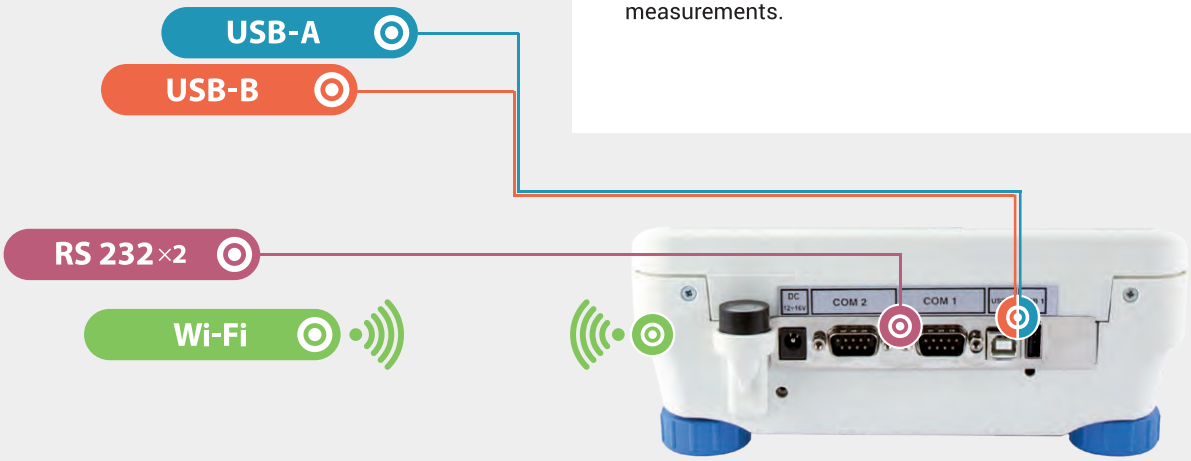


Operating temperature range

Now, owing to a wider working temperature range, you don't have to monitor and adjust the room temperature, affecting your balance stability, over and over again.

Communication interfaces

The R series balances have been equipped with various means of communication. They offer standard cable connections, realized via USB-A and USB-B or RS 232 ports, and wireless connection, realised via Wi-Fi technology. The latter is supported by all RADWAG-manufactured programs.



Databases ergonomics for your weighing process

You certainly will appreciate information system of R series balances. The system is based on 5 databases: users database (10 different operators), products database (1000 different products), weighments database (1000 different measurements), tares database (10 different packaging weights).

When operating the new R series balances you can analyze particular measurements in details, export or import any data and exchange.

Resistance to ambient conditions

Increased resistance to fluctuating ambient conditions such as breezes and changes in humidity provides more accurate measurements.

Functionality and Ergonomics

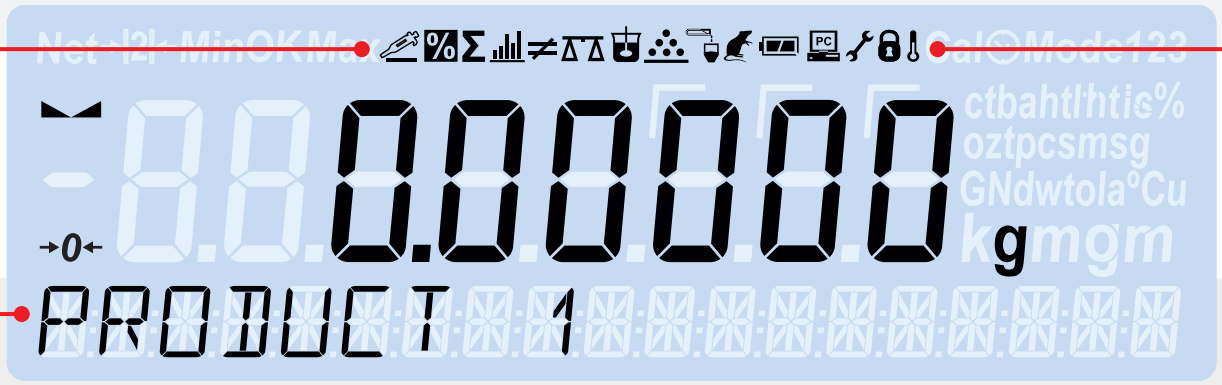
Symbols and units

The R series offers a priceless set of intuitive symbols signalling current working mode, computer connection type, battery status, function that is in operation and much more. The symbols add to readout clarity, they provide maximum comfort of operation and improve ergonomics. Another facility supporting the weighing process is a wider choice of units.

Ambient conditions monitoring

Stable ambient temperature is a key factor when it comes to the accuracy of balance indications. The R series balances feature an ergonomic diagnostic tool, namely, automatic monitoring of balance temperature. The dynamics of balance temperature variation is registered online. Shall the limit values be exceeded, a thermometer symbol is displayed on the balance screen. This calls for the necessity to stabilize the balance.

You may find ambient conditions monitoring especially useful during installation of the balance at its place of use. This solution may also turn out to be exceptionally valuable for observation of ambient temperature variation.

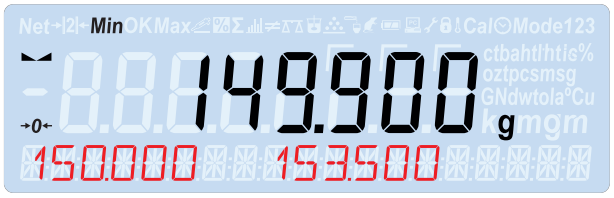


Extra text line

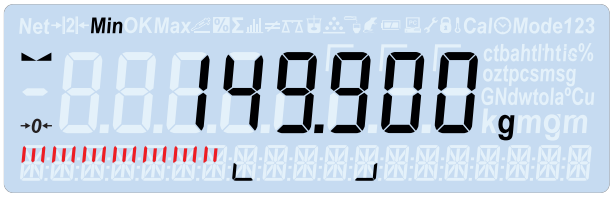
An extra text line provides you with either information or prompts on the weighing process, e.g. product name or tare value.

Bar Graph, visual representation of load capacity

The bar graph indicates the load capacity change in real time. It can be run for various working modes with threshold markers, e.g. parts counting, dosing, percent weighing, animal weighing, statistics, totaling, peak hold or checkweighing.

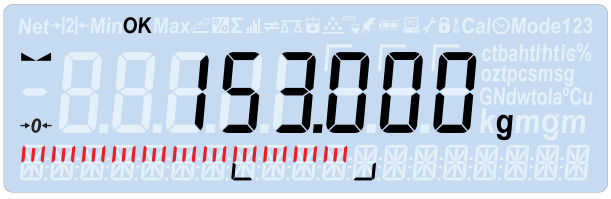


Minimum value Maximum value



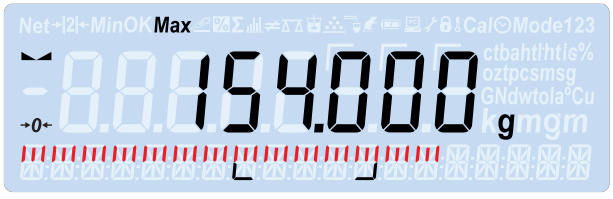
Mass value lower than the value of minimum threshold

Minimum value Maximum value



Mass value contained within thresholds

Minimum value Maximum value



Mass value higher than the value of maximum threshold

Database Security

Data protection

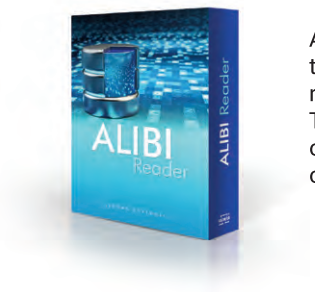
Access to the secured sensitive data is only possible when logged in. The access rights for each operator are set up by the Administrator.

ALIBI memory

ALIBI memory is a guarantee of data protection. It enables record of up to 100 000 weighings. This ensures security of stored data over long period of time.

Archiving and data exchange

Archive your data. You will do it by transfer of reports on performed processes and partial measurements to external devices via a USB interface. With the USB interface, you can control the working process, restore any data, and copy the balance settings.



ALIBI Reader PC software enables the user to preview all weighings recorded in balance memory. The software allows printout of selected data and creation of PDF and CSV (Excel) reports.

Reports and Printouts

Configurable printouts

In the new R series balances the weighing reports are divided into 3 configurable sections, each of which can be fully customized.

Working mode	Weighing
Date	18.01.2021
Time	11:36:36
Balance type	AS R2
Balance ID	2035
Product	PILL
Tare	0.5000 g
Gross weight	1.3020 g
Net weight	0.8020 g
User	Tom Smith

---------- Calibration Report ----------

Calibration type	Internal
User	Tom Smith
Project	124/SGW/2021
Date	18.01.2021
Time	12:56:10
Balance ID	1035
Calibration difference	0.0000 g

Signature

Measurement printouts sent to PC software

Measurements carried out by R series balance can be transferred directly to R-Lab and RAD KEY PC software.

RAD KEY PC Software is designed to acquire your balance data with the use of special HotKey, which is then entered into an active spreadsheet cell.

R-Lab software enables scale preview and generating both weighings and statistics graphs.

Sample report divided into three configurable sections: header, GLP printout and footer.

All R balances communicate with computer printers supporting PCL standard. Communication between the devices is established via USB or RS 232 interface.

Technical Specification

Analytical Balance

Product Code	Model	Max. capacity	Readability	Repeatability	Weighing pan dimensions
WL-104-0179	**AS 62.R2 PLUS**	62 g	0.01 mg	0.012 mg	ø90 mm & ø85 mm (option)
WL-104-0175	**AS 110.R2 PLUS**	110 g	0.1 mg	0.06 mg	ø90 mm & ø85 mm (option)
WL-104-0191	**AS 120.R2 PLUS**	120 g	0.01 mg	0.012 mg	ø90 mm & ø85 mm (option)
WL-104-1052	**AS 60/220.R2 PLUS**	60 / 220 g	0.01 / 0.1 mg	0.012 mg	ø90 mm & ø85 mm (option)
WL-104-1051	**AS 82/220.R2 PLUS**	82 / 220 g	0.01 / 0.1 mg	0.012 mg	ø90 mm & ø85 mm (option)

Product Code	Model	Max. capacity	Readability	Repeatability	Weighing pan dimensions
WL-104-0230	**AS 120.R1 PLUS**	120 g	0.1 mg	0.06 mg	ø100 mm
WL-104-0229	**AS 220.R1 PLUS**	220 g	0.1 mg	0.07 mg	ø100 mm
WL-104-0176	**AS 160.R2 PLUS**	160 g	0.1 mg	0.07 mg	ø100 mm
WL-104-0177	**AS 220.R2 PLUS**	220 g	0.1 mg	0.07 mg	ø100 mm
WL-104-0178	**AS 310.R2 PLUS**	310 g	0.1 mg	0.08 mg	ø100 mm
WL-104-0186	**AS 520.R2 PLUS**	520 g	0.1 mg	0.08 mg	ø100 mm

Precision Balance

Product Code	Model	Max. capacity	Readability	Repeatability	Weighing pan dimensions
WL-213-0020	**PS 360.R1**	360 g	0.001 g	0.0005 g	128×128 mm
WL-213-0080	**PS 600.R1**	600 g	0.001 g	0.0005 g	128×128 mm
WL-213-0022	**PS 750.R1**	750 g	0.001 g	0.0005 g	128×128 mm
WL-213-0023	**PS 1000.R1**	1000 g	0.001 g	0.0005 g	128×128 mm
WL-213-1002	**PS 200/2000.R1**	200 / 2000 g	0.001 / 0.01 g	0.0005 / 0.005 g	128×128 mm

Product Code	Model	Max. capacity	Readability	Repeatability	Weighing pan dimensions
WL-213-0091	**PS 3500.R1.M**	3500 g	0.01 g	0.005 g	195×195 mm
WL-213-0078	**PS 4500.R1.M**	4500 g	0.01 g	0.005 g	195×195 mm
WL-213-0085	**PS 6100.R1.M**	6100 g	0.01 g	0.005 g	195×195 mm

Product Code	Model	Max. capacity	Readability	Repeatability	Weighing pan dimensions
WL-212-0018	**PS 210.R2**	210 g	0.001 g	0.0005 g	128×128 mm
WL-212-0019	**PS 360.R2**	360 g	0.001 g	0.0005 g	128×128 mm
WL-212-0071	**PS 0.6.R2**	600 g	0.01 g	0.005 g	195×195 mm
WL-212-0020	**PS 600.R2**	600 g	0.001 g	0.0005 g	128×128 mm
WL-212-0021	**PS 750.R2**	750 g	0.001 g	0.0005 g	128×128 mm
WL-212-0022	**PS 1000.R2**	1000 g	0.001 g	0.0005 g	128×128 mm
WL-212-1003	**PS 200/2000.R2**	200 / 2000 g	0.001 / 0.01 g	0.0005 / 0.005 g	128×128 mm

Product Code	Model	Max. capacity	Readability	Repeatability	Weighing pan dimensions
WL-212-0170	**PS 2100.R2.M**	2100 g	0.01 g	0.005 g	195×195 mm
WL-212-0173	**PS 3500.R2.M**	3500 g	0.01 g	0.005 g	195×195 mm
WL-212-0134	**PS 4500.R2.M**	4500 g	0.01 g	0.005 g	195×195 mm
WL-212-0135	**PS 6100.R2.M**	6100 g	0.01 g	0.005 g	195×195 mm
WL-212-0132	**PS 8100.R2.M**	8100 g	0.01 g	0.005 g	195×195 mm
WL-212-0133	**PS 10100.R2.M**	10100 g	0.01 g	0.005 g	195×195 mm

Product Code	Model	Max. capacity	Readability	Repeatability	Weighing pan dimensions
WL-221-0001	**PS 210.R2.H**	210 g	0.001 g	0.0005 g	ø100 mm
WL-221-0002	**PS 360.R2.H**	360 g	0.001 g	0.0005 g	ø100 mm
WL-221-0003	**PS 600.R2.H**	600 g	0.001 g	0.0005 g	ø100 mm
WL-221-0004	**PS 750.R2.H**	750 g	0.001 g	0.0005 g	ø100 mm
WL-221-0005	**PS 1000.R2.H**	1000 g	0.001 g	0.0005 g	ø100 mm

Product Code	Model	Max. capacity	Readability	Repeatability	Weighing pan dimensions
WL-221-1001	**PS 200/2000.R2.H**	200 / 2000 g	0.001 / 0.01 g	0.0005 / 0.005 g	ø100 mm
WL-221-0023	**PS 2100.R2.M.H**	2100 g	0.01 g	0.005 g	195×195 mm
WL-221-0024	**PS 3500.R2.M.H**	3500 g	0.01 g	0.005 g	195×195 mm
WL-221-0025	**PS 4500.R2.M.H**	4500 g	0.01 g	0.005 g	195×195 mm
WL-221-0026	**PS 6100.R2.M.H**	6000 g	0.01 g	0.005 g	195×195 mm

Technical Specification for R Series Moisture Analyzers can be found in the Laboratory Balances section, under Moisture Analyzers.

PRODUCT CATALOGUE

ADVANCED WEIGHING TECHNOLOGIES

www.radwag.com

PM
Precision Balances

[d] down to 0.01 g
[Max] up to 120 kg

Minimum Eccentricity Error Over the Entire Range

PM balances can be used to determine the mass of irregularly shaped components with a centre of gravity that is significantly shifted from the weighing pan axis.

Fast and Stable Measurement

It only takes a second for the balance to display the final measurement result.

Parameter Stability Over Time and After Transport

The mechanical design is resistant and robust, allowing you to maintain the correct metrological parameters after transport and despite long and intensive use.

Weighing Heavy Loads with High Accuracy

On the large weighing pan of a PM balance, you can weigh a load of 120 kg with a readability of 0.2 g and second-to-none repeatability.

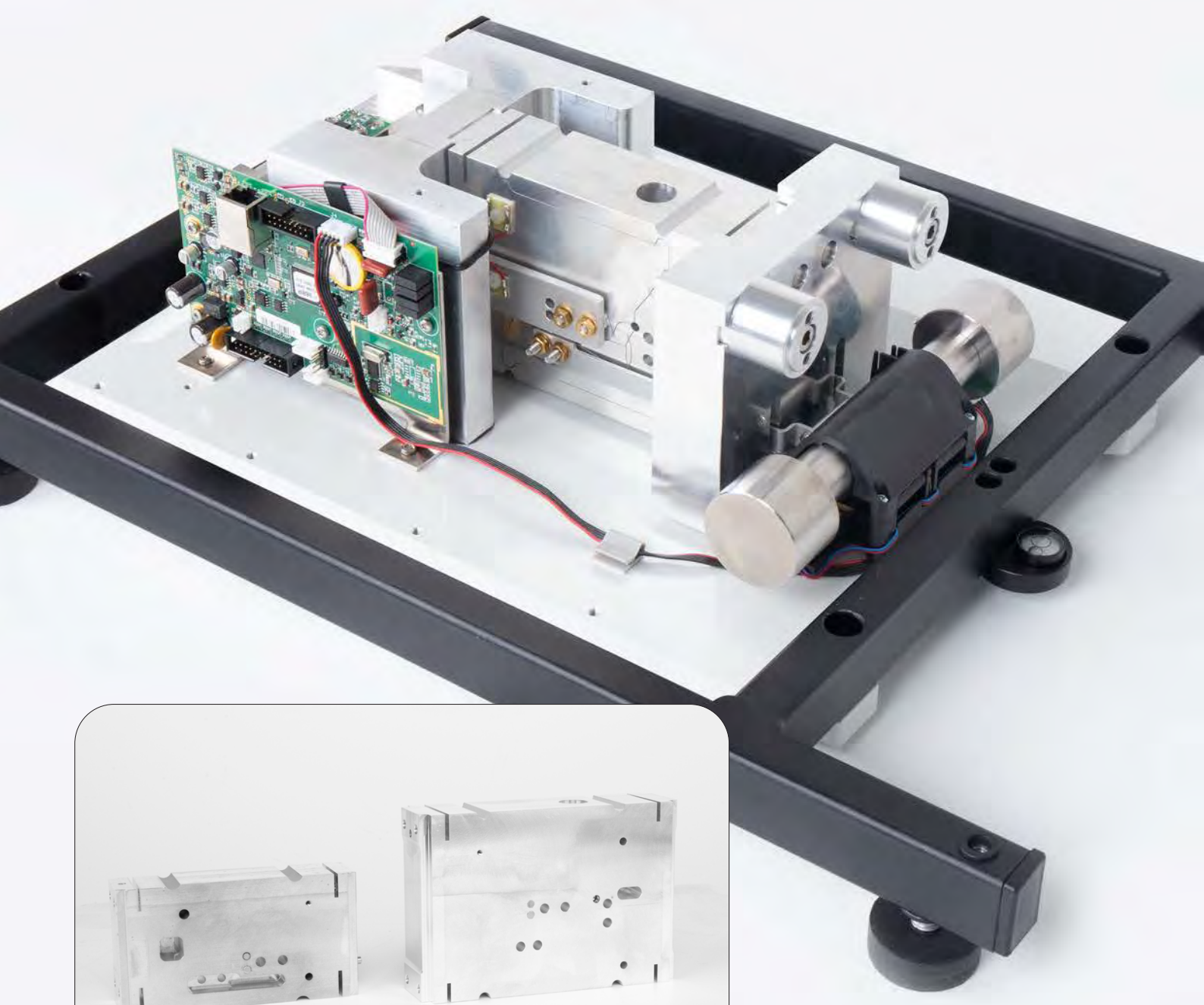
Platforms of IP 54

Weighing Pan Dimensions Adapted to the Accuracy of the Balance

Weigh with the highest readability of 0.01 g on the 200 x 185 mm weighing pan and with a readability of 0.2 g on the 500 x 400 mm weighing pan.

New, Improved RADWAG MONOBLOCK®

- Readability of 0.01 g at 10 kg maximum capacity and 0.2 g at 120 kg maximum capacity,
- Repeatability down to 0.01 g,
- Greater resistance to ambient conditions change.



The new, taller and larger RADWAG MONOBLOCK® enables the best repeatability and speed in its class of weighing platforms.

PM 5Y Precision Balances

5Y terminal:

- 10-inch display
- Digital Weighing Auditor,
- multi-step user verification,
- Ambient Light alerts,
- Hotspot,
- RFID,
- Live Note voice and text notes,
- voice commands for the balance,
- handy measurement history within the Handy Library,
- widgets.

PM C32 Precision Balances

PUE C32 terminal:

- 5-inch, colour, graphic display,
- membrane keypad,
- IP 43,
- freely programmable function buttons,
- battery as an optional power source.
- intuitive operation.

Technical Specification

PM 5Y

Product Code	Model	Max. capacity	Readability	Repeatability	Weighing pan dimensions
WL-224-0001	**PM 10.5Y**	10 kg	0.01 g	0.004 g	200×185 mm
WL-224-0002	**PM 15.5Y**	15 kg	0.01 g	0.004 g	200×185 mm
WL-224-0003	**PM 20.5Y**	20 kg	0.01 g	0.004 g	200×185 mm

Product Code	Model	Max. capacity	Readability	Repeatability	Weighing pan dimensions
WL-224-0004	**PM 25.5Y**	25 kg	0.1 g	0.04 g	350×260 mm
WL-224-0005	**PM 35.5Y**	35 kg	0.1 g	0.04 g	350×260 mm
WL-224-0006	**PM 50.5Y**	50 kg	0.1 g	0.04 g	350×260 mm

Product Code	Model	Max. capacity	Readability	Repeatability	Weighing pan dimensions
WL-224-0007	**PM 60.5Y**	60 kg	0.1 g	0.041 g	400×500 mm
WL-224-0009	**PM 120.5Y**	120 kg	0.2 g	0.06 g	400×500 mm

PM C32

Product Code	Model	Max. capacity	Readability	Repeatability	Weighing pan dimensions
WL-223-0005	**PM 10.C32**	10 kg	0.01 g	0.004 g	200×185 mm
WL-223-0006	**PM 15.C32**	15 kg	0.01 g	0.004 g	200×185 mm

Product Code	Model	Max. capacity	Readability	Repeatability	Weighing pan dimensions
WL-223-0025	**PM 25.C32**	25 kg	0.1 g	0.04 g	350×260 mm
WL-223-0007	**PM 35.C32**	35 kg	0.1 g	0.04 g	350×260 mm
WL-223-0008	**PM 50.C32**	50 kg	0.1 g	0.04 g	350×260 mm

Product Code	Model	Max. capacity	Readability	Repeatability	Weighing pan dimensions
WL-223-0081	**PM 60.C32**	60 kg	0.1 g	0.4 g	400×500 mm
WL-223-0009	**PM 60.05.C32**	60 kg	0.5 g	0.2 g	400×500 mm
WL-223-0012	**PM 60.1.C32**	60 kg	1 g	0.4 g	400×500 mm
WL-223-0082	**PM 120.C32**	120 kg	0.2 g	0.4 g	400×500 mm

PRODUCT CATALOGUE

ADVANCED WEIGHING TECHNOLOGIES

www.radwag.com

WLC and WTC
Precision Balance

[d] down to 0.001 g
[Max] up to 120 kg

WLC, WLC C/2 and WTC Precision Balance

The **internal battery** will allow you to work on the balance despite the lack of access to power.

Communication interfaces: RS 232, USB-A and USB-B will allow you to work with a computer, printer and flash drive.

Thanks to **automatic internal adjustment**, the balance will calibrate itself as soon as you press the button and automatically every 12 hours and when the temperature changes by more than 3°C.*

* Refers to the WLC C/2 balances.

The **Alibi Memory** will allow you to record all weighings on the balance with the software.

Thanks to the **real-time clock** – in the standard printout you can provide information about when the measurement took place.

WLC F1/R

WLC F1/K

Technical Specification

WLC C/2 Precision Balance (Adjustment: internal)

Product Code	Model	Max. capacity	Readability	Repeatability	Weighing pan dimensions
WL-217-0006	**WLC 0.6/A1/C/2**	0.6 kg	0.01 g	0.015 g	128×128 mm

Product Code	Model	Max. capacity	Readability	Repeatability	Weighing pan dimensions
WL-217-0007	**WLC 1/A2/C/2**	1 kg	0.01 g	0.015 g	195×195 mm
WL-217-0015	**WLC 2/A2/C/2**	2 kg	0.01 g	0.015 g	195×195 mm
WL-217-0014	**WLC 6/A2/C/2**	6 kg	0.1 g	0.15 g	195×195 mm

WLC Precision Balance (Adjustment: external)

Product Code	Model	Max. capacity	Readability	Repeatability	Weighing pan dimensions
WL-206-0041	**WLC 1/A2**	1 kg	0.01 g	0.01 g	195×195 mm
WL-206-0039	**WLC 2/A2**	2 kg	0.01 g	0.01 g	195×195 mm
WL-206-0003	**WLC 6/A2**	6 kg	0.1 g	0.1 g	195×195 mm
WL-206-0004	**WLC 10/A2**	10 kg	0.1 g	0.1 g	195×195 mm
WL-206-0022	**WLC 20/A2**	20 kg	0.1 g	0.1 g	195×195 mm

Product Code	Model	Max. capacity	Readability	Repeatability	Weighing pan dimensions
WL-206-0074	**WLC 6/F1/R**	6 kg	0.1 g	0.1 g	300×300 mm
WL-206-0073	**WLC 6/F1/K**	6 kg	0.1 g	0.1 g	300×300 mm
WL-206-0076	**WLC 12/F1/R**	12 kg	0.2 g	0.2 g	300×300 mm
WL-206-0075	**WLC 12/F1/K**	12 kg	0.2 g	0.2 g	300×300 mm
WL-206-0078	**WLC 30/F1/R**	30 kg	0.5 g	0.5 g	300×300 mm
WL-206-0077	**WLC 30/F1/K**	30 kg	0.5 g	0.5 g	300×300 mm

Product Code	Model	Max. capacity	Readability	Repeatability	Weighing pan dimensions
WL-206-0063	**WLC 60/C2/R**	60 kg	1 g	1 g	400×500 mm
WL-206-0015	**WLC 60/C2/K**	60 kg	1 g	1 g	400×500 mm
WL-206-0036	**WLC 120/C2/R**	120 kg	2 g	2 g	400×500 mm
WL-206-0021	**WLC 120/C2/K**	120 kg	2 g	2 g	400×500 mm

WTC Precision Balance (Adjustment: external)

Product Code	Model	Max. capacity	Readability	Repeatability	Weighing pan dimensions
WL-210-0004	**WTC 200**	200 g	0.001 g	0.002 g	ø100 mm

Product Code	Model	Max. capacity	Readability	Repeatability	Weighing pan dimensions
WL-210-0003	**WTC 600**	600 g	0.01 g	0.01 g	128×128 mm
WL-210-0001	**WTC 2000**	2000 g	0.01 g	0.01 g	128×128 mm
WL-210-0007	**WTC 3000**	3100 g	0.1 g	0.1 g	128×128 mm

PRODUCT CATALOGUE

ADVANCED WEIGHING TECHNOLOGIES

www.radwag.com

Moisture Analyzers

PMV 50.5Y
Microwave Moisture Analyzer

The best possible functionality and professionalism for a drying process and moisture content analysis!

- 10” touch screen display
- Interactive menu
- Wi-Fi
- Control and adjustment system for a drying chamber (GMP)
- Compliance with regulations (GLP System)
- Databases (products, weighings, customers, drying programs, drying processes reports, control Wand statistics for drying processes reports)
- Dynamic control of sample weight (bar graph)
- Drying parameters optimisation (test)
- Drying process visualisation (%M, %R, %D, graph)
- Statistics (trend of sample humidity over time)
- Printouts, reports (standard PCL)
- Multilingual menu
- Interfaces: USB-A ×2, USB-C, HDMI, Ethernet, Wi-Fi®, Hotspot
- Wide spectrum of applications (industry, laboratories, universities, research and development institutes)

Home screen

A Information on a selected working mode and on a current drying mode
B Information on a logged in user
C Area for date, time, information on connection, battery level, etc.
D Pictogram informing on levelling status
E Weight bar graph
F Bar graph for sample weight control
G Configurable area for supplementary information
H Drying mode / temperature selection
I Auto switch-off option
J Printout interval
K Temperature and elapsed analysis time
L Area defining the drying chamber (Opened / Closed / Drying Process)
M Quick launch bar providing access to functions
N Digital Weighing Auditor
O Touch-free operation (IR sensors)

PMV 50.5Y

- **Maximum efficiency and productivity.**
- **Arranging work through databases.**
- **History of moisture content variations for a given sample.**
- **Easy data exchange between devices.**
- **Data protection and access control.**
- **Fully configurable screen menu.**

Moisture Analyzers of X2 Series

Professional design assuring the highest quality of drying process and maximum comfort of operation.

- 5” colour touch screen
- Free customization of menu elements
- Wi-Fi
- Control and adjustment system for a drying chamber (GMP)
- Compliance with regulations (GLP System)
- Databases (products, customers, users, packaging, drying programs, drying reports)
- Dynamic control of sample weight (bar graph)
- Drying parameters optimisation (test)
- Drying process visualisation
- Statistics (trend of sample humidity over time)
- Printouts, reports (standard PCL)
- Multilingual menu
- Wide spectrum of applications (industry, laboratories, universities, research and development institutes)

Home screen

A Displaying home screen
B Exit (return to the previous screen)
C Tare button
D Display shutdown
E Enter/Print button
F Zero button
G Status bar (working mode, moisture analyzer metrological data)
H Area with drying/weighing result
I Information panel
J Quick access key triggering functions and settings
K Current working mode settings
L Proximity sensors
M Drying mode / temperature selection
N Drying process automatic shutdown
O Printout interval
P Temperature and analysis time
R Area defining the drying chamber (Opened / Closed / Drying Process)

- **Clear information arrangement.**
- **Uncomplicated and intuitive operation as a result of free customization of the menu.**
- **Automatically opened and closed drying chamber.**

Moisture Analyzers of R Series

Advanced technology for a drying process and moisture content analysis!

- LCD display
- Cascading menu
- Wi-Fi
- Control and adjustment system for a drying chamber (GMP)
- Compliance with regulations (GLP System)
- Databases (users, products, programs, tares)
- Drying parameters optimisation (Test)
- Drying process visualisation (%M, %R, %D, graph)
- Printouts, reports (standard PCL)
- Multilingual menu
- Wide spectrum of applications (industry, laboratories, universities, research and development institutes)

Home screen

A Elapsed drying time
B Drying temperature
C Area defining the drying chamber (Opened / Closed / Drying Process)
D Moisture content result for a given sample
E Automatic shutdown
F Drying mode
G Measuring unit %M, %D, %R
H Information area
I Direct access to reports on performed drying processes
J Direct access to databases
K Switching drying mode and changing drying temperature
L Selecting sample out of the database

- **Compact size and design.**
- **Easy and intuitive operation.**
- **Direct access to reports and product databases.**
- **Ease of data exchange between devices.**
- **Versatility of applications in various workstations.**

Design and Construction

Measurements Precision in all Thermal Conditions

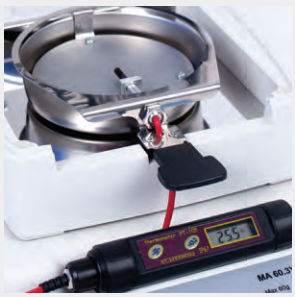
Moisture analyzer comprises precision balance and a drying chamber joined together. High resolution weighing module is designed to provide quick and precise measurement

of a particular sample weight, independently from its thermal condition. Module stabilisation is obtained using special algorithm controlling halogen lamp operation.

A drying chamber
B weighing module

Drying Temperature Stability

Drying temperature stabilization is ensured by a heating element (IR emitter) coupled with a temperature sensor. Proper operation of this system is possible owing to adjustment performed in the course of a manufacturing process. the emitter, as a heat source, is effective when carrying out analysis of various materials: powders, liquids, paste, semi-liquid substances, solid bodies etc.



Graduating drying temperature means comparing and correcting indications of moisture analyzer thermometer. the correction is referred to indications of control thermometer, three measuring points are used for comparison. During the test, the control thermometer replaces a weighing pan.

IR emitter is one of the moisture analyzer heat sources, it operates in a feedback loop. This ensures thermal conditions stability for the time of analysis. **RADWAG-designed method for dynamic control of drying chamber temperature is one of the factors allowing to obtain short time for analysis process and repeatability within drying series.**

A specific algorithm controlling heating elements operation is needed in order to maintain a particular temperature throughout the drying process. **RADWAG has designed such an algorithm thus ensuring quickness and accuracy of operation independently from analysis duration.**

Heat Source Types and Intended Use

IRS Halogen

Intended for:
powder, semi-liquids, liquids.

IRL Emitter

Intended for:
bodies of thick consistence and for solids.

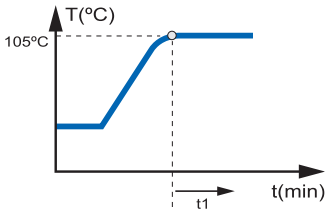
IRM Emitter

Intended for:
most samples of liquid or semi-liquid consistence, powders, crushed solids.

Microwave Emitter

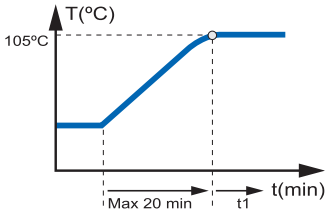
Intended for:
drying of samples containing significant amount of moisture (up to 100%)

Methods for Obtaining the Preset Temperature



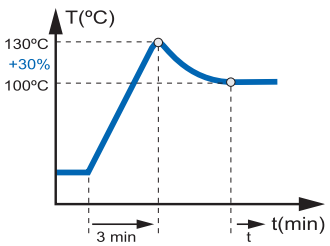
Standard Mode

Intended use:
Solid, powder and semi-liquid samples. Temperature grows until the determined value is reached.
99% of applications.



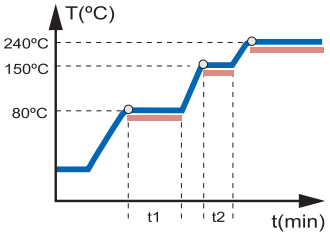
Mild Mode

Intended use:
Mild mode shall be applied when too fast temperature growth eliminates components other than water.
Possibility of adjusting the speed of temperature growth.



Quick Mode

Intended use:
Samples of high humidity.
In case of overadjustment the temperature drops until the determined value is reached.
Temperature drop caused by heat coming from evaporation is eliminated.



Step Mode

Intended use:
Drying minerals. Chemically bound water and surface bound water is eliminated.
Sample analysis for various temperature values is possible.

Drying Methods and Processes

Samples Types and Preparation

Size of the sample and its preparation shall provide the following: sample structure homogeneity, short time of drying, good repeatability of measurement within a measurement series and drying process result comparable to a reference result (standardised method).

Solid bodies
- light sample,
- requires grinding

Samples of low humidity
- heavy sample
(10 - 15 g)

Liquids
- increasing active surface of evaporation is recomended

Sample Structure Transformation

Unfavorable physical processes, affecting the sample structure, may occur during the drying process. These are caused by dispersion of indications and mistakes made when undertaking assessment of actual moisture content for a particular sample.

Crust Formation
It is a process where an impermeable layer is formed on a sample surface. This makes removal of humidity from the sample impossible. As a result the indication being an outcome of an analysis is lower than the sample reference value.

Sample Burning
Such a process is a consequence of too high drying temperature. it results in a change of sample colour. When sample burning occurs then the sample humidity value is greater than its reference value.

Heat Absorption
Dark in colour samples absorb more heat than the light ones. this accounts for application of lower drying temperatures while drying light in colour samples. Tests need to be carried out in order to select the right temperature value.

Automatic Control of Sample Weight

Obtaining optimal results for a drying process depends on samples quantity and weight. Too heavy sample lengthens duration of the drying process. Too light sample works against repeatability of the results. This proves that control of the sample weight is inevitable.

A **WEIGHT CONTROL** (checkweighing thresholds)

B **GRAPH** (drying process curve, registered for dynamic state)

C **DRYING PROGRAMS** (drying mode type, temperature, auto switch-off)

D **SAMPLES** (name, code, end mass, tolerance, etc.)

E **SAMPLE DESCRIPTION** (information on how to prepare a sample for a drying process)

Initial mass	2.7548 g
0:00:10	0.1503% M
0:00:20	0.6258% M
---------- Auto switch off ----------	
0:08:08	Auto 1
Result	11.4789% M
---------- Auto switch off ----------	
0:11:05	Auto 2
Result	11.9058% M
---------- Auto switch off ----------	
0:13:55	Auto 3
Result	12.0502% M
---------- Auto switch off ----------	
0:15:20	Auto 4
Result	12.0858% M

Demonstrative printout of TEST function.

Methods of Analysis Completion

TEST function analyses weight variation for a particular sample, occurring during the drying process. There are 5 different options for automatic shutdown. the user shall select option allowing him to end the drying process in a way ensuring that the obtained humidity value is as close as possible to a reference value. Among other automatic shutdown possibilities there are time-defined, manual and user-defined options, the latest one being the best adjusted to a particular sample characteristics.

Obtained humidity value depends on start mass of a particular sample – an optimal mass value shall be selected prior running the tests.

Respective method for a particular sample drying, shall be selected based on tests optimizing the sample size, drying temperature and method of analysis end procedure.

Reports and Statistics

Report on Drying Process

RADWAG moisture analyzers allow the user to make self-configured reports. Analysis, summaries, etc. may be printed by means of any office printer (PCL).

The report comprises three sections: the header (A), the data area (B) and the footer (C). Each section can be freely configured by a user.

Drying Process Statistics

Moisture content analyses performed for the same sample are used to determine the sample moisture content variation within a specified time interval (Trend).

A

Drying	
Date	05.01.2021
Time	6:32:18
Operator	Admin
Product	Prod-01
Program	MAR-1
Drying profile	Standard
Drying profile parameters	90 °C
Finish mode	Manual
Start mass	0.674 g

B

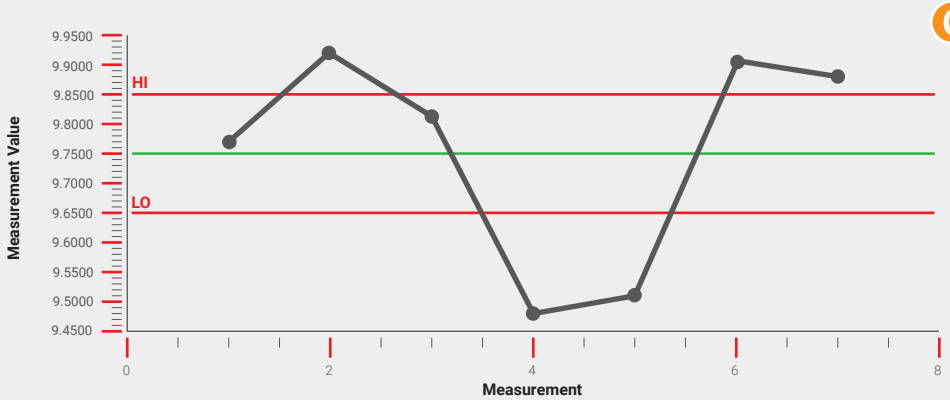
0:00:30
0:01:00
0:01:30
0:02:00
0:02:30
0:03:00

C

Status	Completed
Drying time	0:03:00
End mass	0.499 g
Result	25.964% M

Example of a simple drying report, generated by MA R moisture analyzer.

Trend graph is calculated automatically. Calculating moisture content variation is required wherever manufacturing process and control is performed in a permanent manner. the obtained data is used by systems controlling the manufacturing process. it helps to determine optimal moisture content for a particular sample, required for a finished product prior its packing.



A

Drying	
Start date	2021.01.28
Start time	11:34:44
Operator	Admin
Product	Corn
Drying mode	Corn-PRG01
Drying mode	Standard
Drying mode parameters	100 °C
Auto switch-off mode	Auto
Finish mode parameters	1 mg/60 s
Printout interval	0:00:30
Start mass	0.590 g

B

Date and time	2021.01.28 11:35:14
Drying time	0:00:30
Product	Corn
Current result	5.085% M
0:00:30	5.085% M
Humidity content	5.085% M
Dry mass content	94.915% D
Humid / Dry	5.357% R
Tare	0.007 g
Gross	0.567 g
Set temperature	100 °C
Current temperature	99 °C

Date and time	2021.01.28 11:35:44
Drying time	0:01:00
Current result	7.795% M

Date and time	2021.01.28 11:39:14
Drying time	0:04:30
Current result	14.237% M

C

Status	Completed
End date	2021.01.28
End time	11:39:22
Drying time	0:04:38
Operator	Admin
Product	Corn
End mass	0.506 g
Humidity content	14.237% M

Example of a complex drying report, generated by PMV 50.5Y moisture analyzer.

Databases Managing and Editing

Databases
Drying Process Ergonomics

Drying parameters such as temperature and automatic shutdown are optimally selected for every single sample. Trying to remember the parameters for just a few samples requires considerable effort. it is more convenient to record the parameters in a database than attempting to learn them by heart.

Product Database Contains any Data Relating to a Sample:

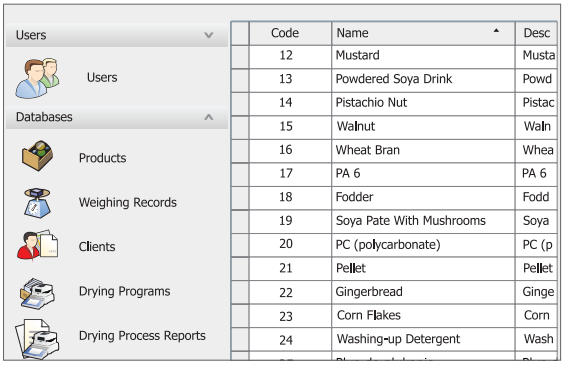
- name and description,
- EAN code: searching a sample in a database by means of a scanner,
- target value (%): value used for automatic control of sample weight (bar graph) and for determining moisture content variation over time (trend),
- Min, Max: value used for automatic control of sample weight (bar graph),
- tolerance: value used for determining moisture content variation over time (trend),
- drying program.

Drying Programs Database Contains any Data Relating to a Drying Process:

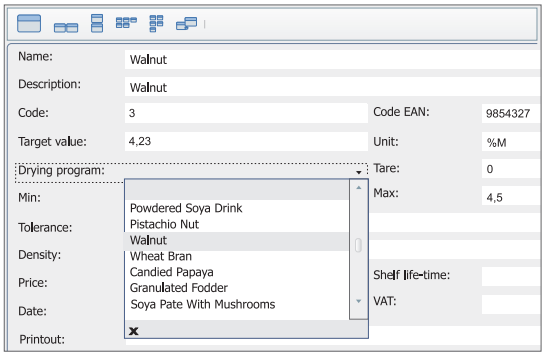
- name, code,
- drying mode, drying temperature,
- automatic shutdown (auto / time-defined / user-defined),
- start mass control (none / optional / essential),
- equipment intended for a sample (methodology),
- instruction on sample preparation for a drying process (methodology),
- required sample size (methodology).

Database
Editor

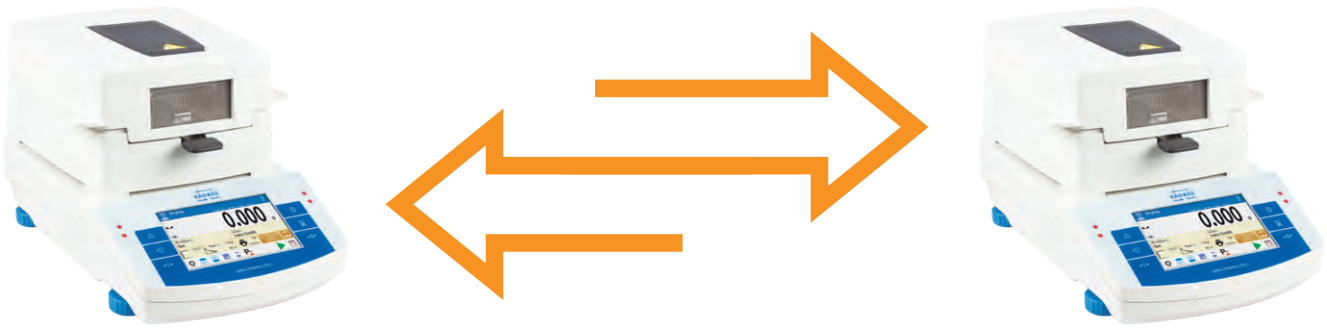
Database Editor PC software is designed to support users dealing with a vast number of samples. Clear structure of the program ensures quickness when it comes to specifying drying parameters and other information relating to a sample. Data is transferred from the software to a moisture analyzer by means of Ethernet () or RS 232 (, R).



Available databases: Products, Weighing Records, Customers, Drying Programs, Drying Process Records, Ambient Conditions, Packaging, Warehouses, Printouts, Universal Variables.



Detailed information concerning the product.



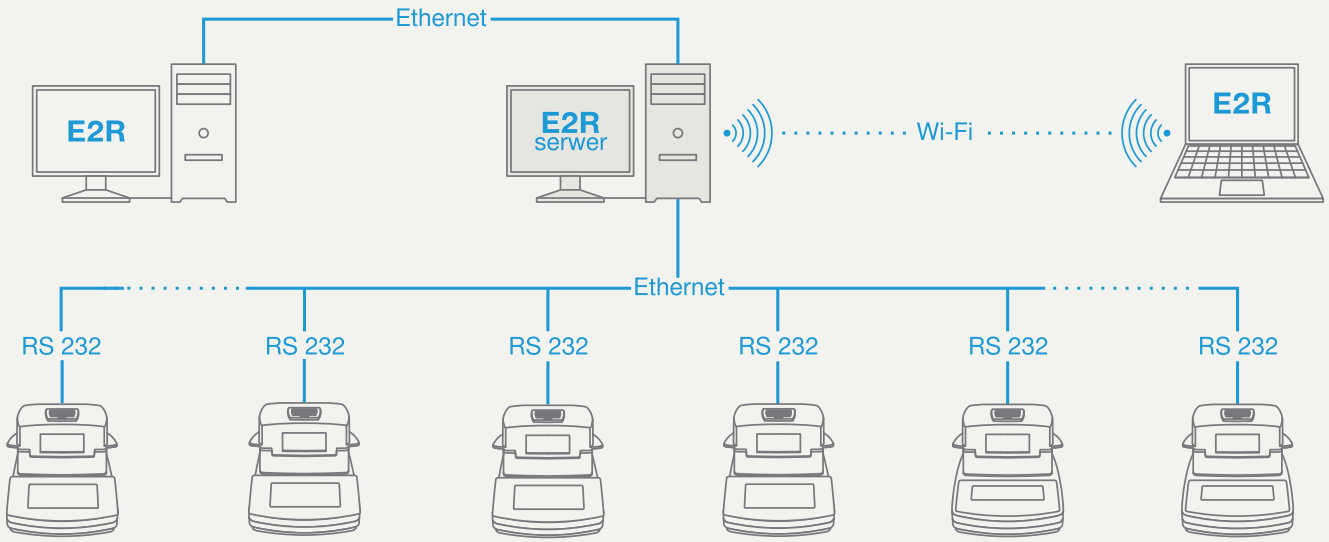
Export / import of databases moisture analyzers

E2R Results Analysis

Databases Drying Processes Ergonomics

Production processes for which moisture content of a particular sample is a crucial parameter, require quick reaction. This may be carried out using so called weighing networks comprising PMV 50 PLUS, MA X2 and MA R moisture analyzers. Each drying process is monitored on-line regardless of workstations location.

E2R Moisture Analyzer PC software is designed to record measurements performed by means of RADWAG moisture analyzers cooperating in a network, using RS 232 and Ethernet interfaces for connection. the software enables monitoring and reporting of collected measurements.



Software functions: on-line monitoring of moisture analyzer operation, possibility of configuring reports and graphs,analysis of data collected from many drying workstations, data protection.

PC Software

RADWAG PC software supports moisture analyzers expanding their functionality.

R-Lab
Scales preview, weighings graphs and statistics graphs.

Database Editor
Readout, databases editing and record of computer stored databases on balance.

Rad Key
Readout of balance data by means of defined Hot Key.

E2R Moisture Analyzers
Record of weighments carried out by moisture analyzers cooperating in a network.

Additional Equipment

- Anti-vibration weighing tables,
- Disposable weighing pans,
- Thermal and dot matrix printers,
- Barcode scanners,
- Control thermometer,
- Water vapor permeability set.

Complete offer is to be found on www.radwag.com website.

E2R Moisture Analyzer is a module of integrated system for managing E2R weighing processes. E2R System comprises various programs ensuring continuous control of balances and their databases together with both, complete managing of the manufacturing process and the process optimisation.

Intended Use and Aplications

Area of Use

Moisture content analysis and dry mass measurement of a particular product are both crucial for various branches of industry and science. Vast area of use and diversity of analyzed samples structure require individual approach to different substances.

Dairy Industry

Samples:
cheese, buttermilk, yoghurt, powdered milk, etc.

Samples are dried directly on a weighing pan or by means of glass fiber filters or silica sand (increasing surfaceof evaporation).

Fruit and Vegetable Industry

Samples:
dried vegetables, fruits and mushroom, nuts etc.

Samples shall be cut into smaller pieces (the analyzed samples cannot be too thick).

Food Industry

Samples:
sugar, flour, pasta, spices, gelatin, etc.

Thin layer of semi-liquid samples shall be distributed on a weighing pan (silica sand or glass fiber filters may be used). Other kinds of samples shall be crushed.

Chemical Industry

Samples:
emulsion, gel and lotions used for cleaning, paints, film, graphite, etc.

Thin layer of semi-liquid samples shall be distributed on a weighing pan (Silica sand or glass fiber filters may be used). Other kinds of samples shall be crushed.

Agricultural Industry

Samples:
grain, seeds, hay, biomass, etc.

Grain needs to be crushed prior drying.

Technical Specification

Microwave Moisture Analyzer

Product Code	Model	Max. capacity	Readability	Heating module
WL-307-0006	**PMV 50.5Y**	50 g	0,1 mg	microvawe radiation emiter

X2 Series

Product Code	Model	Max. capacity	Readability	Heating module
WL-306-0032	**MA 50.X2.A.WH**	50 g	1 mg	halogen
WL-306-0043	**MA 50.X2.IC.A.WH**	50 g	1 mg	halogen
WL-306-0035	**MA 50/1.X2.A.WH**	50 g	0,1 mg	halogen
WL-306-0047	**MA 50/1.X2.IC.A.WH**	50 g	0,1 mg	halogen
WL-306-0021	**MA 50.X2.A**	50 g	1 mg	IR emitter
WL-306-0041	**MA 50.X2.IC.A**	50 g	1 mg	IR emitter
WL-306-0026	**MA 50/1.X2.A**	50 g	0,1 mg	IR emitter
WL-306-0045	**MA 50/1.X2.IC.A**	50 g	0,1 mg	IR emitter
WL-306-0063	**MA 50.X2.A.NS**	50 g	1 mg	metal heater
WL-306-0074	**MA 50.X2.IC.A.NS**	50 g	1 mg	metal heater
WL-306-0075	**MA 50/1.X2.A.NS**	50 g	0,1 mg	metal heater
WL-306-0076	**MA 50/1.X2.IC.A.NS**	50 g	0,1 mg	metal heater
WL-306-0034	**MA 110.X2.A.WH**	110 g	1 mg	halogen
WL-306-0051	**MA 110.X2.IC.A.WH**	110 g	1 mg	halogen
WL-306-0027	**MA 110.X2.A**	110 g	1 mg	IR emitter
WL-306-0049	**MA 110.X2.IC.A**	110 g	1 mg	IR emitter
WL-306-0080	**MA 110.X2.A.NS**	110 g	1 mg	metal heater
WL-306-0081	**MA 110.X2.IC.A.NS**	110 g	1 mg	metal heater
WL-306-0078	**MA 200/1.X2.A.WH**	200 g	0,1 mg	halogen
WL-306-0065	**MA 200/1.X2.IC.A.WH**	200 g	0,1 mg	halogen
WL-306-0061	**MA 200/1.X2.A**	200 g	0,1 mg	IR emitter
WL-306-0062	**MA 200/1.X2.IC.A**	200 g	0,1 mg	IR emitter
WL-306-0077	**MA 200/1.X2.A.NS**	200 g	0,1 mg	metal heater
WL-306-0079	**MA 200/1.X2.IC.A.NS**	200 g	0,1 mg	metal heater
WL-306-0033	**MA 210.X2.A.WH**	210 g	1 mg	halogen
WL-306-0055	**MA 210.X2.IC.A.WH**	210 g	1 mg	halogen
WL-306-0028	**MA 210.X2.A**	210 g	1 mg	IR emitter
WL-306-0053	**MA 210.X2.IC.A**	210 g	1 mg	IR emitter
WL-306-0082	**MA 210.X2.A.NS**	210 g	1 mg	metal heater
WL-306-0083	**MA 210.X2.IC.A.NS**	210 g	1 mg	metal heater

R Series

Product Code	Model	Max. capacity	Readability	Heating module
WL-305-0005	**MA 50.R.WH**	50 g	1 mg	halogen
WL-305-0006	**MA 50/1.R.WH**	50 g	0,1 mg	halogen
WL-305-0001	**MA 50.R**	50 g	1 mg	IR emitter
WL-305-0002	**MA 50/1.R**	50 g	0,1 mg	IR emitter
WL-305-0014	**MA 50.R.NS**	50 g	1 mg	metal heater
WL-305-0039	**MA 50/1.R.NS**	50 g	0,1 mg	metal heater
WL-305-0007	**MA 110.R.WH**	110 g	1 mg	halogen
WL-305-0004	**MA 110.R**	110 g	1 mg	IR emitter
WL-305-0024	**MA 110.R.NS**	110 g	1 mg	metal heater
WL-305-0008	**MA 210.R.WH**	210 g	1 mg	halogen
WL-305-0003	**MA 210.R**	210 g	1 mg	IR emitter
WL-305-0009	**MA 210.R.NS**	210 g	1 mg	metal heater
WL-305-0009	**MA 210.R.NS**	210 g	1 mg	metal heater

PRODUCT CATALOGUE

ADVANCED WEIGHING TECHNOLOGIES

www.radwag.com

MICRO-KIT

www.radwag.com

MICRO-KIT

Set of holders for microscale glassware

Special holders available in RADWAG balances enable weighing of a wide range of microscale glassware. They have been designed to increase ergonomics and minimize the risk of contamination during sample application.

The holders have the ability to tilt the microscale glassware, allowing it to be placed at any angle, depending on the application. the set includes dedicated draft shields that stabilize the measurement conditions in the weighing chamber.

Examples of Application

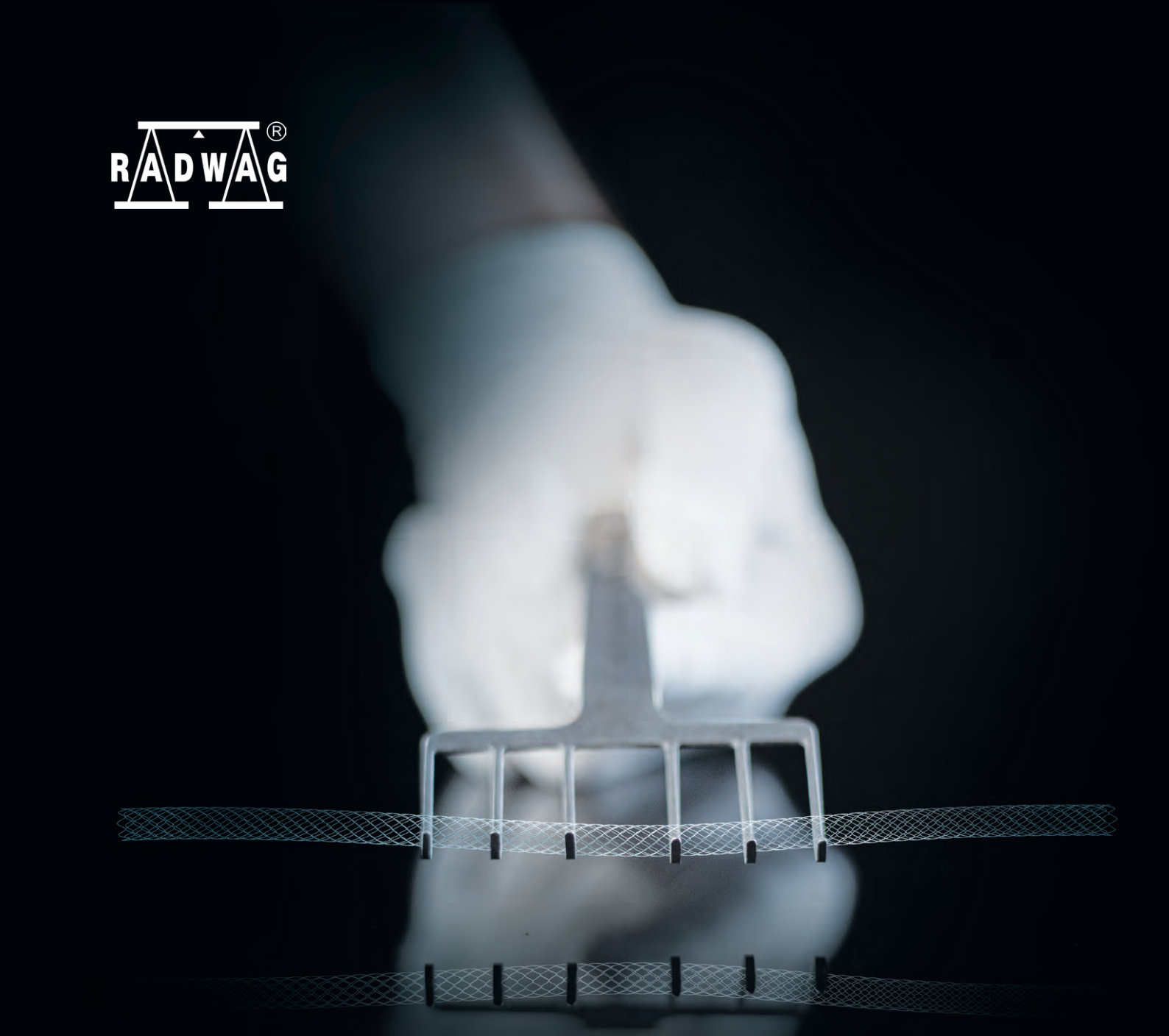
of the microscale glassware holders

The designers did not forget about the special stand, which allows for easy storage of unused holders.

PRODUCT CATALOGUE

ADVANCED WEIGHING TECHNOLOGIES

www.radwag.com



Specialized Stent Weighing Equipment

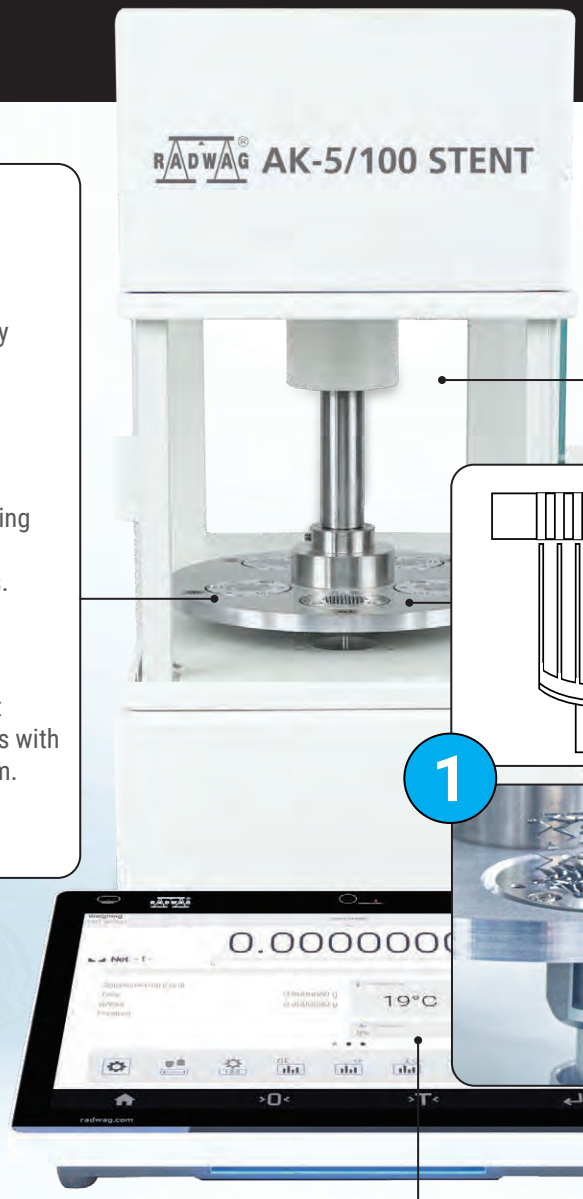
www.radwag.com

AK-5/100 STENT
Automatic Balance for Stents

Automatic Operation
Automatic weighing eliminates error due to human factor, which improves the repeatability of measurements.

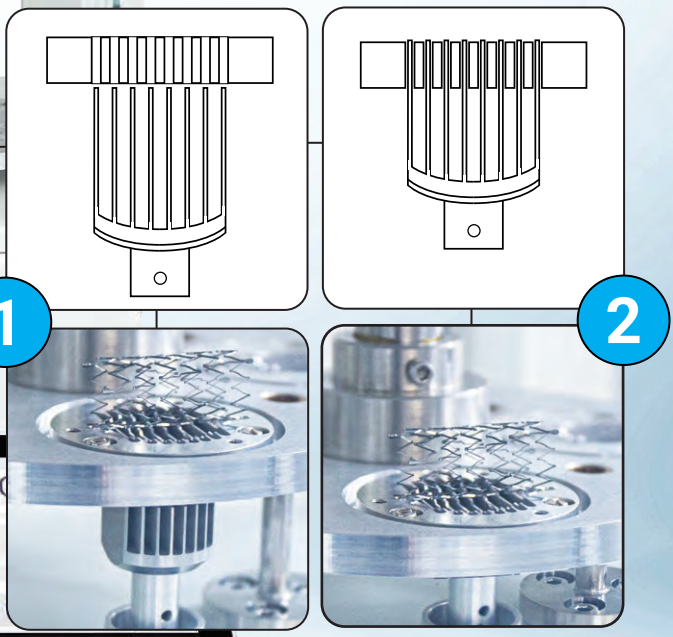
Measurement of the Whole Sample Series
The device enables creating identical test conditions for the entire stent series.

Unique Weighing Pan
Weighing pan of custom design allows convenient weighing of 40 mm stents with a diameter of even 20 mm.



Spacious Chamber for Convenient Operation
In the weighing chamber there are perfect conditions enabling highly precise weighing. the spacious chamber makes loading of the weighing pan with stents comfortable and uncomplicated.

Measurement automation

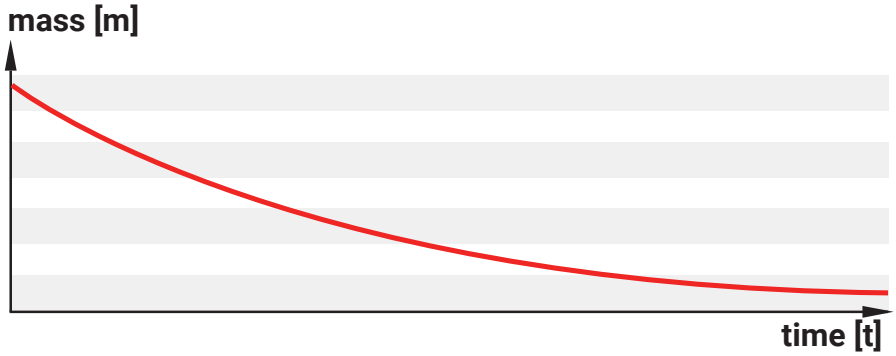


Second to None Accuracy
The AK-5/100 STENT automatic balance for stents operates with the readability of d = 0.1 µg.

Differential Weighing
The AK-5/100 STENT, similarly to other RADWAG balances designed for stent weighing, features a special working mode, which enables analysis of sample mass changes during the technological process.

MASS CHANGES Visualization

Thanks to the special function of the AK-5/100 STENT automatic balance for stents, it is possible to observe changes in stent mass over time.



XA 6.5Y.M.S
Microbalance

Dedicated solution for stent weighing: a special weighing pan with an additional shield, and a stent applicator.

Spacious Chamber
A large weighing hamber is a guarantee of operation ergonomics, and an innovative system controlling door opening and closing ensures smooth and silent door sliding.

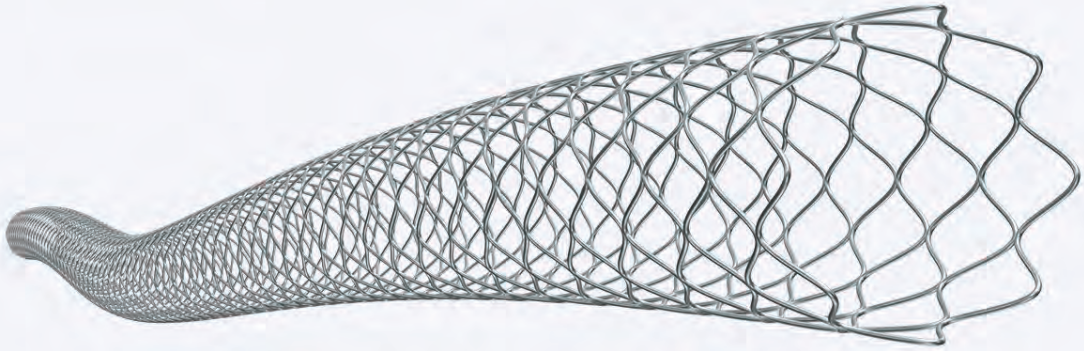
Ease of Cleaning
The complete disassembly of the weighing chamber without the use of tools, the latch-type assembly system for components and the stainless steel weighing pan all make the XA 6.5Y.M.S microbalance easy to clean.

Readability
Smaller stents can be weighed even with a readability of d = 1 µg in the case of the microbalance.

Integrated Antistatic Ionizer
the alternating generation of positive and negative ions leads to an electrostatically inert working environment. the substance with which the stent is covered, when placed in such an environment, also becomes electrostatically inert, so that the weighing process runs smoothly.

Various STENTS Dimensions

RADWAG stent weighing balances enable weighing stents of various dimensions, including:
5.5 × 140 mm, 6 × 60 mm, 8 × 40 mm, 19 × 10 mm, 1.6 × 19 mm



PRODUCT CATALOGUE

ADVANCED WEIGHING TECHNOLOGIES

www.radwag.com

PIPETTES

Cutting-edge measuring equipment
Quick dispensing of small volume liquids
Highly precise dispensing

Pipettes

	RW8-101-20-9	RW8-102-20-9	RW8-103-20-9	RW8-104-20-9	RW8-105-20-9	RW8-106-20-9	RW8-107-20-9
Volume	0.5 µl ÷ 10 µl	2 µl ÷ 20 µl	5 µl ÷ 50 µl	10 µl ÷ 100 µl	20 µl ÷ 200 µl	100 µl ÷ 1000 µl	500 µl ÷ 5000 µl
Error of accuracy (systematic)*	2.5 % / 1.0 %	3.0 % / 0.9 %	2.0 % / 0.6 %	3.0 % / 0.8 %	2.0 % / 0.6 %	2.0 % / 0.6 %	2.0 % / 0.5 %
Error of repeatability (random)**	1.5 % / 0.8 %	2.0 % / 0.4 %	2.0 % / 0.3 %	1.5 % / 0.15 %	0.8 % / 0.15 %	0.7 % / 0.2 %	0.6 % / 0.15 %
Tips	10 µl	300 µl	300 µl	300 µl	300 µl	1000 µl	5000 µl
Colours							

* Error determined as difference between the mean value obtained for a series of 10 measurements and the expected value.
** Error determined as standard deviation for the series of 10 measurements.

AP-12.5Y

Automatic Device for Multichannel Pipette Calibration

Why?

Speed, process automation, cost reduction.

For whom?

**Accredited calibration laboratories,
calibration centres, pipette manufacturers.**

What do you gain?

Time and money.

Calibration of a 12-channel pipette will take 1.5 hours rather than 6 hours.

Semi-automatic levelling system

The AP-12.5Y prompts the user in which direction to level the balance.
This shortens the entire process.

Ergonomic mechanical design

The AP-12.5Y allows you to empty weighing vessels,
and Ambient Light alerts you when they are overfilled.

Full compliance with ISO 8655

The AP-12.5Y software allows pipettes to be calibrated
in accordance with ISO 8655 criteria.

Ambient conditions monitoring

Calibrated THB P and THB W sensors, according to ISO 8655.

Editable pipette and report databases

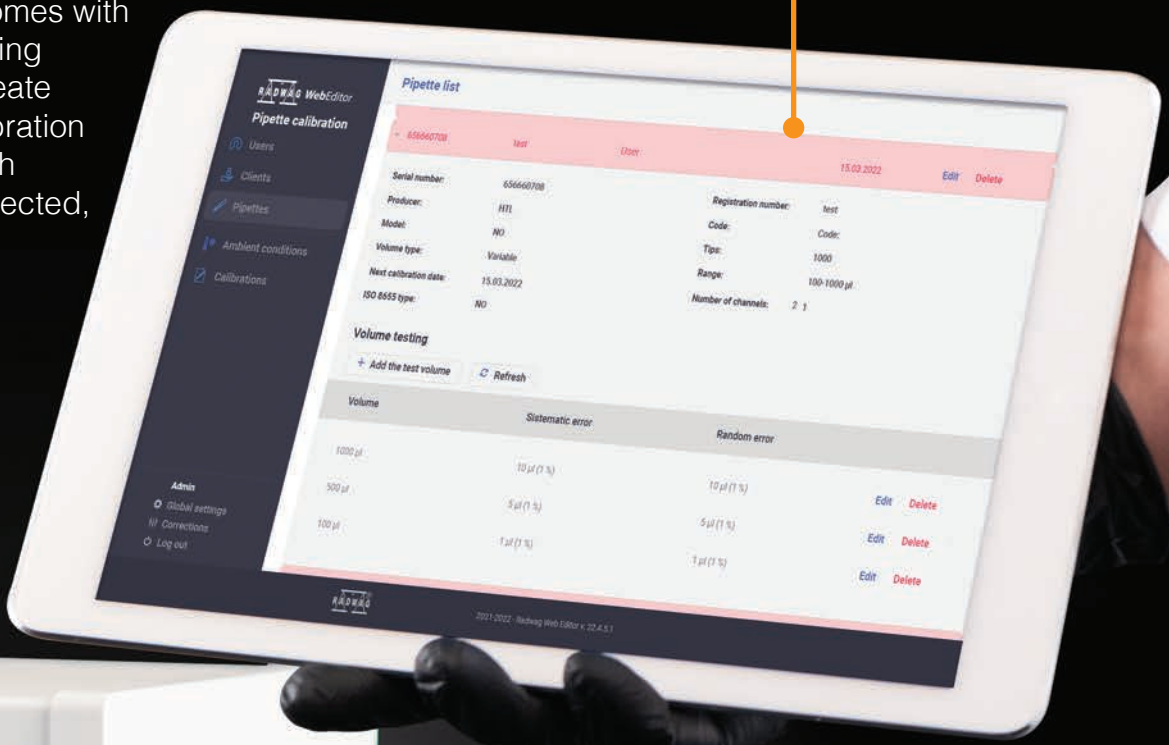
- Database of pipettes with permissible error values by ISO 8655
- Database of pipette calibration reports with measurements and calculated error values for particular points and volumes

Ambient Light

One look and everything's clear.
Ambient Light alerts signal the need to empty
the weighing vessels.

Tablet as standard

The device comes with a tablet, allowing the user to create a pipette calibration order and, with a printer connected, print a report.



Optimised calibration process

Fully automated calibration process, eliminating human errors.

Calibration of 1-channel pipettes

Calibration of 1-channel pipettes is possible by using an additional evaporation ring in place of the case for 12-channel pipettes.

Minimum calibration process time

The AP-12.5Y checks all pipettes in one cycle after emptying a 12-channel pipette.

THB W liquid temperature sensor

The temperature of liquid can be measured using the calibrated THB W sensor.

Pipettes Calibration Workstation

Pipettes calibration workstation is a complex solution characterised with excellent operation ergonomics, which guarantees precise measurements.

Additional, built-in anti-vibration table with a stone top prevents transmission of ground vibrations onto the balance, with this the stabilization time is significantly reduced. Due to separation of the table frame from the anti-vibration construction, the operator-generated vibrations are not transferred onto the balance.

Ambient conditions are monitored with use of a set of measuring probes: temperature, air and distilled water, humidity and atmospheric pressure. The probes monitor workstation's ambient conditions in an ongoing manner, this guarantees reliable weighing results.

Pipettes calibration process is supported by a PC software, "Pipettes", which software due to automation improves the procedure of calibration carried out using gravimetric method accordant with ISO 8655-6 standard. "Pipettes" PC software facilitates calibration reports generation, measurement results archiving, and complex pipettes management, compliant with ISO 10012 standard.

Balances Intended for Pipettes Calibration

The highest measurement accuracy is ensured using microbalances and analytical balances of 5Y series, equipped with a special adapter for pipettes calibration. the adapter is characteristic for an evaporation ring which minimizes occurrence of errors in the course of pipettes calibration. Bothe the instruments, a microbalance and an analytical balance, can be used for performance of standard weighing processes. for this purpose, all the operator needs to do, is to disassemble the adapter.

Characteristics

RADWAG pipettes are modern measuring equipment designed and manufactured in accordance with strict standards concerning manufacturing cleanliness and biodegradability of the product.

The pipettes represent a new line of the ‚liquid handling' product group, designed to quickly batch and transport liquids of small volume. They enable highly precise dispensing, and are characterized by ergonomic, solid design. the pipette mechanism ensures exceptional precision and repeatability with less intense pressure applied onto the push button.

All the pipettes are inspected for conformity with the requirements of PN-EN ISO 8655 standard regarding precise and repeatable dispensing. Each pipette is delivered with a test report featuring measurements results. Calibration certificates, issued by the accredited calibration laboratory, are available on request.

Features

- Large and readable volume display that is fully visible during pipetting;
- Innovative soft grip preventing heat transfer to the pipette inside;
- Low pressure required while using the pipette reduces the risk of RSI;
- Simple click mechanism for changing pipette volume;
- Option of autoclaving the pipette in one piece (disassembling not required). Recommended autoclaving process: 15 minutes at 121°C temperature, 1.05 bar pressure;
- Tip ejector collar is made of PVDF which has a high chemical resistance (also at high temperatures) and low susceptibility to microorganisms expansion;
- Ultra UV resistance;
- Convenient in use tip ejector;
- Compatibility with majority of tips available on the market.

Technical Specification

Automatic Device for Multichannel Pipette Calibration

Product Code	Model	Max. capacity	Readability	Repeatability	Weighing pan dimensions
WL-101-0416	**AP-12.5Y**	52 g	0.01 mg	1.3 µg	ø26 mm & automat

Microbalance for Pipette Calibration

Product Code	Model	Max. capacity	Readability	Repeatability	Weighing pan dimensions
WL-109-0023	**MYA 21.5Y.P**	21 g	1 µg	1 µg	ø26 mm

Product Code	Model	Max. capacity	Readability	Repeatability	Weighing pan dimensions
WL-112-0001	**XA 21.5Y.M.P**	21 g	1 µg	1.3 µg	ø26 mm

Analytical Balance

Product Code	Model	Max. capacity	Readability	Repeatability	Weighing pan dimensions
WL-101-0416	**AS 82/220.X2.P PLUS**	82 / 220 g	0,01 / 0,1 mg	0,01 mg	ø90 & (option) ø85 mm

Professional statistical control
Easy operation
Measurement automation

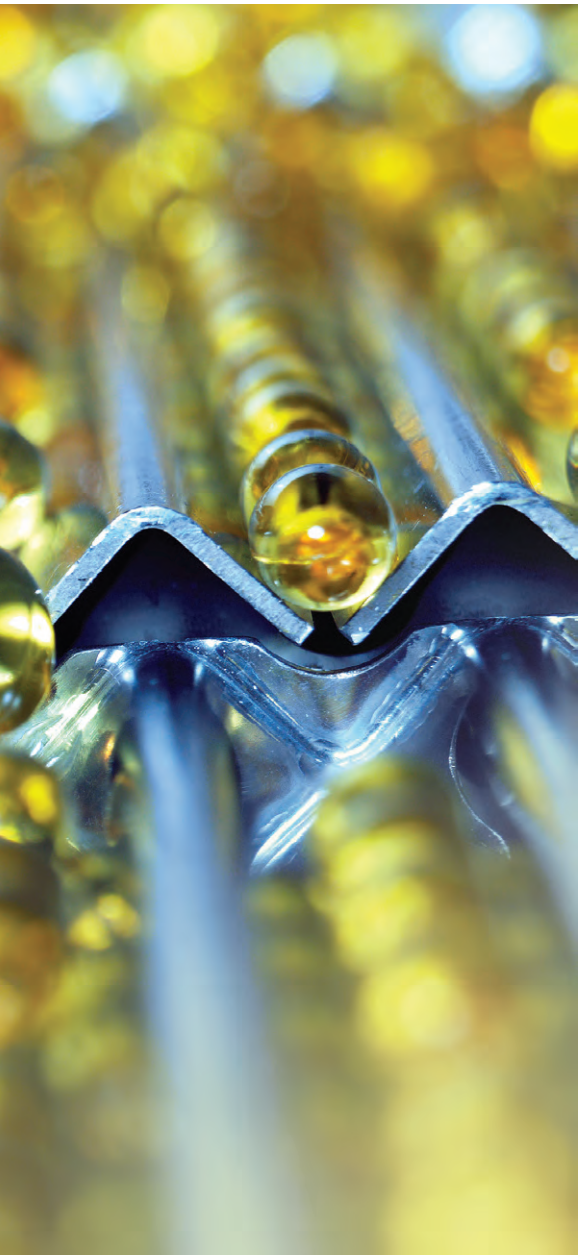
www.radwag.com

PA-04/H Automatic Feeder

CUTTING-EDGE CONTROL SYSTEM FOR PHARMACY

PA-04/H

High Throughput
Easy Cleaning



Intended Use
The automatic feeder is dedicated for automatic dispensing of small objects onto the weighing pan of RADWAG-manufactured balance to which it is connected. the feeder ensures regular feeding of the elements in accordance with determined time intervals.

Operation and Compatibility
The PA-04/H feeder cooperates with XA 5Y analytical balances. Both the feeder and the balance are automated devices. the balance carries out analysis of dosed elements and sends signal to the feeder to dispense subsequent element. the feeder features diodes, signalling its operation, and keypad allowing to control the process. Automatic feeder is equipped with function of automatic emptying of the storage bin.

Vibrating Feeder
Cylindrical vibrating feeder with storage bin enables safe and precise dosing of elements. the storage bin has a conical and stepped shape and is continuously welded. the stainless steel surface of adequate roughness reduces elements grating during dosing process.

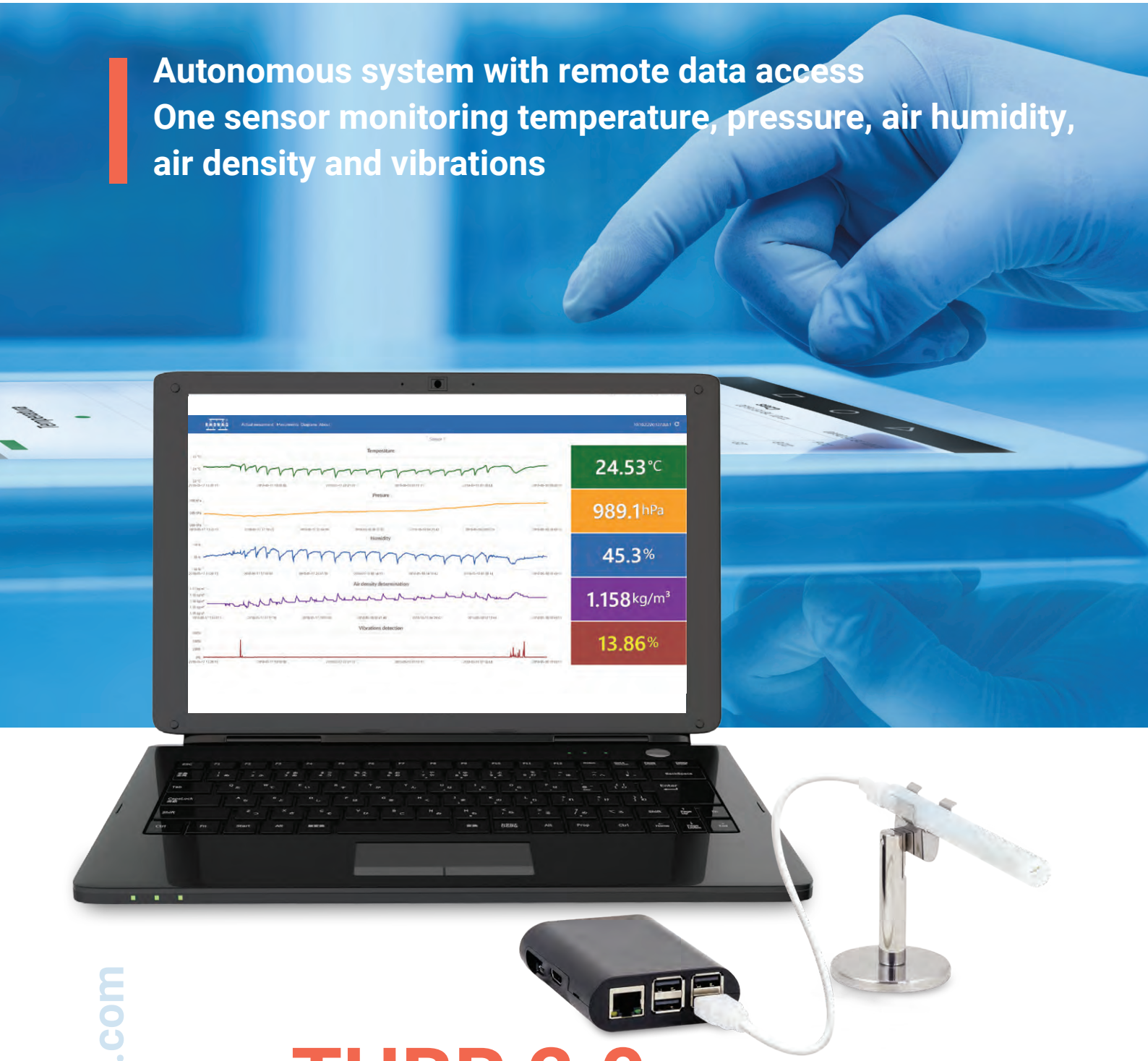
Variety of Applications
The feeder is appropriate for dosing pills of diameter ranging from 3 to 25 mm, round and oblong, as well as details of similar shapes and dimensions.

Design
The device is equipped with powder-coated steel housing and stainless steel cover. the storage bin features transparent lid that allows verifying quantity of remaining elements.

Automatic Feeder

Product Code	Model	Dispensed element dimensions	Feeder diameter	Dispensing speed	Ingress protection
WX-001-0105	**PA-04/H**	ø 3 mm – ø 10 mm, length = 25 mm	ø 180 mm	1 – 15 pcs / min.	IP 34

Autonomous system with remote data access
One sensor monitoring temperature, pressure, air humidity, air density and vibrations



THBR 2.0 System

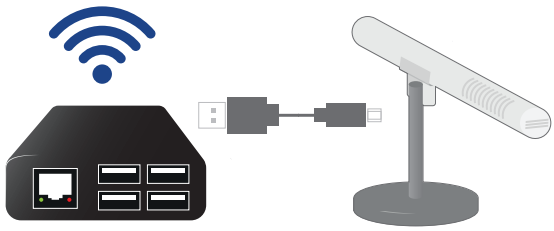
AMBIENT CONDITIONS MONITORING SYSTEM

www.radwag.com

THBR BOX
LOCAL AREA NETWORK

THBR Box has been designed to collect measurements of ambient conditions, store data, send alerts and warnings. the device enables direct display of measured parameters via a mobile app or with use of a computer. This requires either entering an IP address and running a selected web browser, or using HDMI interface.

- 16 GB — Built-in memory
- Reports
- WWW — Access via web browser
- E-mail alerts
- Mobile app



THB/ETH
LOCAL AREA NETWORK

THB/ETH is a solution enabling direct connection of the sensor to ETHERNET. With the option of sensor search by its unique serial number, the user can monitor ambient conditions from any place within local area network.

THB → USB → THB/ETH Converter → LAN → Receiver

THB-R software offers user interface facilitating presentation, archiving and reporting of recorded measurement data plus configuration of measuring devices. it comprises THB Single application, designed to support one sensor, and THB Multi application, intended to support numerous sensors concurrently.

THBR Mobile Application
LOCAL AREA NETWORK

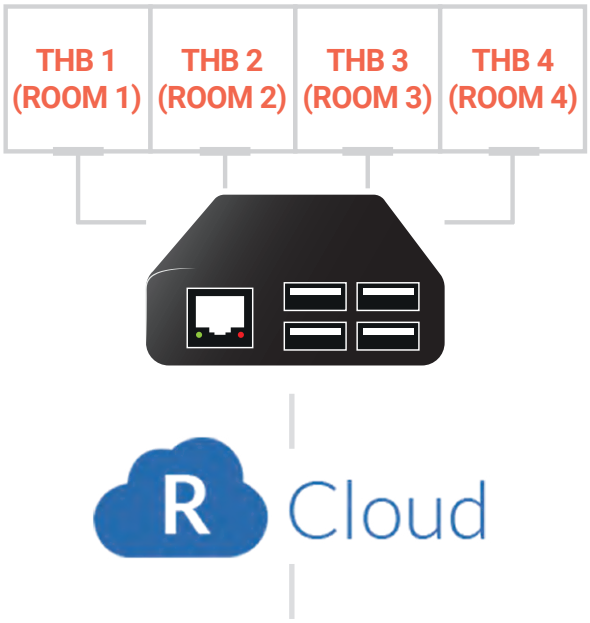
THBR Box recorder can be operated and configured using special THBR mobile app, intended for Android system. the application enables display of real-time measured values of ambient conditions. it stores archive measurements in a form of lists and graphs.

With use of THBR mobile application the user can configure modules names, sensors and both warnings and alerts. This mobile app allows the users to switch between THBR Box recorders and sensors operating in a local area network. Due to an intuitive operation it is possible to easily and quickly access measurements from various devices, and configure them according to individual needs. Monitoring of ambient conditions via THBR interface requires connection with local area network within which the recorder operates.

THBR mobile app can be downloaded from Google Play Store.

R-CLOUD
INTERNET

R-Cloud service offers record and preview of measurement results from few sensors concurrently which can be done from any place in the world with Internet access.



THB + BALANCE
DIRECT CONNECTION

THB S, THB P and THB W sensors may be connected directly to the balance via USB port. in such a case readout of ambient conditions is carried out using the balance display. the sensors cooperate with RADWAG balances of 5Y, WPY, WLY and HY10 series.

THB-R 2.0 System

Absolute Control Precisely Accurate Measurements

THB S – Standard Ambient Conditions Sensor
THB S sensor is a measuring device of standard class that cooperates with a computer
and a weighing device directly or via THBR Box. THB S is used to measure temperature, pressure, air humidity, air density and ground vibrations. Each sensor has its own identification number that is assigned to measurements saved to the database.

THB P – Precise Ambient Conditions Sensor
THB P sensor is a precise device for measurement of ambient conditions. Range of measured parameters for both THB S and THB P sensors is the same, however in case of THB P the parameters are monitored with greater accuracy.

THB W – Liquid Temperature Sensor
THB W sensor is a sensor designed to measure temperature of liquid. Readout of temperature from
THB sensor requires connecting to a computer or THBR Box ambient conditions recorder.
THB W is used at pipettes calibration workstation, it measures water temperature in gravimetric method, which is done in order to determine „Z" coefficient in accordance with ISO 8655.

Results
The measurement results can be observed using:
- Balance display
- Web page (THBR Box)
- Windows OS application: THB Single or THB Multi
- Android system application (THBR Box).

	THB S	THB P	THB W (for liquids)
Measured temperature range	+5 – +45 °C	+5 – +45 °C	+5 – +45 °C
Temperature readability [d]	0.01 ° C	0.001 ° C	0.01 °C
Temperature measurement accuracy	+/- 0.1 °C	+/- 0.1 °C	+/- 0. 1 °C
Measured pressure range	850 -1050 hPa	850 -1050 hPa	–
Pressure readability [d]	0.1 hPa	0.001 hPa	–
Pressure measurement accuracy	1 hPa	1 hPa	–
Measured humidity range	0-100%	0-100%	–
Humidity readability [d]	0.1 %	0.01 %	–
Humidity measurement accuracy	+/- 1.8 %	+/- 1.8 %	–
Operating temperature	+5 – +45 °C	+5 – +45 °C	–
Communication interface	USB 2.0	USB 2.0	USB 2.0
Vibrations detection	YES	YES	–
Air density determination	YES	YES	–

Weighing Tables and Workstations

Anti-vibration weighing workstations for precise weighing under laboratory and industrial conditions

Weighing Tables and Workstations

Granite Anti-Vibration Tables

SAL/STONE/C

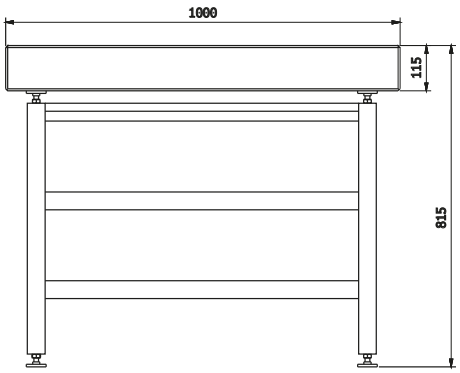
Granite table

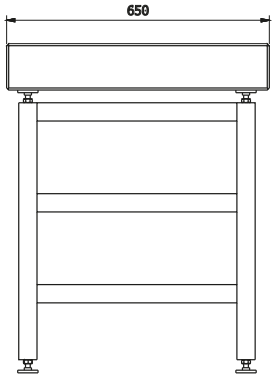
SAL/STONE/H

Stainless steel granite table

The table has been designed to eliminate ground vibrations during the operation of laboratory equipment such as microbalances, analytical balances and others. the working part consists of a table and a stone separated by a vibration damper. the table is equipped with adjustable feet with rubber tips, facilitating table levelling on uneven surfaces. Stability and vibration damping properties, resulting from the significant weight, are the main advantages of the table. the large surface of the tabletop makes it possible to place several balances on it.

The structure of the SAL/STONE/C version is made of powder-coated steel, and in the case of the SAL/STONE/H version - of stainless steel.





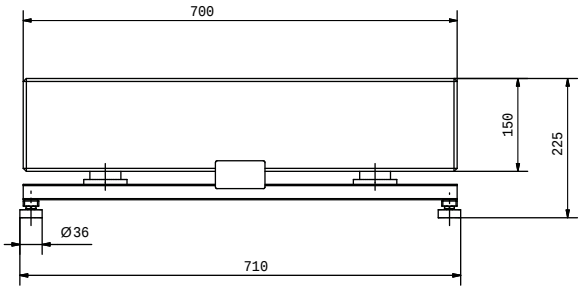
SA/APP/C

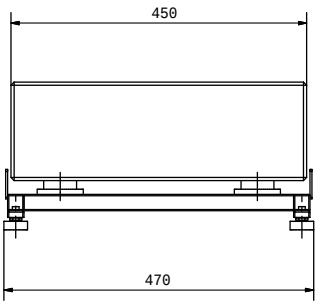
Anti-vibration table for mass comparators

SA/APP/H

Stainless steel anti-vibration table for mass comparators

This anti-vibration table is intended for mass comparators. it is made of powder-coated steel and a massive granite plate placed on top. the table has a safety feature to prevent accidental slipping of the stone, as well as vibration dampening rubbers. Due to low construction, the need to lift large masses to a considerable height is reduced.





Weighing Tables and Workstations

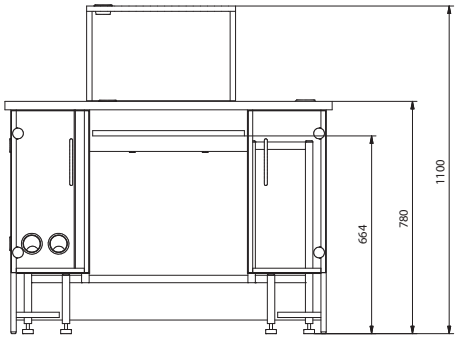
Professional Weighing Workstations

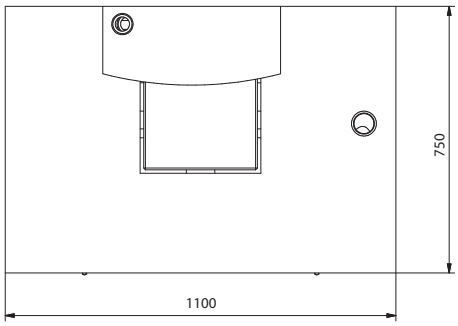
PSW

Professional single weighing workstation

The professional weighing workstation is intended for microbalances and analytical balances. it is equipped with two lockers for a computer and an emergency UPS power supply or a power strip. the workstation also has a sliding shelf for a keyboard and a mouse.
It additionally features ventilation openings and a base for a monitor. the separated anti-vibration part provides protection against vibration, and the feet feature rubber tips to facilitate table levelling on uneven floors.

The structure of the workstation is made of steel, the top of stone, and the working part of MDF.



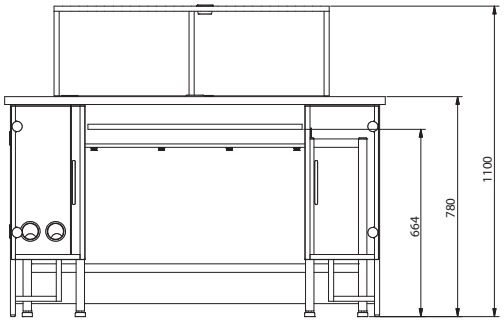


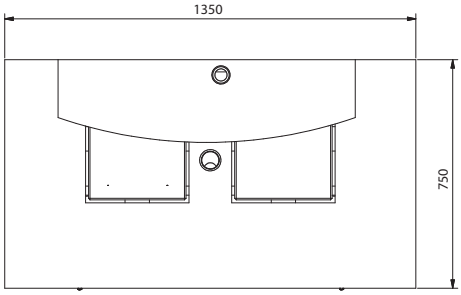
PSW/DUAL

Professional dual weighing workstation

The dual weighing workstation is intended for microbalances and analytical balances. it is equipped with two lockers for a computer and an emergency UPS power supply or a power strip. the workstation also has a sliding shelf for a keyboard and a mouse. it additionally features ventilation openings and a base for a monitor. the separated anti-vibration part provides protection against vibration, and the feet feature rubber tips to facilitate table levelling on uneven floors.

The structure of the workstation is made of steel, the two tabletops that allow two balances to be used simultaneously are made of stone, and the working part of the tables is made of MDF.





Weighing Tables and Workstations

Standard Anti-Vibration Tables

SAL/C PLUS

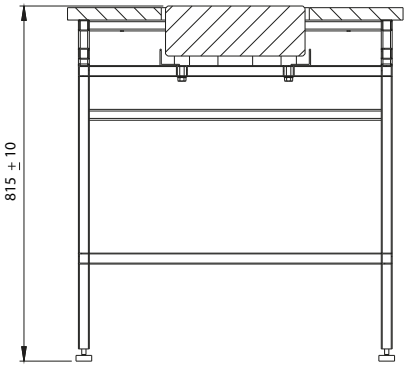
Anti-vibration table for PLUS series balances

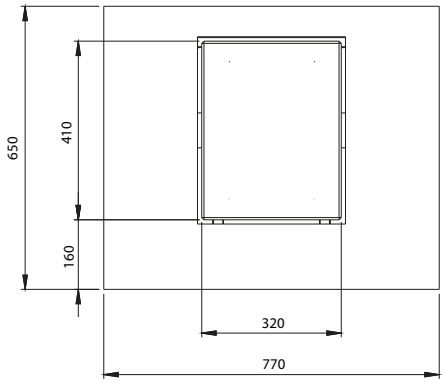
SAL/H PLUS

Stainless laboratory anti-vibration table for PLUS series balances

The anti-vibration table has been designed to eliminate floor vibrations during the operation of PLUS series laboratory balances. it consists of two separate constructions: the outer, designed to isolate the working part, and the inner. the working part includes a table and a stone separated by a vibration damper. the table features a stone top (located at the centre of the table) and adjustable feet with protective rubber tips, facilitating table levelling on uneven surfaces.

The structure of the SAL/R/C version is made of powder-coated steel, and the tabletop is made of MDF. in the case of the SAL/R/H version, the structure and the tabletop are made of acid-resistant stainless steel.





SAL/C

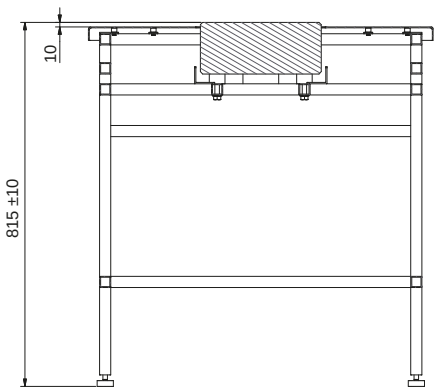
Laboratory anti-vibration table

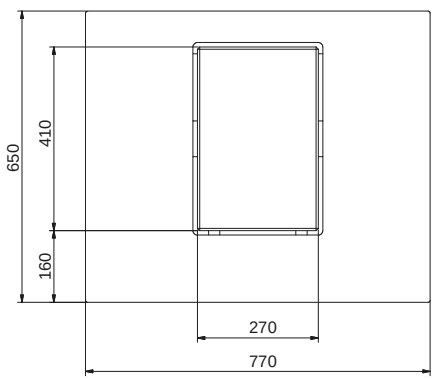
SAL/H

Stainless steel laboratory anti-vibration table

The anti-vibration table has been designed to eliminate ground vibrations during the operation of laboratory equipment such as microbalances, analytical balances and others. it consists of two separate constructions: the outer, designed to isolate the working part, and the inner. the working part includes a table and a stone separated by a vibration damper. the table features a stone top (located at the centre of the table) and adjustable feet with protective rubber tips, facilitating table levelling on uneven surfaces.

The structure of the SAL/C version is made of powder-coated steel, and the tabletop is made of MDF. In the case of the SAL/H version, the structure and the tabletop are made of acid-resistant stainless steel.





Weighing Tables and Workstations

Standard Anti-Vibration Tables

SAP/C

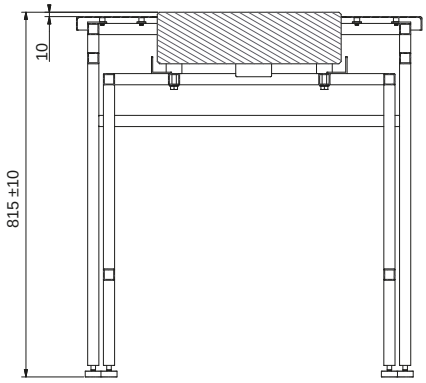
Industrial anti-vibration table

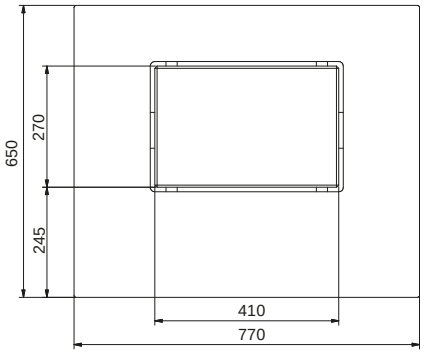
SAP/H

Stainless steel industrial anti-vibration table

The anti-vibration table has been designed to eliminate floor vibrations during the operation of industrial scales. it consists of two separate constructions: the outer, designed to isolate the working part, and the inner. the working part includes a table and a stone separated by a vibration damper. the table features a large stone top and adjustable feet with protective rubber tips, facilitating table levelling on uneven surfaces.

The structure of the SAP/C version is made of powder-coated steel, and the tabletop is made of MDF. In the case of the SAP/H version, the structure and the tabletop are made of acid-resistant stainless steel.



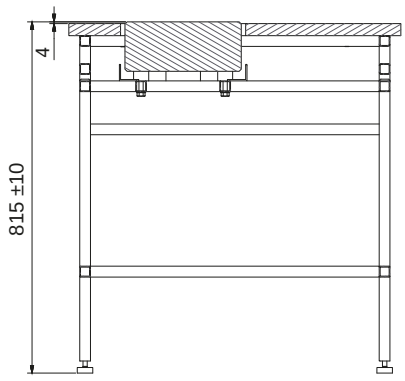


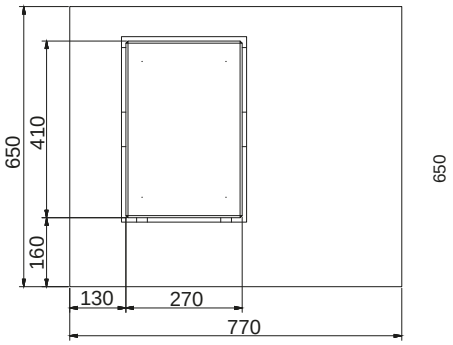
SAL/T

Steel Anti-Vibration Table for PA-04/H 2 900 Automatic Feeder

The anti-vibration table has been designed to eliminate ground vibrations during the operation of automatic feeder. it consists of two separate constructions: the outer, designed to isolate the working part, and the inner. the working part includes a table and a stone separated by a vibration damper. the table features a stone top (located on the left side of the table) and adjustable feet with protective rubber tips, facilitating table levelling on uneven surfaces.

The structure of the SAL/L/C version is made of powder-coated steel, and the top is made of HPL board.





Technical Specification

Anti-Vibration Table for PLUS Series Balances

Product Code	Model	NET weight	Construction	Load-bearing capacity	Dimensions (Length x Width x Height)
WX-001-0156	**SAL/C/PLUS**	table 30 kg & stone 40 kg	mild steel St3S	40 kg	770 x 650 x 815±10 mm
WX-001-0155	**SAL/H/PLUS**	table 30 kg & stone 40 kg	stainless steel	40 kg	770 x 650 x 815±10 mm

Laboratory Anti-Vibration Table

Product Code	Model	NET weight	Construction	Load-bearing capacity	Dimensions (Length x Width x Height)
WX-001-0076	**SAL/C**	table 30 kg & stone 34 kg	mild steel St3S	40 kg	770 x 650 x 815±10 mm
WX-001-0077	**SAL/H**	table 30 kg & stone 34 kg	stainless steel	40 kg	770 x 650 x 815±10 mm

Granite Anti-Vibration Tables

Product Code	Model	NET weight	Construction	Load-bearing capacity	Dimensions (Length x Width x Height)
WX-001-0078	**SAL/STONE/C**	table 25 kg & stone 190 kg	mild steel St3S	150 kg	1000 x 650 x 815 mm
WX-001-0079	**SAL/STONE/H**	table 25 kg & stone 190 kg	stainless steel	150 kg	1000 x 650 x 815 mm

Industrial Anti-Vibration Table

Product Code	Model	NET weight	Construction	Load-bearing capacity	Dimensions (Length x Width x Height)
WX-004-0145	**SAP/C**	table 28 kg & stone 34 kg	mild steel St3S	40 kg	770 x 650 x 815±10 mm
WX-004-0146	**SAP/H**	table 30 kg & stone 34 kg	stainless steel	40 kg	770 x 650 x 815±10 mm

Anti-Vibration Table for Mass Comparators

Product Code	Model	NET weight	Construction	Load-bearing capacity	Dimensions (Length x Width x Height)
WX-002-0039	**SA/APP/C**	table 15 kg & stone 130 kg	mild steel St3S	150 kg	700 x 450 x 225 mm
WX-002-0040	**SA/APP/H**	table 15 kg & stone 130 kg	stainless steel	150 kg	700 x 450 x 225 mm

Steel Anti-Vibration Table for PA-04/H Automatic Feeder

Product Code	Model	NET weight	Construction	Load-bearing capacity	Dimensions (Length x Width x Height)
WX-001-0107	**SAL/T**	table 30 kg & stone 34 kg	mild steel St3S	40 kg	770 x 650 x 815±10 mm

Professional Single Weighing Workstation

Product Code	Model	NET weight	Construction	Load-bearing capacity	Dimensions (Length x Width x Height)
WX-001-0020	**PSW**	table 110 kg & stone 40 kg	-	-	1100 x 750 x 1100 mm

Professional Dual Weighing Workstation

Product Code	Model	NET weight	Construction	Load-bearing capacity	Dimensions (Length x Width x Height)
WX-001-0402	**PSW/DUA**	table 140 kg & stone 80 kg	-	-	1350 x 750 x 1100 mm

PRODUCT CATALOGUE

ADVANCED WEIGHING TECHNOLOGIES

www.radwag.com

HRP High Resolution Scales

[d] down to 0.02 g
[Max] up to 2 000 kg

High Maximum Capacity and Accuracy in a Single Device

On the large weighing pan of an HRP scale, you can weigh a load of 150 kg with a readability of 1 g and impressive repeatability.

Fast and Stable

The scale displays the final result even in one second.

Parameter Stability Over Time and After Transport

Retain the correct metrological parameters even after prolonged, intensive use and transport of the scale due to its resistant and robust mechanical design.

Maximum Robustness

- Platforms with IP 67,
- Additional sealing elements protect against dust, dirt, and moisture,
- Can be cleaned with a pressure washer.

Weighing Pan Dimensions Adapted to the Accuracy of the Balance

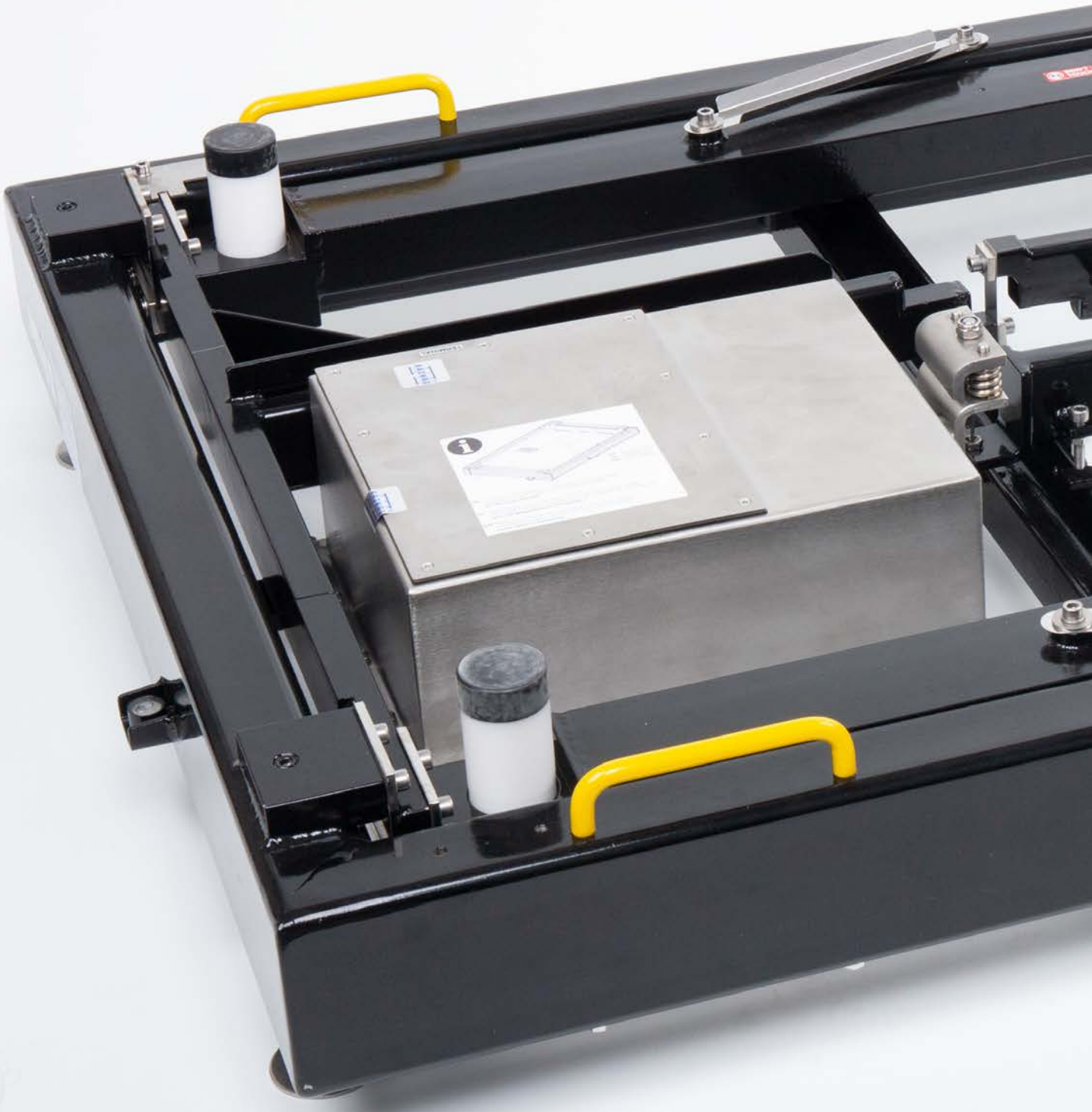
Weigh with the highest readability of 0.02 g on the 360 x 280 mm weighing pan and with a readability of 20 g on the 1,250 x 1,000 mm weighing pan.

Minimum Eccentricity Error Over the Entire Range

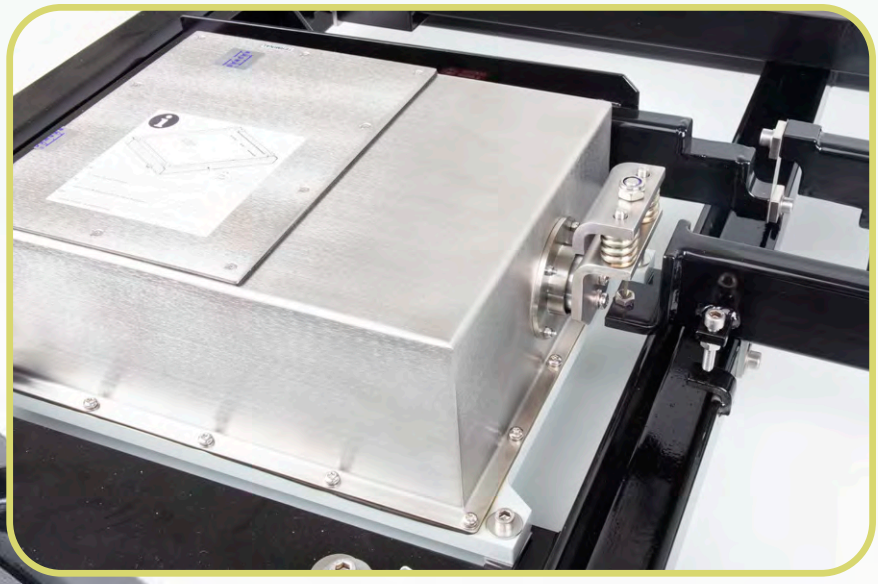
On the HRP scales, you can also weigh irregularly shaped items with a centre of gravity significantly displaced from the weighing pan axis.

New HRP Platform

- Readability of 0.01 g at 10 kg maximum capacity and 0,2 g at 120 kg maximum capacity,
- Repeatability down to 0.01 g,
- Higher resistance to changes in ambient conditions.
- The platforms are so robust that they can be cleaned with a pressure washer,
- Transport protection that stiffens the structure during transport, eliminating any unwanted stresses,
- Platforms of IP 67.



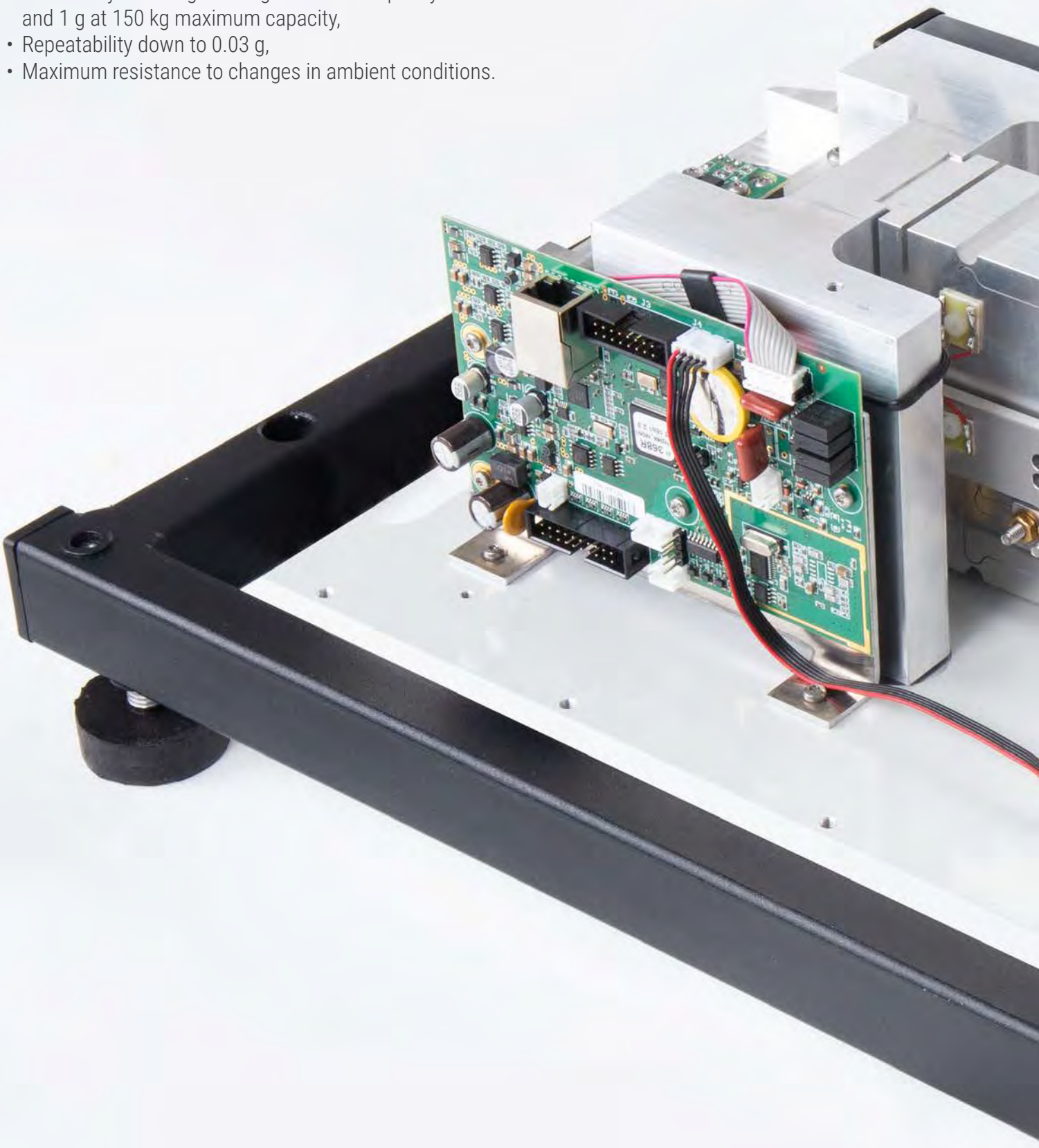
Measuring system based on MONOBLOCK® technology

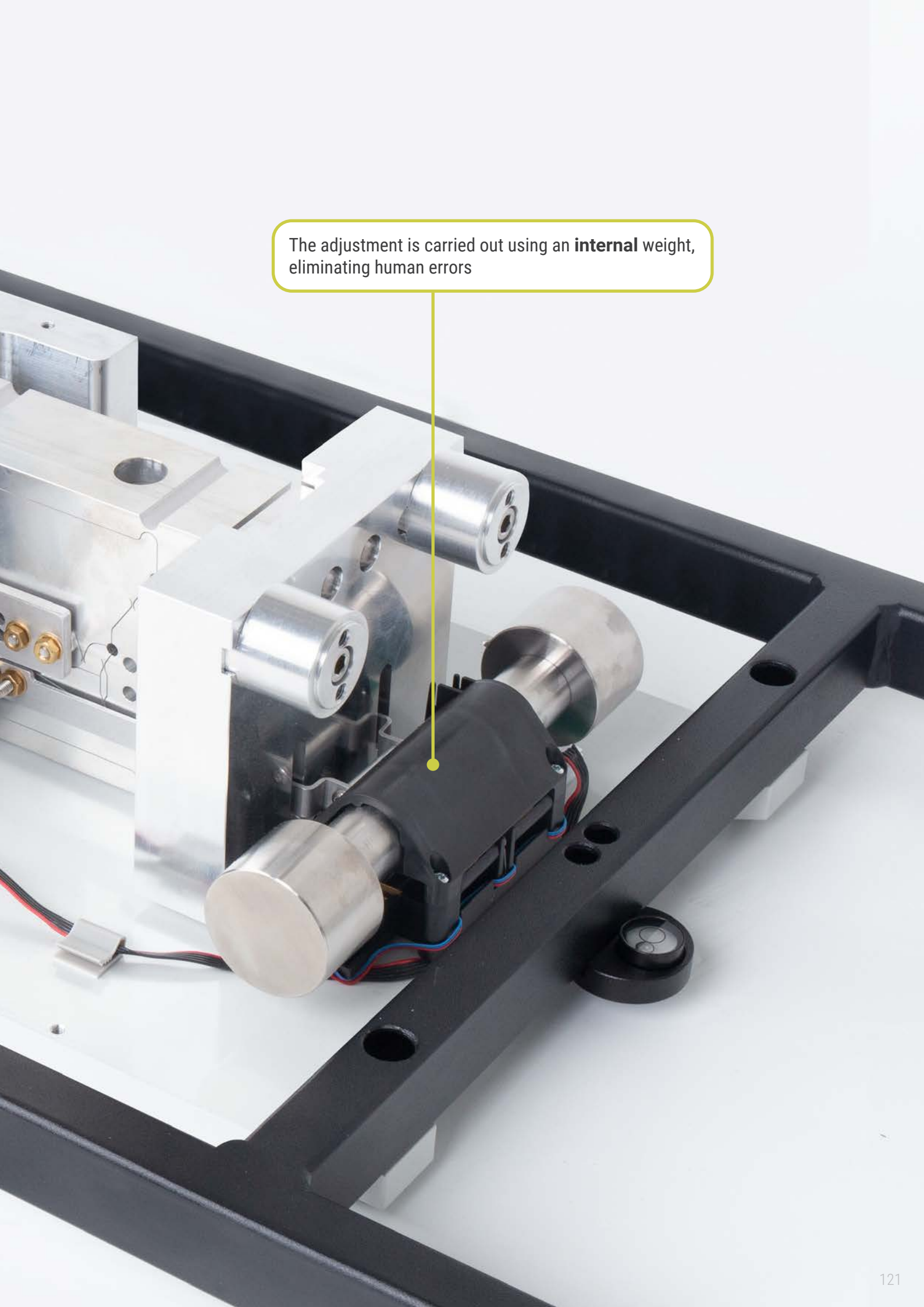


Platforms with a maximum capacity starting at 300 kg include transport handles, which makes them easy to move.

New, Improved RADWAG MONOBLOCK®

- Readability of 0.02 g at 10 kg maximum capacity and 1 g at 150 kg maximum capacity,
- Repeatability down to 0.03 g,
- Maximum resistance to changes in ambient conditions.




The adjustment is carried out using an **internal** weight, eliminating human errors

High Resolution Scales HY10.HRP

The PUE HY10 terminal features:

- 10.1”, graphic, colour display,
- touch-sensitive keypad,
- stainless steel housing,
- IP 68/69,
- communication interfaces such as: RS 232 (2), USB (2), Ethernet, IN/OUT (4),
- optional extra modules such as: Wi-Fi, RS 485, Profibus, Profinet, analog output module, IN/OUT (12).


0.00

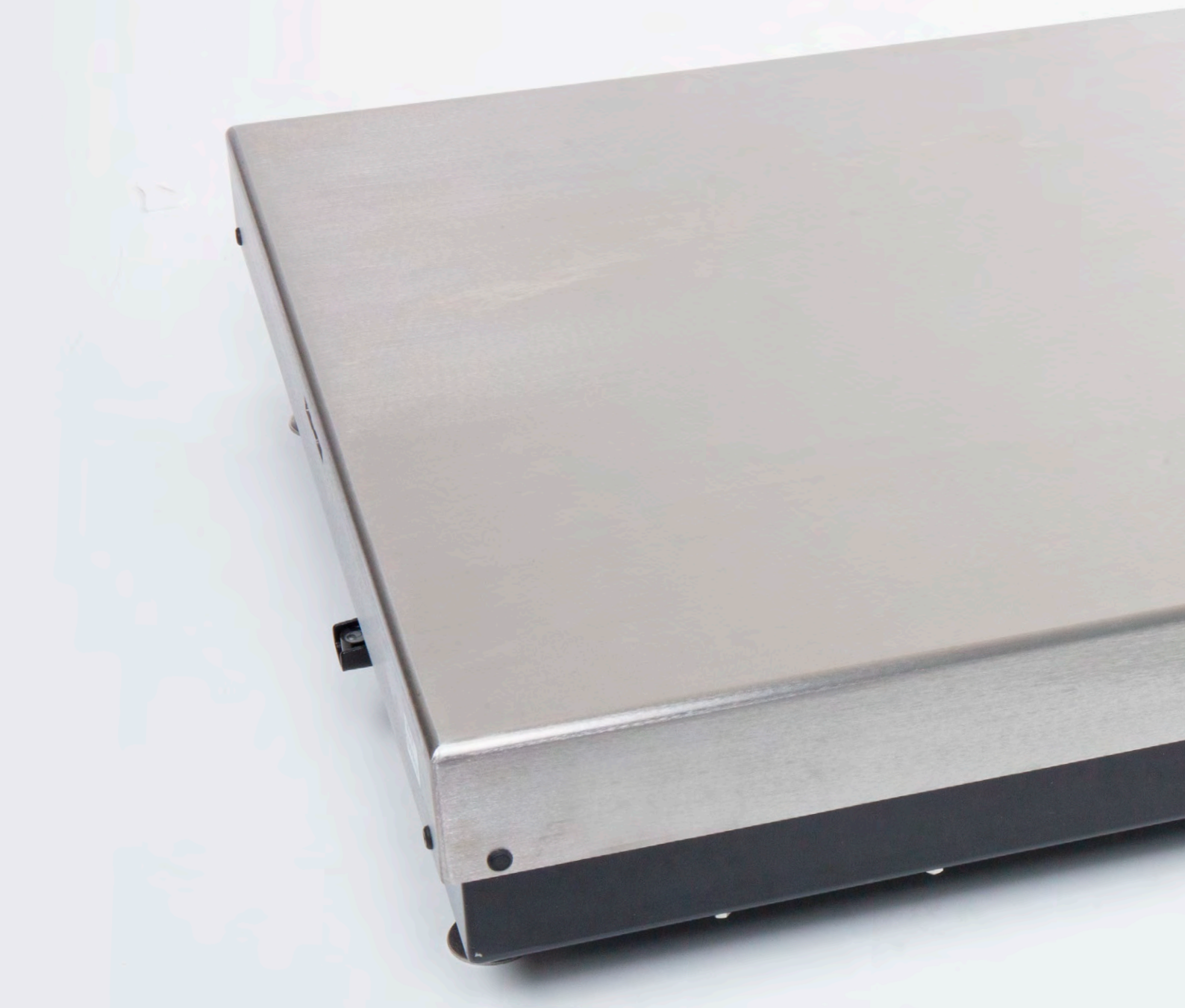

0.0


RADWAG
0.0 g
Product: Pumice
Package: None
Lot number: 2486
Batch number: st234
Tare: 0g
Gross: 0g
Number: 19
Total: 1865g
Average: 981.894736842105
Threshold: OK

High Resolution Scales PUE 7.1.HRP

The PUE 7.1 terminal features:

- 5.7”, resistive, colour display,
- touch-sensitive keypad,
- ABS plastic housing,
- IP 43,
- communication interfaces such as: RS 232 (2), USB-A (2), Ethernet, IN/OUT (4), Wi-Fi,
- optional extra modules such as: module of an additional A/D DP6 converter.



Technical Specification

HY10 Terminal

Weighing Pan Dimensions - 360×280 mm

Product Code	Model	Max. capacity	Readability	Repeatability
WP-330-0036	**HY10.10.HRP**	10 kg	0.02 g	0.03 g
WP-330-0010	**HY10.16.HRP**	16 kg	0.1 g	0.1 g
WP-330-0033	**HY10.16.HRP.M2.1**	16 kg	0.1 g	0.1 g
WP-330-0034	**HY10.16.HRP.M2.2**	16 kg	1 g	0.3 g
WP-330-1009	**HY10.16.HRP.M3**	5 / 10 / 16 kg	0.5 / 1 / 2 g	0.15 / 0.3 / 0.6 g
WP-330-0009	**HY10.32.HRP**	32 kg	0.1 g	0.1 g
WP-330-0015	**HY10.32.HRP.M2.1**	32 kg	0.1 g	0.1 g
WP-330-0016	**HY10.32.HRP.M2.2**	32 kg	2 g	0.6 g
WP-330-1001	**HY10.32.HRP.M3**	10 / 20 / 32 kg	1 / 2 / 5 g	0.3 / 0.6 / 1.5 g
WP-340-0037	**HY10.10.HRP.H**	10 kg	0.02 g	0.03 g
WP-340-0001	**HY10.16.HRP.H**	16 kg	0.1 g	0.1 g
WP-340-0029	**HY10.16.HRP.H.M2.1**	16 kg	0.1 g	0.1 g
WP-340-0030	**HY10.16.HRP.H.M2.2**	16 kg	1 g	0.3 g
WP-340-1010	**HY10.16.HRP.H.M3**	5 / 10 / 16 kg	0.5 / 1 / 2 g	0.15 / 0.3 / 0.6 g
WP-340-0002	**HY10.32.HRP.H**	32 kg	0.1 g	0.1 g
WP-340-0013	**HY10.32.HRP.H.M2.1**	32 kg	0.1 g	0.1 g
WP-340-0014	**HY10.32.HRP.H.M2.2**	32 kg	2 g	0.6 g
WP-340-1001	**HY10.32.HRP.H.M3**	10 / 20 / 32 kg	1 / 2 / 5 g	0.3 / 0.6 / 1.5 g

Weighing Pan Dimensions - 500×400 mm

Product Code	Model	Max. capacity	Readability	Repeatability
WP-330-0001	**HY10.62.HRP**	62 kg	0.5 g	0.3 g
WP-330-0017	**HY10.62.HRP.M2.1**	62 kg	1 g	0.3 g
WP-330-0018	**HY10.62.HRP.M2.2**	62 kg	2 g	0.6 g
WP-330-1002	**HY10.62.HRP.M3**	20 / 50 / 62 kg	2 / 5 / 10 g	0.6 / 1.5 / 3 g
WP-330-0007	**HY10.120.HRP**	120 kg	0.5 g	0.3 g
WP-330-0019	**HY10.120.HRP.M2.1**	120 kg	1 g	0.3 g
WP-330-0020	**HY10.120.HRP.M2.2**	120 kg	2 g	0.6 g
WP-330-1003	**HY10.120.HRP.M3**	50 / 100 / 120 kg	2 / 5 / 10 g	0.6 / 1.5 / 3 g
WP-330-0038	**HY10.150.HRP**	150 kg	1 g	0.6 g
WP-330-0039	**HY10.150.HRP.M2.1**	150 kg	1 g	0.6 g
WP-330-0040	**HY10.150.HRP.M2.2**	150 kg	5 g	1.5 g
WP-330-1010	**HY10.150.HRP.M3**	50 / 100 / 150 kg	5 / 10 / 20 g	1.5 / 3 / 6 g
WP-340-0003	**HY10.62.HRP.H**	62 kg	0.5 g	0.3 g
WP-340-0015	**HY10.62.HRP.H.M2.1**	62 kg	1 g	0.3 g
WP-340-0016	**HY10.62.HRP.H.M2.2**	62 kg	2 g	0.6 g
WP-340-1002	**HY10.62.HRP.H.M3**	20 / 50 / 62 kg	2 / 5 / 10 g	0.6 / 1.5 / 3 g
WP-340-0009	**HY10.120.HRP.H**	120 kg	0.5 g	0.3 g
WP-340-0017	**HY10.120.HRP.H.M2.1**	120 kg	1 g	0.3 g
WP-340-0018	**HY10.120.HRP.H.M2.2**	120 kg	2 g	0.6 g
WP-340-1003	**HY10.120.HRP.H.M3**	50 / 100 / 120 kg	2 / 5 / 10 g	0.6 / 1.5 / 3 g
WP-340-0042	**HY10.150.HRP.H**	150 kg	1 g	0.6 g
WP-340-0043	**HY10.150.HRP.H.M2.1**	150 kg	1 g	0.6 g
WP-340-0044	**HY10.150.HRP.H.M2.2**	150 kg	5 g	1.5 g
WP-340-1012	**HY10.150.HRP.H.M3**	50 / 100 / 150 kg	5 / 10 / 20 g	1.5 / 3 / 6 g

Weighing Pan Dimensions - 800×600 mm

Product Code	Model	Max. capacity	Readability	Repeatability
WP-330-0002	**HY10.150.1.HRP**	150 kg	1 g	1.5 g
WP-330-0021	**HY10.150.1.HRP.M2.1**	150 kg	1 g	1.5 g
WP-330-0022	**HY10.150.1.HRP.M2.2**	150 kg	5 g	1.5 g
WP-330-1004	**HY10.150.1.HRP.M3**	50 / 100 / 150 kg	5 / 10 / 20 g	1.5 / 3 / 6 g
WP-330-0003	**HY10.300.HRP**	300 kg	1 g	3 g
WP-330-0023	**HY10.300.HRP.M2.1**	300 kg	1 g	3 g
WP-330-0024	**HY10.300.HRP.M2.2**	300 kg	20 g	6 g
WP-330-1005	**HY10.300.HRP.M3**	100 / 200 / 300 kg	10 / 20 / 50 g	3 / 6 / 15 g
WP-340-0004	**HY10.150.1.HRP.H**	150 kg	1 g	1.5 g
WP-340-0019	**HY10.150.1.HRP.H.M2.1**	150 kg	1 g	1.5 g
WP-340-0020	**HY10.150.1.HRP.H.M2.2**	150 kg	5 g	1.5 g
WP-340-1004	**HY10.150.1.HRP.H.M3**	50 / 100 / 150 kg	5 / 10 / 20 g	1.5 / 3 / 6 g
WP-340-0005	**HY10.300.HRP.H**	300 kg	1 g	3 g
WP-340-0021	**HY10.300.HRP.H.M2.1**	300 kg	1 g	3 g
WP-340-0022	**HY10.300.HRP.H.M2.2**	300 kg	20 g	6 g
WP-340-1005	**HY10.300.HRP.H.M3**	100 / 200 / 300 kg	10 / 20 / 50 g	3 / 6 / 15 g

Weighing Pan Dimensions - 1000×800 mm

Product Code	Model	Max. capacity	Readability	Repeatability
WP-330-0004	**HY10.300.1.HRP**	300 kg	1 g	3 g
WP-330-0025	**HY10.300.1.HRP.M2.1**	300 kg	1 g	3 g
WP-330-0026	**HY10.300.1.HRP.M2.2**	300 kg	20 g	6 g
WP-330-1006	**HY10.300.1.HRP.M3**	100 / 200 / 300 kg	10 / 20 / 50 g	3 / 6 / 15 g
WP-330-0005	**HY10.600.HRP**	600 kg	5 g	7.5 g
WP-330-0027	**HY10.600.HRP.M2.1**	600 kg	10 g	7.5 g
WP-330-0028	**HY10.600.HRP.M2.2**	600 kg	20 g	7.5 g
WP-330-1007	**HY10.600.HRP.M3**	200 / 500 / 600 kg	20 / 50 / 100 g	7.5 / 15 / 30 g
WP-330-1008	**HY10.1100.HRP.M3**	200 / 500 / 1000 kg	20 / 50 / 100 g	15 / 15 / 30 g
WP-330-0006	**HY10.1100.HRP**	1100 kg	10 g	15 g
WP-330-0031	**HY10.1100.HRP.M2.1**	1100 kg	10 g	15 g
WP-330-0032	**HY10.1100.HRP.M2.2**	1100 kg	50 g	15 g
WP-340-0006	**HY10.300.1.HRP.H**	300 kg	1 g	3 g
WP-340-0023	**HY10.300.1.HRP.H.M2.1**	300 kg	1 g	3 g
WP-340-0024	**HY10.300.1.HRP.H.M2.2**	300 kg	20 g	6 g
WP-340-1006	**HY10.300.1.HRP.H.M3**	100 / 200 / 300 kg	10 / 20 / 50 g	3 / 6 / 15 g
WP-340-0007	**HY10.600.HRP.H**	600 kg	5 g	7.5 g
WP-340-0025	**HY10.600.HRP.H.M2.1**	600 kg	10 g	7.5 g
WP-340-0026	**HY10.600.HRP.H.M2.2**	600 kg	20 g	7.5 g
WP-340-1007	**HY10.600.HRP.H.M3**	200 / 500 / 600 kg	20 / 50 / 100 g	7.5 / 15 / 30 g
WP-340-1009	**HY10.1100.HRP.H.M3**	200 / 500 / 1000 kg	20 / 50 / 100 g	15 / 15 / 30 g
WP-340-0008	**HY10.1100.HRP.H**	1100 kg	10 g	15 g
WP-340-0027	**HY10.1100.HRP.H.M2.1**	1100 kg	10 g	15 g
WP-340-0028	**HY10.1100.HRP.H.M2.2**	1100 kg	50 g	15 g

Weighing Pan Dimensions - 1250×1000 mm

Product Code	Model	Max. capacity	Readability	Repeatability
WP-340-0012	**HY10.2000.HRP.H**	2000 kg	20 g	30 g

Technical Specification

PUE 7.1 Terminal

Weighing Pan Dimensions - 360×280 mm

Product Code	Model	Max. capacity	Readability	Repeatability
WP-350-0048	**PUE 7.1.10.HRP**	10 kg	0.02 g	0.03 g
WP-350-0001	**PUE 7.1.16.HRP**	16 kg	0.1 g	0.1 g
WP-350-0037	**PUE 7.1.16.HRP.M2.1**	16 kg	0.1 g	0.1 g
WP-350-0038	**PUE 7.1.16.HRP.M2.2**	16 kg	1 g	0.3 g
WP-350-1009	**PUE 7.1.16.HRP.M3**	5 / 10 / 16 kg	0.5 / 1 / 2 g	0.15 / 0.3 / 0.6 g
WP-350-0002	**PUE 7.1.32.HRP**	32 kg	0.1 g	0.1 g
WP-350-0020	**PUE 7.1.32.HRP.M2.1**	32 kg	0.1 g	0.1 g
WP-350-0021	**PUE 7.1.32.HRP.M2.2**	32 kg	2 g	0.3 g
WP-350-1001	**PUE 7.1.32.HRP.M3**	10 / 20 / 32 kg	1 / 2 / 5 g	0.15 / 0.3 / 0.6 g

Weighing Pan Dimensions - 500×400 mm

Product Code	Model	Max. capacity	Readability	Repeatability
WP-350-0010	**PUE 7.1.62.HRP**	62 kg	0.5 g	0.3 g
WP-350-0022	**PUE 7.1.62.HRP.M2.1**	62 kg	1 g	0.3 g
WP-350-0023	**PUE 7.1.62.HRP.M2.2**	62 kg	2 g	0.6 g
WP-350-1002	**PUE 7.1.62.HRP.M3**	20 / 50 / 62 kg	2 / 5 / 10 g	0.6 / 1.5 / 3 g
WP-350-0004	**PUE 7.1.120.HRP**	120 kg	0.5 g	0.3 g
WP-350-0024	**PUE 7.1.120.HRP.M2.1**	120 kg	1 g	0.3 g
WP-350-0025	**PUE 7.1.120.HRP.M2.2**	120 kg	2 g	0.6 g
WP-350-1003	**PUE 7.1.120.HRP.M3**	50 / 100 / 120 kg	2 / 5 / 10 g	0.6 / 1.5 / 3 g
WP-350-0051	**PUE 7.1.150.HRP**	150 kg	1 g	0.6 g
WP-350-0052	**PUE 7.1.150.HRP.M2.1**	150 kg	1 g	0.6 g
WP-350-0053	**PUE 7.1.150.HRP.M2.2**	150 kg	5 g	1.5 g
WP-350-1010	**PUE 7.1.150.HRP.M3**	50 / 100 / 150 kg	5 / 10 / 20 g	1.5 / 3 / 6 g

Weighing Pan Dimensions - 800×600 mm

Product Code	Model	Max. capacity	Readability	Repeatability
WP-350-0005	**PUE 7.1.150.1.HRP**	150 kg	1 g	1.5 g
WP-350-0026	**PUE 7.1.150.1.HRP.M2.1**	150 kg	1 g	1.5 g
WP-350-0027	**PUE 7.1.150.1.HRP.M2.2**	150 kg	5 g	1.5 g
WP-350-1004	**PUE 7.1.150.1.HRP.M3**	50 / 100 / 150 kg	5 / 10 / 20 g	1.5 / 3 / 6 g
WP-350-0006	**PUE 7.1.300.HRP**	300 kg	1 g	3 g
WP-350-0028	**PUE 7.1.300.HRP.M2.1**	300 kg	1 g	3 g
WP-350-0029	**PUE 7.1.300.HRP.M2.2**	300 kg	20 g	6 g
WP-350-1005	**PUE 7.1.300.HRP.M3**	100 / 200 / 300 kg	10 / 20 / 50 g	3 / 6 / 15 g

Weighing Pan Dimensions - 1000×800 mm

Product Code	**Model**	Max. capacity	Readability	Repeatability
WP-350-0007	**PUE 7.1.300.1.HRP**	300 kg	1 g	3 g
WP-350-0030	**PUE 7.1.300.1.HRP.M2.1**	300 kg	1 g	3 g
WP-350-0031	**PUE 7.1.300.1.HRP.M2.2**	300 kg	20 g	6 g
WP-350-1006	**PUE 7.1.300.1.HRP.M3**	100 / 200 / 300 kg	10 / 20 / 50 g	3 / 6 / 15 g
WP-350-0033	**PUE 7.1.600.HRP**	600 kg	20 g	7.5 g
WP-350-0032	**PUE 7.1.600.HRP.M2.1**	600 kg	10 g	7.5 g
WP-350-0033	**PUE 7.1.600.HRP.M2.2**	600 kg	20 g	7.5 g
WP-350-1007	**PUE 7.1.600.HRP.M3**	200 / 500 / 600 kg	20 / 50 / 100 g	7.5 / 15 / 30 g
WP-350-1008	**PUE 7.1.1100.HRP.M3**	200 / 500 / 1000 kg	20 / 50 / 100 g	15 / 15 / 30 g
WP-350-0009	**PUE 7.1.1100.HRP**	1100 kg	10 g	15 g
WP-350-0034	**PUE 7.1.1100.HRP.M2.1**	1100 kg	10 g	15 g
WP-350-0035	**PUE 7.1.1100.HRP.M2.2**	1100 kg	50 g	15 g

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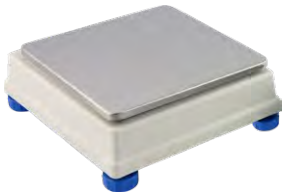
Platform Scales

Advanced Weighing Technologies for Industry

Technical Specification

1-Load-Cell Platform Scales

Platform in Plastic Casing



Product Code	Model	Max. capacity	Readability	Protection class	Weighing pan dimensions
WX-009-1014	**PL0.6/1.5/D2**	0.6 / 1.5 kg	0.5 g	IP 43	195×195 mm
WX-009-1007	**PL1,5/3/D2**	1.5 / 3 kg	1 g	IP 43	195×195 mm
WX-009-1002	**PL3/6/D2**	3 / 6 kg	2 g	IP 43	195×195 mm

Mild Steel Powder Coated Weighing Platforms

Product Code	Model	Max. capacity	Readability	Protection class	Weighing pan dimensions
WX-009-0096	**PLC/6/F1**	6 kg	2 g	IP 65	300×300mm
WX-009-0097	**PLC/15/F1**	15 kg	5 g	IP 65	300×300mm
WX-009-0098	**PLC/30/F1**	30 kg	10 g	IP 65	300×300mm

Product Code	Model	Max. capacity	Readability	Protection class	Weighing pan dimensions
WX-009-0004	**PLC/60/C2**	60 kg	20 g	IP 65	400×500mm
WX-009-0005	**PLC/150/C2**	150 kg	50 g	IP 65	400×500mm
WX-009-0006	**PLC/300/C2**	300 kg	100 g	IP 65	400×500mm
WX-009-0007	**PLC/150/C3**	150 kg	50 g	IP 65	500×700mm
WX-009-0008	**PLC/300/C3**	300 kg	100 g	IP 65	500×700mm

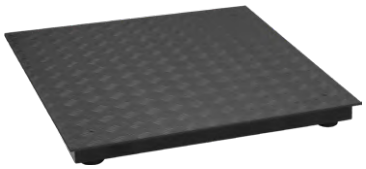
Waterproof Stainless Steel Platforms

Product Code	Model	Max. capacity	Readability	Protection class	Weighing pan dimensions
WX-009-0009	**PL/3/H1**	3 kg	1 g	IP 68	150×200mm
WX-009-0010	**PL/6/H2**	6 kg	2 g	IP 68	250×300mm
WX-009-0011	**PL/15/H2**	15 kg	5 g	IP 68	250×300mm
WX-009-0012	**PL/15/H3**	15 kg	5 g	IP 68	410×410 mm
WX-009-0013	**PL/30/H3**	30 kg	10 g	IP 68	410×410 mm
WX-009-0014	**PL/60/H3**	60 kg	20 g	IP 68	410×410 mm
WX-009-0016	**PL/60/H4**	60 kg	20 g	IP 68	500×500 mm
WX-009-0018	**PL/60/H5**	60 kg	20 g	IP 68	600×600 mm
WX-009-0020	**PL/60/H6**	60 kg	20 g	IP 68	800×800 mm
WX-009-0015	**PL/150/H3**	150 kg	50 g	IP 68	410×410 mm
WX-009-0178	**PL/60/H3/5**	150 kg	50 g	IP 68	400×600 mm
WX-009-0017	**PL/150/H4**	150 kg	50 g	IP 68	500×500 mm
WX-009-0019	**PL/150/H5**	150 kg	50 g	IP 68	600×600 mm
WX-009-0021	**PL/150/H6**	150 kg	50 g	IP 68	800×800 mm
WX-009-0178	**PL/60/H3/5**	150 kg	50 g	IP 68	400×600 mm
WX-009-0022	**PL/300/H6**	300 kg	100 g	IP 68	800×800 mm

Technical Specification

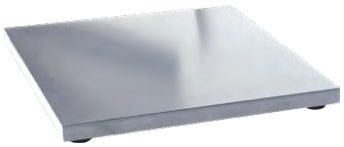
4-Load-Cell Platform Scales

Mild Steel Powder Coated Weighing Platforms



Product Code	Model	Max. capacity	Readability	Protection class	Weighing pan dimensions
WX-009-0023	**PLC/4/600/C6**	600 kg	200 g	IP 65	800×800 mm
WX-009-0083	**PLC/4/600/C7**	600 kg	200 g	IP 65	1000×1000 mm
WX-009-0024	**PLC/4/1500/C7**	1500 kg	500 g	IP 65	1000×1000 mm
WX-009-0025	**PLC/4/1500/C8**	1500 kg	500 g	IP 65	1200×1200 mm
WX-009-0027	**PLC/4/1500/C8/9**	1500 kg	500 g	IP 65	1200×1500 mm
WX-009-0029	**PLC/4/1500/C9**	1500 kg	500 g	IP 65	1500×1500 mm
WX-009-0026	**PLC/4/3000/C8**	3000 kg	1 kg	IP 65	1200×1200 mm
WX-009-0028	**PLC/4/3000/C8/9**	3000 kg	1 kg	IP 65	1200×1500 mm
WX-009-0030	**PLC/4/3000/C9**	3000 kg	1 kg	IP 65	1500×1500 mm
WX-009-0031	**PLC/4/3000/C10**	3000 kg	1 kg	IP 65	1500×2000 mm
WX-009-0032	**PLC/4/3000/C11**	3000 kg	1 kg	IP 65	2000×2000 mm
WX-009-1146	**PLC/4/6000/C10**	6000 kg	2 kg	IP 65	1500×2000 mm
WX-009-0033	**PLC/4/6000/C11**	6000 kg	2 kg	IP 65	2000×2000 mm

Waterproof Stainless Steel Platforms



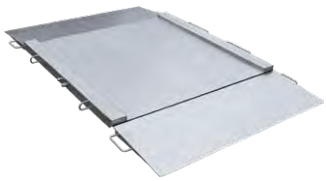
Product Code	Model	Max. capacity	Readability	Protection class	Weighing pan dimensions
WX-009-0035	**PL/4/300/H6**	300 kg	100 g	IP 68	800×800 mm
WX-009-0037	**PL/4/300/H7**	300 kg	100 g	IP 68	1000×1000 mm
WX-009-0036	**PL/4/600/H6**	600 kg	200 g	IP 68	800×800 mm
WX-009-0038	**PL/4/600/H7**	600 kg	200 g	IP 68	1000×1000 mm
WX-009-0039	**PL/4/1500/H7**	1500 kg	500 g	IP 68	1000×1000 mm
WX-009-0040	**PL/4/1500/H8**	1500 kg	500 g	IP 68	1200×1200 mm
WX-009-0070	**PL/4/1500/H8/9**	1500 kg	500 g	IP 68	1200×1500 mm
WX-009-0042	**PL/4/1500/H9**	1500 kg	500 g	IP 68	1500×1500 mm
WX-009-0041	**PL/4/3000/H8**	3000 kg	1 kg	IP 68	1200×1200 mm
WX-009-0071	**PL/4/3000/H8/9**	3000 kg	1 kg	IP 68	1200×1500 mm
WX-009-0043	**PL/4/3000/H9**	3000 kg	1 kg	IP 68	1500×1500 mm
WX-009-0044	**PL/4/3000/H10**	3000 kg	1 kg	IP 68	1500×2000 mm
WX-009-0045	**PL/4/6000/H10**	6000 kg	2 kg	IP 68	1500×2000 mm

Stainless Steel Platforms, Pit Version

Product Code	Model	Max. capacity	Readability	Protection class	Weighing pan dimensions
WX-009-0061	**PL/4/300/H6/Z**	300 kg	100 g	IP 68	800×800 mm
WX-009-0073	**PL/4/300/H7/Z**	300 kg	100 g	IP 68	1000×1000 mm
WX-009-0072	**PL/4/600/H6/Z**	600 kg	200 g	IP 68	800×800 mm
WX-009-0101	**PL/4/600/H7/Z**	600 kg	200 g	IP 68	1000×1000 mm
WX-009-0074	**PL/4/1500/H7/Z**	1500 kg	500 g	IP 68	1000×1000 mm
WX-009-1020	**PL/4/1500/H8/Z**	1500 kg	500 g	IP 68	1200×1200 mm
WX-009-0075	**PL/4/3000/H8/Z**	3000 kg	1 kg	IP 68	1200×1200 mm

Product Code	Model	Max. capacity	Readability	Protection class	Weighing pan dimensions
WX-009-0076	**PL/4/1500/H8/9/Z**	1500 kg	500 g	IP 68	1200×1500 mm
WX-009-0064	**PL/4/1500/H9/Z**	1500 kg	500 g	IP 68	1500×1500 mm
WX-009-0077	**PL/4/3000/H8/9/Z**	3000 kg	1 kg	IP 68	1200×1500 mm
WX-009-0066	**PL/4/3000/H9/Z**	3000 kg	1 kg	IP 68	1500×1500 mm
WX-009-0078	**PL/4/3000/H10/Z**	3000 kg	1 kg	IP 68	1500×2000 mm
WX-009-0069	**PL/4/6000/H10/Z**	6000 kg	2 kg	IP 68	1500×2000 mm

Ramp Stainless Steel Platforms



Product Code	Model	Max. capacity	Readability	Protection class	Weighing pan dimensions
WX-009-0182	**PL/4N/150/H1**	150 kg	50 g	IP 68	840×860 mm
WX-009-0120	**PL/4N/300/H1**	300 kg	100 g	IP 68	840×860 mm
WX-009-0184	**PL/4N/300/H2**	300 kg	0	IP 68	1100×1200 mm
WX-009-0186	**PL/4N/300/H3**	300 kg	100 g	IP 68	1200×1500 mm
WX-009-0188	**PL/4N/300/H4**	300 kg	100 g	IP 68	1500×1500 mm
WX-009-0183	**PL/4N/600/H1**	600 kg	0	IP 68	840×860 mm
WX-009-0185	**PL/4N/600/H2**	600 kg	200 g	IP 68	1100×1200 mm
WX-009-0187	**PL/4N/600/H3**	600 kg	200 g	IP 68	1200×1500 mm
WX-009-0189	**PL/4N/600/H4**	600 kg	200 g	IP 68	1500×1500 mm
WX-009-0079	**PL/4N/1500/H2**	1500 kg	500 g	IP 68	1100×1200 mm
WX-009-0081	**PL/4N/1500/H3**	1500 kg	500 g	IP 68	1200×1500 mm
WX-009-0082	**PL/4N/1500/H4**	1500 kg	500 g	IP 68	1500×1500 mm

Stainless Steel Ramp Platforms With LD Lifting System

Product Code	Model	Max. capacity	Readability	Protection class	Weighing pan dimensions
WX-009-0239	**PL/4N/150/H1.LD**	150 kg	50 g	IP 68	840×860 mm
WX-009-0240	**PL/4N/300/H1.LD**	300 kg	100 g	IP 68	840×860 mm
WX-009-0242	**PL/4N/300/H2.LD**	300 kg	100 g	IP 68	1100×1200 mm
WX-009-0245	**PL/4N/300/H3.LD**	300 kg	100 g	IP 68	1200×1500 mm
WX-009-0248	**PL/4N/300/H4.LD**	300 kg	100 g	IP 68	1500×1500 mm
WX-009-0241	**PL/4N/600/H1.LD**	600 kg	200 g	IP 68	840×860 mm
WX-009-0243	**PL/4N/600/H2.LD**	600 kg	200 g	IP 68	1100×1200 mm
WX-009-0246	**PL/4N/600/H3.LD**	600 kg	200 g	IP 68	1200×1500 mm
WX-009-0249	**PL/4N/600/H4.LD**	600 kg	200 g	IP 68	1500×1500 mm
WX-009-0244	**PL/4N/1500/H2.LD**	1500 kg	500 g	IP 68	1100×1200 mm
WX-009-0247	**PL/4N/1500/H3.LD**	1500 kg	500 g	IP 68	1200×1500 mm
WX-009-0250	**PL/4N/1500/H4.LD**	1500 kg	500 g	IP 68	1500×1500 mm

To make sure the scale meets your needs, you are the one who chooses both the terminal and the platform. At your request, we will combine any terminal with any platform so that you get a device that meets all your needs.

PUE C315

PUE H315

PUE C32

PUE 7.1

HX5 EX

PUE HX7

PUE HY10

PUE 5.15

PUE 5.19

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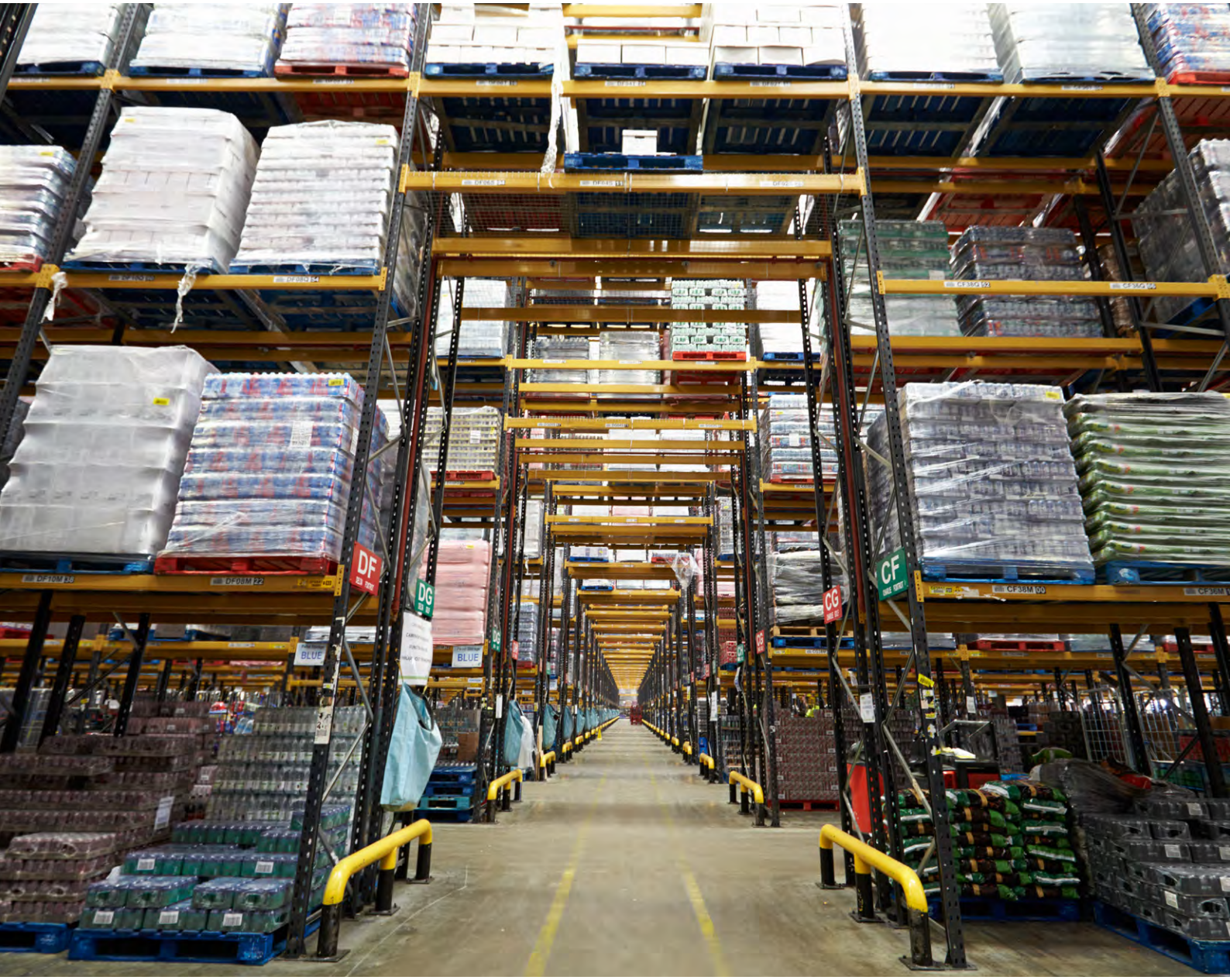

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Industrial Scales

Advanced Weighing Technologies for Industry

Technical Specification

Pallet Scales

Product Code	Model	Max. capacity	Readability	Protection class	Weighing pan dimensions
WP-230-0020	**C315.4P 600.C**	600 kg	200 g	IP 65 construction, IP 67 cell, IP 43 indicator	840×1200 mm
WP-230-0021	**C315.4P.1500.C**	1500 kg	500 g	IP 65 construction, IP 67 cell, IP 43 indicator	840×1200 mm
WP-230-0022	**C315.4P.3000.C**	3000 kg	1000 g	IP 65 construction, IP 67 cell, IP 43 indicator	840×1200 mm

Product Code	Model	Max. capacity	Readability	Protection class	Weighing pan dimensions
WP-228-0001	**HX7.4P.600.C**	600 kg	200 g	IP 65 construction, IP 66/68 indicator	840×1200 mm
WP-228-0002	**HX7.4P.1500.C**	1500 kg	500 g	IP 65 construction, IP 66/68 indicator	840×1200 mm
WP-228-0003	**HX7.4P.3000.C**	3000 kg	1000 g	IP 65 construction, IP 66/68 indicator	840×1200 mm

Stainless Steel Pallet Scales

Product Code	Model	Max. capacity	Readability	Protection class	Weighing pan dimensions
WP-235-0001	**H315.4P.600.H**	600 kg	200 g	IP 68 construction, IP 68 (1h max)/69 indicator	860×1200mm
WP-235-0002	**H315.4P.1500.H**	1500 kg	500 g	IP 68 construction, IP 68 (1h max)/69 indicator	860×1200mm
WP-235-0003	**H315.4P.3000.H**	3000 kg	1000 g	IP 68 construction, IP 68 (1h max)/69 indicator	860×1200mm

Product Code	Model	Max. capacity	Readability	Protection class	Weighing pan dimensions
WP-228-0004	**HX7.4P.600.H**	600 kg	200 g	IP 68 construction, IP 66/68 indicator	860×1200mm
WP-228-0005	**HX7.4P.1500.H**	1500 kg	500 g	IP 68 construction, IP 66/68 indicator	860×1200mm
WP-228-0006	**HX7.4P.3000.H**	3000 kg	1000 g	IP 68 construction, IP 66/68 indicator	860×1200mm

Beam Scales

Product Code	Model	Max. capacity	Readability	Protection class	Weighing pan dimensions
WP-230-0023	**C315.4P2.600.C**	600 kg	200 g	IP 67 construction, IP 43 indicator	2 pcs 1.2 m
WP-230-0024	**C315.4P2.1500.C**	1500 kg	500 g	IP 67 construction, IP 43 indicator	2 pcs 1.2 m
WP-230-0026	**C315.4P2.2000.C1**	2000 kg	1000 g	IP 67 construction, IP 43 indicator	2 pcs 2 m
WP-230-0029	**C315.4P2.2000.C2**	2000 kg	1000 g	IP 67 construction, IP 43 indicator	2 pcs 2,5 m
WP-230-0025	**C315.4P2.3000.C**	3000 kg	1000 g	IP 67 construction, IP 43 indicator	2 pcs 1.2 m
WP-230-0027	**C315.4P2.4000.C1**	4000 kg	2000 g	IP 67 construction, IP 43 indicator	2 pcs 2 m
WP-230-0030	**C315.4P2.4000.C2**	4000 kg	2000 g	IP 67 construction, IP 43 indicator	2 pcs 2,5 m
WP-230-0028	**C315.4P2.6000.C1**	6000 kg	2000 g	IP 67 construction, IP 43 indicator	2 pcs 2 m
WP-230-0031	**C315.4P2.6000.C2**	6000 kg	2000 g	IP 67 construction, IP 43 indicator	2 pcs 2,5m

Product Code	Model	Max. capacity	Readability	Protection class	Weighing pan dimensions
WP-229-0001	**HX7.4P2.600.C**	600 kg	200 g	IP 65 construction, IP 66/68 indicator	2 pcs 1.2 m
WP-229-0002	**HX7.4P2.1500.C**	1500 kg	500 g	IP 65 construction, IP 66/68 indicator	2 pcs 1.2 m
WP-229-0004	**HX7.4P2.2000.C1**	2000 kg	1000 g	IP 65 construction, IP 66/68 indicator	2 pcs 2 m
WP-229-0007	**HX7.4P2.2000.C2**	2000 kg	1000 g	IP 65 construction, IP 66/68 indicator	2 pcs 2,5 m
WP-229-0003	**HX7.4P2.3000.C**	3000 kg	1000 g	IP 65 construction, IP 66/68 indicator	2 pcs 1.2 m
WP-229-0005	**HX7.4P2.4000.C1**	4000 kg	2000 g	IP 65 construction, IP 66/68 indicator	2 pcs 2 m
WP-229-0008	**HX7.4P2.4000.C2**	4000 kg	2000 g	IP 65 construction, IP 66/68 indicator	2 pcs 2,5 m
WP-229-0006	**HX7.4P2.6000.C1**	6000 kg	2000 g	IP 65 construction, IP 66/68 indicator	2 pcs 2 m
WP-229-0009	**HX7.4P2.6000.C2**	6000 kg	2000 g	IP 65 construction, IP 66/68 indicator	2 pcs 2,5 m

Stainless Steel Beam Scales

Product Code	Model	Max. capacity	Readability	Protection class	Weighing pan dimensions
WP-236-0001	**H315.4P2.600.H**	600 kg	200 g	IP 68 construction, IP 68 (1h max)/69 indicator	2 pcs 1.2 m
WP-236-0002	**H315.4P2.1500.H**	1500 kg	500 g	IP 68 construction, IP 68 (1h max)/69 indicator	2 pcs 1.2 m
WP-236-0004	**H315.4P2.2000.H1**	2000 kg	1000 g	IP 68 construction, IP 68 (1h max)/69 indicator	2 pcs 2 m
WP-236-0007	**H315.4P2.2000.H2**	2000 kg	1000 g	IP 68 construction, IP 68 (1h max)/69 indicator	2 pcs 2,5 m
WP-236-0003	**H315.4P2.3000.H**	3000 kg	1000 g	IP 68 construction, IP 68 (1h max)/69 indicator	2 pcs 1.2 m
WP-236-0005	**H315.4P2.4000.H1**	4000 kg	2000 g	IP 68 construction, IP 68 (1h max)/69 indicator	2 pcs 2 m
WP-236-0008	**H315.4P2.4000.H2**	4000 kg	2000 g	IP 68 construction, IP 68 (1h max)/69 indicator	2 pcs 2,5 m
WP-236-0006	**H315.4P2.6000.H1**	6000 kg	2000 g	IP 68 construction, IP 68 (1h max)/69 indicator	2 pcs 2 m
WP-236-0009	**H315.4P2.6000.H2**	6000 kg	2000 g	IP 68 construction, IP 68 (1h max)/69 indicator	2 pcs 2,5 m

Product Code	Model	Max. capacity	Readability	Protection class	Weighing pan dimensions
WP-229-0010	**HX7.4P2.600.H**	600 kg	200 g	IP 68 construction, IP 66/68 indicator	2 pcs 1.2 m
WP-229-0011	**HX7.4P2.1500.H**	1500 kg	500 g	IP 68 construction, IP 66/68 indicator	2 pcs 1.2 m
WP-229-0013	**HX7.4P2.2000.H1**	2000 kg	1000 g	IP 68 construction, IP 66/68 indicator	2 pcs 2 m
WP-229-0016	**HX7.4P2.2000.H2**	2000 kg	1000 g	IP 68 construction, IP 66/68 indicator	2 pcs 2,5 m
WP-229-0012	**HX7.4P2.3000.H**	3000 kg	1000 g	IP 68 construction, IP 66/68 indicator	2 pcs 1.2 m
WP-229-0014	**HX7.4P2.4000.H1**	4000 kg	2000 g	IP 68 construction, IP 66/68 indicator	2 pcs 2 m
WP-229-0017	**HX7.4P2.4000.H2**	4000 kg	2000 g	IP 68 construction, IP 66/68 indicator	2 pcs 2,5 m
WP-229-0015	**HX7.4P2.6000.H1**	6000 kg	2000 g	IP 68 construction, IP 66/68 indicator	2 pcs 2 m
WP-229-0018	**HX7.4P2.6000.H2**	6000 kg	2000 g	IP 68 construction, IP 66/68 indicator	2 pcs 2,5 m

Livestock Scale

Product Code	Model	Max. capacity	Readability	Protection class	Weighing pan dimensions
WP-237-0001	**H315.4I.2000.S1**	2000 kg	1 kg	IP 67 construction, IP 68 (1h max)/69 indicator	1×2×1,1 m
WP-237-0002	**H315.4I.2000.S2**	2000 kg	1 kg	IP 67 construction, IP 68 (1h max)/69 indicator	1×2×1,8 m
WP-237-0003	**H315.4I.2000.S3**	2000 kg	1 kg	IP 67 construction, IP 68 (1h max)/69 indicator	1×2,5×1,8 m

Stainless Steel Livestock Scales

Product Code	Model	Max. capacity	Readability	Protection class	Weighing pan dimensions
WP-237-0004	**H315.4I.2000.H1**	2000 kg	1 kg	IP 68 construction, IP 68 (1h max)/69 indicator	1×2×1,1 m
WP-237-0006	**H315.4I.2000.H3**	2000 kg	1 kg	IP 68 construction, IP 68 (1h max)/69 indicator	1×2×1,8 m
WP-237-0005	**H315.4I.2000.H2**	2000 kg	1 kg	IP 68 construction, IP 68 (1h max)/69 indicator	1×2,5×1,8 m

Overhead Track Scale

Product Code	Model	Max. capacity	Readability	Protection class	Detection line span
WP-238-1001	**H315.2K.300/600 300/600**	300 / 600 kg	0.1 / 0.2 kg	IP 67 construction, IP 68 (1h max)/69 indicator	L= 800 mm (min. 200 mm)

Stainless Steel Overhead Track Scales

Product Code	Model	Max. capacity	Readability	Protection class	Detection line span
WP-238-1002	**H315.2K.300/600H**	300 / 600 kg	0.1 / 0.2 kg	IP 67 construction, IP 68 (1h max)/69 indicator	L= 800 mm (min. 200 mm)

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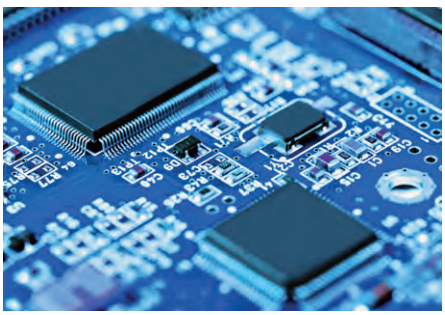
PUE HX5.EX

Explosion-Proof Hazardous Area Indicator

ATEX AND IECEx APPROVAL
PUE HX5.EX is a cutting-edge weighing indicator, designed to make industrial load-cell scales that can be operated in production areas endangered with explosion, classified as zones 1, 2, 21, 22.

VERSATILITY OF USE
The indicator is intended to be used under challenging environmental conditions, and in places of high hygiene standards, e.g. in chemical, pharmaceutical or food industries.



ELECTRONICS
PUE HX5.EX is equipped with high-tech electronics due to which utmost precision and perfect measurement repeatability are ensured. the indicator can cooperate with system comprised of 4-load-cells, where the impedance value is 350 Ω, or of 8 load cells, with 1000 Ω impedance.

COMMUNICATION PROTOCOL
Complex communication protocol enables establishing communication with it systems, and superior adjustment and control systems.

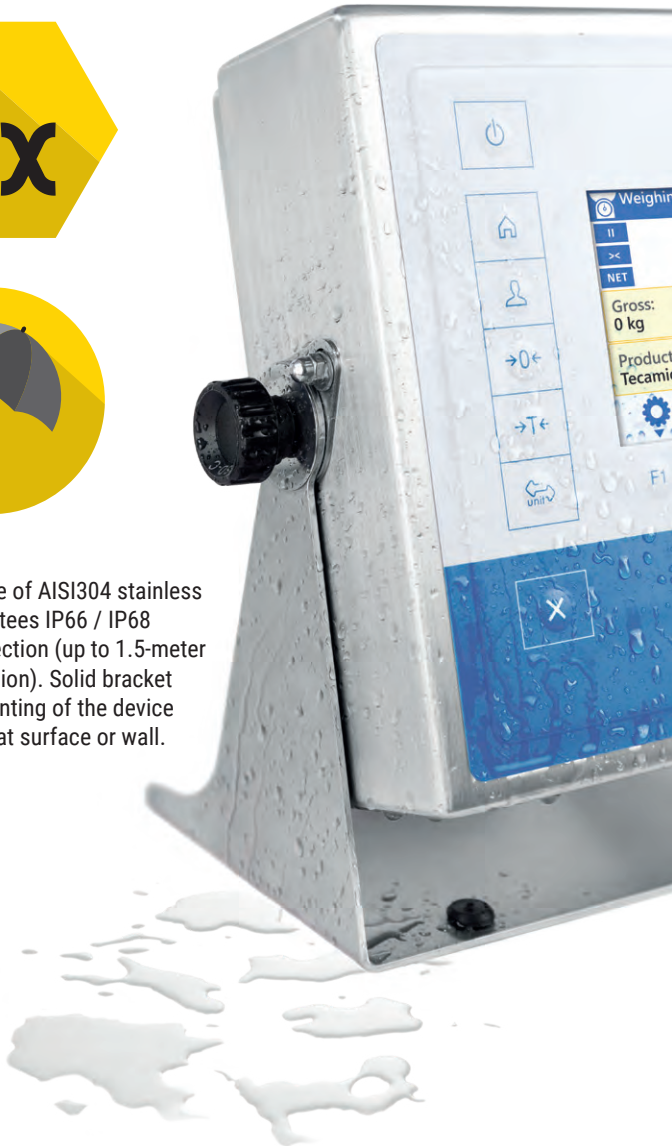
DISPLAY
5” colour graphic display of high resolution guarantees clear and fast presentation of displayed information on current state of carried out process. Graphic user interface features option of customization via widgets, this adds to comfort of operation.

KEYPAD
Large and functional 35-key keypad is equipped with programmable function keys which enable its customization.

SOFTWARE
Advanced software enables carrying out many operations connected with mass measurement, e.g. parts counting, checkweighing, statistics. Alibi Memory guarantees stored data safety.

COMMUNICATION INTERFACES
PUE HX5.EX is equipped with two intrinsically safe RS232 connectors and one intrinsically safe RS485 connector.
Possibility to install additional digital inputs/outputs (4 IN/4 OUT) extends the range of instruments compatible with the indicator by automation components that are compliant with ATEX directive.

HOUSING
Robust, made of AISI304 stainless steel, guarantees IP66 / IP68 ingress protection (up to 1.5-meter deep immersion). Solid bracket enables mounting of the device either on a flat surface or wall.



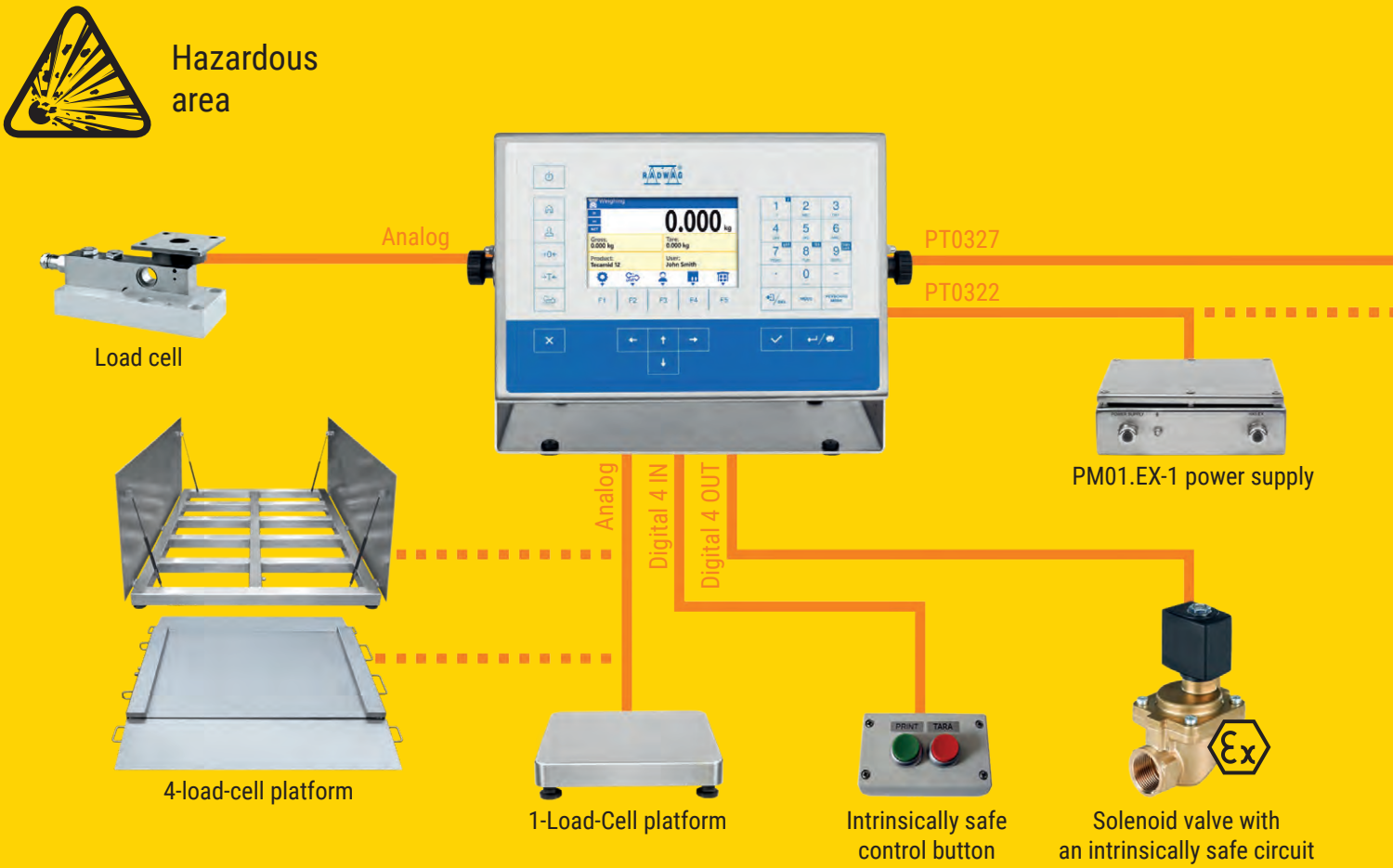
Power Supply

Certified Intrinsically Safe Technology

PUE HX5.EX indicator must be powered using exclusively a certified intrinsically safe Radwag PM01.EX power supply. Depending on the needs, the PM01.EX can be connected to the voltage source placed either in hazardous or safe area.

PM01.EX power supply comes in two designs:

- **PM01.EX-1:** power supply intended for operation in hazardous area:
  - Zone 1 and 2, where there is a risk of explosion due to mixture of air with vapour, mist or gas, classified as explosion group IIC, IIB and IIA and as temperature class T1, T2, T3, T4.
  - Zone 21 and 22, where there is a risk of explosion due to mixture of air with dust, flammable fibres and volatile fuels, classified as explosion group IIIC, IIIB and IIIA.
- **PM01.EX-2:** power supply intended for operation outside hazardous area, equipped with intrinsically safe circuits which may be placed in zones 1, 2, 21, 22.



Communication Module

Cooperation With External Devices

With use of IM01.EX communication module it is possible to expand communication interfaces range of the HX5. EX indicator. the module is installed outside the hazardous area, and connected to the indicator using intrinsically safe interface.

The module facilitates cooperation with various accessories, e.g. barcode scanners, printers, displays, control buttons, light signalling towers, buzzers and other controlling/signalling devices. it enables establishing communication with systems of automatic adjustment and control of industrial processes, and with superior it systems.

Available designs:

- **IM01.EX-1 (standard):** 2 × RS232, USB, 4 IN/4 OUT, Ethernet
- **IM01.EX-2:** Analog output 4-20mA/0-10V
- **IM01.EX-3:** Digital 12IN/12OUT
- **IM01.EX-4:** Profibus DP
- **IM01.EX-5:** Profinet
- **IM01.EX-8:** RS485
- **IM01.EX-9:** EtherNet/IP

1-Load-Cell Ex Scales

Remarkably Fast and Precise Measurements

Ex scales equipped with 1-Load-Cell platforms are designed to enable fast and precise measurement of loads, weight of which is not greater than 300 kg.

Characteristic feature of 1-Load-Cell platforms is use of 1-Load-Cell sensor for mass measurements. the platforms are equipped with stainless steel weighing pan, their frame, depending on the model, can be made of stainless, acid-proof or powder coated steel.

F1, C2 and C3 series
Platforms of F1, C2 and C3 series, designed with durability and reliability in mind, are relatively inexpensive devices when speaking in terms of quality they offer. These are solutions of up to 30 000 d resolution (non-verified scales). IP65 ingress protection allows to use these platforms in dry environment.

The series is intended for operation in zone 1 and 2.

H1 – H6 series
Platforms of H1-H6 series are intended to be operated either under high humidity conditions or at direct contact with water. Solid and reliable mechanical design makes them a perfect solution in food and cosmetic industries, and wherever meeting high hygiene standards is required.

The series is intended for operation in zone 1 and 2.

HR2 – HR6 series
Platforms of HR2-HR6 series are intended to be operated under the most challenging environmental conditions, and at direct contact with both water and chemical substances. They are made of acid-proof steel providing resistance to corrosive substances used in chemical and pharmaceutical industries on a regular basis.

The series is intended for operation in zone 1, 2, 21 and 22.

The main features

resolution	3000 d	verified scales
	up to 30000 d	non-verified scales
ingress protection	F1, C2-C3	IP65
	H1-H6	IP68
	HR2-HR5	IP68/69
material	F1, C2-C3	mechanical design St3S, platform AISI304
	H1-H6	AISI304
	HR2-HR5	AISI316
load cell	F1, C2-C3	aluminium IP65
	H1-H6	aluminium IP65, protected by silicone bellow
	HR2-HR5	stainless steel IP68/69

Platform F1

Platform H2

Platform HR3

4-Load-Cell Ex Scales

Precise Measurements of Large Loads

Ex scales equipped with platforms featuring multiple load cells are intended to carry out fast and precise mass measurements of large loads.

When it comes to design of multiple-load-cell platforms, its characteristic feature is use of numerous load cells, usually four. They are made of either stainless steel or powder coated carbon steel, their design is often customized so that particular user needs are met (pallet scales, ramp scales, etc.).

4.C6–4.C11 series
Platforms of IP65 ingress protection, made of St3S carbon steel, and protected against corrosion via powder coating. Their tear plate surface prevents potential slip. the platforms are offered in wide range of different dimensions and maximum capacities. They can be equipped with numerous dedicated accessories (ramps, ramps for pit-version scales, etc.). These scales are intended to be operated in dry environment.

The series can be used in zone 1 and 2 (ATEX).

4.H6–4.H10 and 4.H6/Z–4.H10/Z series
Extremely solid and reliable platforms made of AISI304 stainless steel. Due to IP68 ingress protection they can be operated under severe industrial conditions and at a frequent contact with water. Z series features frame that is to be embedded in the ground, and opened weighing pan, which allows to maintain the device clean.

H6–H10 series is intended for operation in zone 1/21 and 2/22, and H6/Z–H10/Z in zone 1 and 2.

4N.H1–4N.H4 series
Low-profile platforms made of AISI304 stainless steel, and equipped with two ramps. They are perfect solution for weighing loads transported using trolleys. the IP68 ingress protection allows to use these platforms in corrosive conditions (frequent cleaning and contact with water).

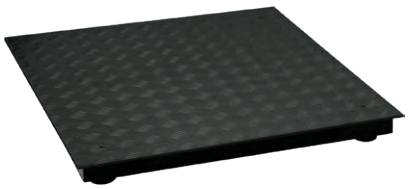
The series is intended for operation in zone 1/21 and 2/22.

4P and 4P2 series
Pallet and beam scales made of carbon steel, St3S, or stainless steel, AISI304. They are designed to enable weighing of loads placed on pallets, and objects of atypical and unfixed size. These scales can be operated in challenging industrial environment.

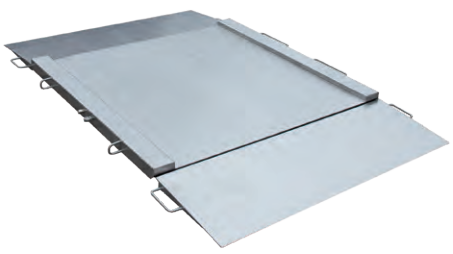
The series is intended for operation in zones 1, 2 (St3S), and in zones 1/21, 2/22 (AISI304).

The main features

resolution	3000 d	verified scales
	up to 30000 d	non-verified scales
ingress protection	4.C6–4.C11 4P.C, 4P2.C– 4P2.C2	IP65
	4.H6–4.H10, 4.H6/Z–4.H10/Z 4N.H1–4N.H4 4P.H, 4P2.H–4P2.H2	IP68
material	4.C6–4.C11 4P.C, 4P2.C– 4P2.C2	St3S
	4.H6–4.H10, 4.H6/Z–4.H10/Z 4N.H1–4N.H4 4P.H, 4P2.H–4P2.H2	AISI304
load cell	4.C6–4.C11, 4P.C	powder coated steel IP67
	4P2.C– 4P2.C2	stainless steel IP67
	4.H6–4.H10, 4.H6/Z–4.H10/Z 4N.H1–4N.H4 4P.H, 4P2.H–4P2.H2	stainless steel IP68



Platform C6



Platform 4N.H

Platform 4.H/Z

Platform 4P.H

Ex Zones

Classification, Description, Characteristics

Zone endangered with explosion risk is a hazardous area where gases, vapours and mists or dusts are mixed with air causing potentially explosive atmosphere. in accordance with 1999/92/EC directive, these zones are classified with regard to frequency of explosive atmosphere occurrence and its duration:

Explosive atmosphere caused by mixture of air and:	Hazardous area	Characteristics
gas, liquid and vapours (zone G)	Zone 0	constant explosion risk lasting for a long period of time
	Zone 1	occasional explosion risk
	Zone 2	no explosion risk during regular work, shall any occur it lasts for a short period of time
flammable dust (zone D)	Zone 20	constant explosion risk lasting for a long period of time
	Zone 21	occasional explosion risk
	Zone 22	no explosion risk during regular work, shall any occur it lasts for a short period of time

Wherever there is a risk of fire or explosion, it is necessary to use safe, respective for a particular zone, devices.
The devices must allow operation in potentially hazardous environment. They must eliminate risk of fire or explosion due to electric arch, spark or high temperature.

HX5.EX series scales intended for operation in hazardous areas meet the highest safety standards. Their mechanical design prevents initiation of explosive mixtures ignition.

General classification of devices designed to be used within hazardous area where the devices have been classified with regard to the intended use and required safety level:

Group I	protective systems and devices intended to be used in mines, where there is methane hazard or risk of coal dust explosion
Group II	protective systems and devices intended to be used in other than mines places where there is risk of explosive atmospheres occurrence

Devices of each group are divided into categories.
When speaking of group II, the categories are:

Category 1	devices guaranteeing very high safety level, even in case of sporadic device breakdowns, with the following safety measures taken: a) if one of the safety measures fails, the required safety level is ensured by a second independent safety solution b) required safety level is ensured in case two independent breakdowns occur
Category 2	devices guaranteeing high safety level with such safety measures taken that protection is ensured even in case of frequent breakdowns
Category 3	devices ensuring standard safety level with such safety measures taken that guarantee protection in the course of typical operation

Ex Zones
Classification and Marking

The device intended to be operated within an area where there is risk of explosion, features CE mark and symbols classifying the device for a particular area, group and category. for explanation of Ex marking symbols see the table below.

Hazardous areas classification and marking

Flammable material	Explosion probability	Hazardous areas classification	Products classification	
			Group	Category
Gases, vapours, mists	Continuously or frequently	Zone 0	II	1G
	Occasionally	Zone 1	II	2G
	Rarely or for a short period only	Zone 2	II	3G
Dusts	Continuously or frequently	Zone 20	II	1D
	Occasionally	Zone 21	II	2D
	Rarely or for a short period only	Zone 22	II	3D

Area classification with regard to gases, vapours and mists

Explosion group	Examples (depending on explosion group and temperature class)					
IIA	Acrylate Nitrile Town gas	Ethylene Ethylene oxide	Ethyleneglycol Hydrogen sulfide	Diethyl ether		
IIB	Ammonia Propane Ethane	Butane Ethanol	Petrol Diesel oil Hexsane	Acetaldehyde		
IIC	Hydrogen	Acetylene				Carbon disulfide

Temperature class

T1	<450 °C
T2	<300 °C
T3	<200 °C
T4	<135 °C
T5	<100 °C
T6	< 85 °C

Protection level (gases)

Ga	Zone 0, 1, 2
Gb	Zone 1, 2
Gc	Zone 2

II 2G Ex ib IIC T4 Gb

II 2D Ex ib IIIC T60°C Db

Protection level (dusts)

Da	Zone 20, 21, 22
Db	Zone 21, 22
Dc	Zone 22

Surface temperature

Maximum surface temperature in area endangered with dust explosion

Classification and marking of protection type

Exemplary protection types	Zone	Standard	Code
Flame-proof enclosures preventing the explosion from spreading outside the enclosure	1, 2	EN 60079-1	Ex db
Increased safety preventing high temperature and ignition sparks	1, 2	EN 60079-7	Ex eb
Intrinsic safety low voltage /current	0, 1, 2, 20, 21, 22	EN 60079-11	Ex ia
Intrinsic safety low voltage /current	1, 2, 21, 22	EN 60079-11	Ex ib
Encapsulation sealing	1, 2, 21, 22	EN 60079-18	Ex mb
Hermetic housing preventing dust explosion	21, 22	EN 60079-31	Ex tb

Hazardous areas classification due to dusts

Explosion group	Examples (depending on explosion group)
IIIA	Volatile fuels
IIIB	Non-conductive dust
IIIC	Conductive dust

Technical Specification

Hazardous Area Endangered with Gas Explosion

High Resolution Platforms

Product Code	Model	Max. capacity	Readability	Repeatability	Weighing pan dimensions	ATEX Certification
WX-009-0271	**PL.16.HRP.EX**	16 kg	0.1 g	0.1 g	360×280 mm	II 3G Ex ic IIB T4 Gc
WX-009-0272	**PL.32.HRP.EX**	32 kg	0.1 g	0.1 g	360×280 mm	II 3G Ex ic IIB T4 Gc

Product Code	Model	Max. capacity	Readability	Repeatability	Weighing pan dimensions	ATEX Certification
WX-009-0273	**PL.62.HRP.EX**	62 kg	0.5 g	0.3 g	500×500 mm	II 3G Ex ic IIB T4 Gc
WX-009-0274	**PL.120.HRP.EX**	120 kg	1 g	0.6 g	500×500 mm	II 3G Ex ic IIB T4 Gc
WX-009-0275	**PL.150.HRP.EX**	150 kg	1 g	1.5 g	800×600 mm	II 3G Ex ic IIB T4 Gc
WX-009-0276	**PL.300.HRP.EX**	300 kg	2 g	3 g	800×600 mm	II 3G Ex ic IIB T4 Gc
WX-009-0277	**PL.300.1.HRP.EX**	300 kg	2 g	3 g	1000×800 mm	II 3G Ex ic IIB T4 Gc
WX-009-0278	**PL.600.HRP.EX**	600 kg	5 g	7.5 g	1000×800 mm	II 3G Ex ic IIB T4 Gc
WX-009-0279	**PL.1100.HRP.EX**	1100 kg	10 g	15 g	1000×800 mm	II 3G Ex ic IIB T4 Gc

1-Load-Cell Platform Scales

Product Code	Model	Max. capacity	Readability	Weighing pan dimensions	ATEX Certification
WW-006-0001	**HX5.EX-1.1,5.F1**	1.5 kg	0.5 g	300×300 mm	II 2G Ex ib IIB T4 Gb
WW-006-0002	**HX5.EX-1.3.F1**	3 kg	1 g	300×300 mm	II 2G Ex ib IIB T4 Gb
WW-006-0003	**HX5.EX-1.6.F1**	6 kg	2 g	300×300 mm	II 2G Ex ib IIB T4 Gb
WW-006-0004	**HX5.EX-1.15.F1**	15 kg	5 g	300×300 mm	II 2G Ex ib IIB T4 Gb
WW-006-0005	**HX5.EX-1.30.F1**	30 kg	10 g	300×300 mm	II 2G Ex ib IIB T4 Gb

Product Code	Model	Max. capacity	Readability	Weighing pan dimensions	ATEX Certification
WW-006-0006	**HX5.EX-1.15.C2**	15 kg	5 g	400×500 mm	II 2G Ex ib IIB T4 Gb
WW-006-0012	**HX5.EX-1.15.C3**	15 kg	5 g	500×700 mm	II 2G Ex ib IIB T4 Gb
WW-006-0007	**HX5.EX-1.30.C2**	30 kg	10 g	400×500 mm	II 2G Ex ib IIB T4 Gb
WW-006-0013	**HX5.EX-1.30.C3**	30 kg	10 g	500×700 mm	II 2G Ex ib IIB T4 Gb
WW-006-0008	**HX5.EX-1.60.C2**	60 kg	20 g	400×500 mm	II 2G Ex ib IIB T4 Gb
WW-006-0014	**HX5.EX-1.60.C3**	60 kg	20 g	500×700 mm	II 2G Ex ib IIB T4 Gb
WW-006-0009	**HX5.EX-1.150.C2**	150 kg	50 g	400×500 mm	II 2G Ex ib IIB T4 Gb
WW-006-0015	**HX5.EX-1.150.C3**	150 kg	50 g	500×700 mm	II 2G Ex ib IIB T4 Gb
WW-006-0010	**HX5.EX-1.300.C2**	300 kg	100 g	400×500 mm	II 2G Ex ib IIB T4 Gb
WW-006-0016	**HX5.EX-1.300.C3**	300 kg	100 g	500×700 mm	II 2G Ex ib IIB T4 Gb

Waterproof Platform Scales

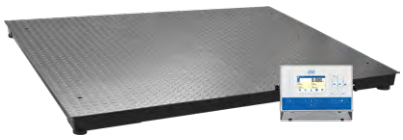
Product Code	Model	Max. capacity	Readability	Weighing pan dimensions	ATEX Certification
WW-006-0017	**HX5.EX-1.1,5.H1**	1.5 kg	0.5 g	150×200 mm	II 2G Ex ib IIB T4 Gb
WW-006-0018	**HX5.EX-1.3.H1**	3 kg	1 g	150×200 mm	II 2G Ex ib IIB T4 Gb
WW-006-0019	**HX5.EX-1.6.H1**	6 kg	2 g	150×200 mm	II 2G Ex ib IIB T4 Gb
WW-006-0020	**HX5.EX-1.15.H1**	15 kg	5 g	150×200 mm	II 2G Ex ib IIB T4 Gb

Product Code	Model	Max. capacity	Readability	Weighing pan dimensions	ATEX Certification
WW-006-0021	**HX5.EX-1.3.H2**	3 kg	1 g	250×300 mm	II 2G Ex ib IIB T4 Gb
WW-006-0022	**HX5.EX-1.6.H2**	6 kg	2 g	250×300 mm	II 2G Ex ib IIB T4 Gb
WW-006-0023	**HX5.EX-1.15.H2**	15 kg	5 g	250×300 mm	II 2G Ex ib IIB T4 Gb
WW-006-0024	**HX5.EX-1.30.H2**	30 kg	10 g	250×300 mm	II 2G Ex ib IIB T4 Gb

Product Code	Model	Max. capacity	Readability	Weighing pan dimensions	ATEX Certification
WW-006-0025	**HX5.EX-1.6.H3**	6 kg	2 g	410×410 mm	II 2G Ex ib IIB T4 Gb
WW-006-0038	**HX5.EX-1.15.H5**	15 kg	5 g	600×600 mm	II 2G Ex ib IIB T4 Gb
WW-006-0026	**HX5.EX-1.15.H3**	15 kg	5 g	410×410 mm	II 2G Ex ib IIB T4 Gb

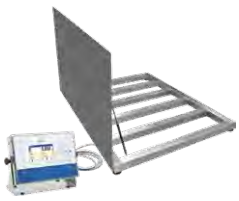
Product Code	Model	Max. capacity	Readability	Weighing pan dimensions	ATEX Certification
WW-006-0034	**HX5.EX-1.15.H3/5**	15 kg	5 g	400×600 mm	II 2G Ex ib IIB T4 Gb
WW-006-0030	**HX5.EX-1.15.H4**	15 kg	5 g	500×500 mm	II 2G Ex ib IIB T4 Gb
WW-006-0027	**HX5.EX-1.30.H3**	30 kg	10 g	410×410 mm	II 2G Ex ib IIB T4 Gb
WW-006-0035	**HX5.EX-1.30.H3/5**	30 kg	10 g	400×600 mm	II 2G Ex ib IIB T4 Gb
WW-006-0031	**HX5.EX-1.30.H4**	30 kg	10 g	500×500 mm	II 2G Ex ib IIB T4 Gb
WW-006-0039	**HX5.EX-1.30.H5**	30 kg	10 g	600×600 mm	II 2G Ex ib IIB T4 Gb
WW-006-0028	**HX5.EX-1.60.H3**	60 kg	20 g	410×410 mm	II 2G Ex ib IIB T4 Gb
WW-006-0036	**HX5.EX-1.60.H3/5**	60 kg	20 g	400×600 mm	II 2G Ex ib IIB T4 Gb
WW-006-0032	**HX5.EX-1.60.H4**	60 kg	20 g	500×500 mm	II 2G Ex ib IIB T4 Gb
WW-006-0040	**HX5.EX-1.60.H5**	60 kg	20 g	600×600 mm	II 2G Ex ib IIB T4 Gb
WW-006-0042	**HX5.EX-1.60.H6**	60 kg	20 g	800×800 mm	II 2G Ex ib IIB T4 Gb
WW-006-0029	**HX5.EX-1.150.H3**	150 kg	50 g	410×410 mm	II 2G Ex ib IIB T4 Gb
WW-006-0037	**HX5.EX-1.150.H3/5**	150 kg	40 g	400×600 mm	II 2G Ex ib IIB T4 Gb
WW-006-0033	**HX5.EX-1.150.H4**	150 kg	50 g	500×500 mm	II 2G Ex ib IIB T4 Gb
WW-006-0041	**HX5.EX-1.150.H5**	150 kg	50 g	600×600 mm	II 2G Ex ib IIB T4 Gb
WW-006-0043	**HX5.EX-1.150.H6**	150 kg	50 g	800×800 mm	II 2G Ex ib IIB T4 Gb
WW-006-0044	**HX5.EX-1.300.H6**	300 kg	100 g	800×800 mm	II 2G Ex ib IIB T4 Gb

4-Load-Cell Platform Scale

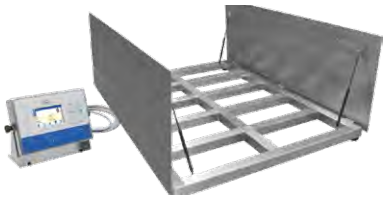


Product Code	Model	Max. capacity	Readability	Weighing pan dimensions	ATEX Certification
WW-008-0006	**HX5.EX-1.4.60.C7**	60 kg	20 g	1000×1000 mm	II 2G Ex ib IIB T4 Gb
WW-008-0001	**HX5.EX-1.4.60.C6**	60 kg	20 g	800×800 mm	II 2G Ex ib IIB T4 Gb
WW-008-0002	**HX5.EX-1.4.150.C6**	150 kg	50 g	800×800 mm	II 2G Ex ib IIB T4 Gb
WW-008-0007	**HX5.EX-1.4.150.C7**	150 kg	50 g	1000×1000 mm	II 2G Ex ib IIB T4 Gb
WW-008-0008	**HX5.EX-1.4.300.C7**	300 kg	100 g	1000×1000 mm	II 2G Ex ib IIB T4 Gb
WW-008-0011	**HX5.EX-1.4.300.C8**	300 kg	100 g	1200×1200 mm	II 2G Ex ib IIB T4 Gb
WW-008-0003	**HX5.EX-1.4.300.C6**	300 kg	100 g	800×800 mm	II 2G Ex ib IIB T4 Gb
WW-008-0004	**HX5.EX-1.4.600.C6**	600 kg	200 g	800×800 mm	II 2G Ex ib IIB T4 Gb
WW-008-0009	**HX5.EX-1.4.600.C7**	600 kg	200 g	1000×1000 mm	II 2G Ex ib IIB T4 Gb
WW-008-0012	**HX5.EX-1.4.600.C8**	600 kg	200 g	1200×1200 mm	II 2G Ex ib IIB T4 Gb
WW-008-0015	**HX5.EX-1.4.600.C8/9**	600 kg	200 g	1200×1500 mm	II 2G Ex ib IIB T4 Gb
WW-008-0018	**HX5.EX-1.4.600.C9**	600 kg	200 g	1500×1500 mm	II 2G Ex ib IIB T4 Gb
WW-008-0005	**HX5.EX-1.4.1500.C6**	1500 kg	500 g	800×800 mm	II 2G Ex ib IIB T4 Gb
WW-008-0010	**HX5.EX-1.4.1500.C7**	1500 kg	500 g	1000×1000 mm	II 2G Ex ib IIB T4 Gb
WW-008-0013	**HX5.EX-1.4.1500.C8**	1500 kg	500 g	1200×1200 mm	II 2G Ex ib IIB T4 Gb
WW-008-0016	**HX5.EX-1.4.1500.C8/9**	1500 kg	500 g	1200×1500 mm	II 2G Ex ib IIB T4 Gb
WW-008-0019	**HX5.EX-1.4.1500.C9**	1500 kg	500 g	1500×1500 mm	II 2G Ex ib IIB T4 Gb
WW-008-0022	**HX5.EX-1.4.3000.C10**	3000 kg	1000 g	1500×2000 mm	II 2G Ex ib IIB T4 Gb
WW-008-0024	**HX5.EX-1.4.3000.C11**	3000 kg	1000 g	2000×2000 mm	II 2G Ex ib IIB T4 Gb
WW-008-0014	**HX5.EX-1.4.3000.C8**	3000 kg	1000 g	1200×1200 mm	II 2G Ex ib IIB T4 Gb
WW-008-0017	**HX5.EX-1.4.3000.C8/9**	3000 kg	1000 g	1200×1500 mm	II 2G Ex ib IIB T4 Gb
WW-008-0020	**HX5.EX-1.4.3000.C9**	3000 kg	1000 g	1500×1500 mm	II 2G Ex ib IIB T4 Gb
WW-008-0021	**HX5.EX-1.4.6000.C9**	6000 kg	2000 g	1500×1500 mm	II 2G Ex ib IIB T4 Gb
WW-008-0023	**HX5.EX-1.4.6000.C10**	6000 kg	2000 g	1500×2000 mm	II 2G Ex ib IIB T4 Gb
WW-008-0025	**HX5.EX-1.4.6000.C11**	6000 kg	2000 g	2000×2000 mm	II 2G Ex ib IIB T4 Gb

Stainless Steel Platform Scales, Pit Version



Product Code	Model	Max. capacity	Readability	Weighing pan dimensions	ATEX Certification
WW-008-0026	**HX5.EX-1.4.60.H6/Z**	60 kg	20 g	800×800 mm	II 2G Ex ib IIB T4 Gb
WW-008-0027	**HX5.EX-1.4.150.H6/Z**	150 kg	50 g	800×800 mm	II 2G Ex ib IIB T4 Gb
WW-008-0030	**HX5.EX-1.4.150.H7/Z**	150 kg	50 g	1000×1000 mm	II 2G Ex ib IIB T4 Gb
WW-008-0034	**HX5.EX-1.4.300.H8/Z**	300 kg	100 g	1200×1200 mm	II 2G Ex ib IIB T4 Gb
WW-008-0028	**HX5.EX-1.4.300.H6/Z**	300 kg	100 g	800×800 mm	II 2G Ex ib IIB T4 Gb
WW-008-0031	**HX5.EX-1.4.300.H7/Z**	300 kg	100 g	1000×1000 mm	II 2G Ex ib IIB T4 Gb
WW-008-0029	**HX5.EX-1.4.600.H6/Z**	600 kg	200 g	800×800 mm	II 2G Ex ib IIB T4 Gb
WW-008-0032	**HX5.EX-1.4.600.H7/Z**	600 kg	200 g	1000×1000 mm	II 2G Ex ib IIB T4 Gb
WW-008-0035	**HX5.EX-1.4.600.H8/Z**	600 kg	200 g	1200×1200 mm	II 2G Ex ib IIB T4 Gb
WW-008-0033	**HX5.EX-1.4.1500.H7/Z**	1500 kg	500 g	1000×1000 mm	II 2G Ex ib IIB T4 Gb
WW-008-0036	**HX5.EX-1.4.1500.H8/Z**	1500 kg	500 g	1200×1200 mm	II 2G Ex ib IIB T4 Gb
WW-008-0037	**HX5.EX-1.4.3000.H8/Z**	3000 kg	1000 g	1200×1200 mm	II 2G Ex ib IIB T4 Gb



Product Code	Model	Max. capacity	Readability	Weighing pan dimensions	ATEX Certification
WW-008-0038	**HX5.EX-1.4.300.H8/9/Z**	300 kg	100 g	1200×1500 mm	II 2G Ex ib IIB T4 Gb
WW-008-0042	**HX5.EX-1.4.300.H9/Z**	300 kg	100 g	1500×1500 mm	II 2G Ex ib IIB T4 Gb
WW-008-0039	**HX5.EX-1.4.600.H8/9/Z**	600 kg	200 g	1200×1500 mm	II 2G Ex ib IIB T4 Gb
WW-008-0043	**HX5.EX-1.4.600.H9/Z**	600 kg	200 g	1500×1500 mm	II 2G Ex ib IIB T4 Gb
WW-008-0047	**HX5.EX-1.4.600.H10/Z**	600 kg	200 g	1500×2000 mm	II 2G Ex ib IIB T4 Gb
WW-008-0048	**HX5.EX-1.4.1500.H10/Z**	1500 kg	500 g	1500×2000 mm	II 2G Ex ib IIB T4 Gb
WW-008-0040	**HX5.EX-1.4.1500.H8/9/Z**	1500 kg	500 g	1200×1500 mm	II 2G Ex ib IIB T4 Gb
WW-008-0044	**HX5.EX-1.4.1500.H9/Z**	1500 kg	500 g	1500×1500 mm	II 2G Ex ib IIB T4 Gb
WW-008-0049	**HX5.EX-1.4.3000.H10/Z**	3000 kg	1000 g	1500×2000 mm	II 2G Ex ib IIB T4 Gb
WW-008-0041	**HX5.EX-1.4.3000.H8/9/Z**	3000 kg	1000 g	1200×1500 mm	II 2G Ex ib IIB T4 Gb
WW-008-0045	**HX5.EX-1.4.3000.H9/Z**	3000 kg	1000 g	1500×1500 mm	II 2G Ex ib IIB T4 Gb
WW-008-0050	**HX5.EX-1.4.6000.H10/Z**	6000 kg	2000 g	1500×2000 mm	II 2G Ex ib IIB T4 Gb
WW-008-0046	**HX5.EX-1.4.6000.H9/Z**	6000 kg	2000 g	1500×1500 mm	II 2G Ex ib IIB T4 Gb

Pallet Scales

Product Code	Model	Max. capacity	Readability	Weighing pan dimensions	ATEX Certification
WW-008-0051	**HX5.EX-1.4P.600.C**	600 kg	200 g	840×1200 mm	II 2G Ex ib IIB T4 Gb
WW-008-0052	**HX5.EX-1.4P.1500.C**	1500 kg	500 g	840×1200 mm	II 2G Ex ib IIB T4 Gb
WW-008-0053	**HX5.EX-1.4P.3000.C**	3000 kg	1000 g	840×1200 mm	II 2G Ex ib IIB T4 Gb

Beam Scales

Product Code	Model	Max. capacity	Readability	Weighing pan dimensions	ATEX Certification
WW-008-0054	**HX5.EX-1.4P2.600.C**	600 kg	200 g	2 pcs 1,2 m	II 2G Ex ib IIB T4 Gb
WW-008-0055	**HX5.EX-1.4P2.1500.C**	1500 kg	500 g	2 pcs 1,2 m	II 2G Ex ib IIB T4 Gb
WW-008-0057	**HX5.EX-1.4P2.2000.C1**	2000 kg	1000 g	2 pcs 2 m	II 2G Ex ib IIB T4 Gb
WW-008-0060	**HX5.EX-1.4P2.2000.C2**	2000 kg	1000 g	2 pcs 2,5 m	II 2G Ex ib IIB T4 Gb
WW-008-0056	**HX5.EX-1.4P2.3000.C**	3000 kg	1000 g	2 pcs 1,2 m	II 2G Ex ib IIB T4 Gb
WW-008-0061	**HX5.EX-1.4P2.4000.C2**	4000 kg	2000 g	2 pcs 2,5 m	II 2G Ex ib IIB T4 Gb
WW-008-0058	**HX5.EX-1.4P2.4000.C1**	4000 kg	2000 g	2 pcs 2 m	II 2G Ex ib IIB T4 Gb
WW-008-0059	**HX5.EX-1.4P2.6000.C1**	6000 kg	2000 g	2 pcs 2 m	II 2G Ex ib IIB T4 Gb
WW-008-0062	**HX5.EX-1.4P2.6000.C2**	6000 kg	2000 g	2 pcs 2,5 m	II 2G Ex ib IIB T4 Gb

Technical Specification

Hazardous Area Endangered with Gas and Dust Explosion

High Resolution Platforms

Product Code	Model	Max. capacity	Readability	Repeatability	Weighing pan dimensions	ATEX Certification
WX-009-0281	**PL.16.HRP.EX.H**	16 kg	0.1 g	0.1 g	360×280 mm	II 3G Ex ic IIC T4 Gc II 3D Ex ic IIIC T60°C Dc
WX-009-0270	**PL.32.HRP.EX.H**	32 kg	0.1 g	0.1 g	360×280 mm	II 3G Ex ic IIC T4 Gc II 3D Ex ic IIIC T60°C Dc

Product Code	Model	Max. capacity	Readability	Repeatability	Weighing pan dimensions	ATEX Certification
WX-009-0282	**PL.62.HRP.EX.H**	62 kg	0.5 g	0.3 g	500×500 mm	II 3G Ex ic IIC T4 Gc II 3D Ex ic IIIC T60°C Dc
WX-009-0283	**PL.120.HRP.EX.H**	120 kg	1 g	0.6 g	500×500 mm	II 3G Ex ic IIC T4 Gc II 3D Ex ic IIIC T60°C Dc

Product Code	Model	Max. capacity	Readability	Repeatability	Weighing pan dimensions	ATEX Certification
WX-009-0284	**PL.150.HRP.EX.H**	150 kg	1 g	1.5 g	800×600 mm	II 3G Ex ic IIC T4 Gc II 3D Ex ic IIIC T60°C Dc
WX-009-0285	**PL.300.HRP.EX.H**	300 kg	2 g	3 g	800×600 mm	II 3G Ex ic IIC T4 Gc II 3D Ex ic IIIC T60°C Dc

Product Code	Model	Max. capacity	Readability	Repeatability	Weighing pan dimensions	ATEX Certification
WX-009-0286	**PL.300.1.HRP.EX.H**	300 kg	2 g	3 g	1000×800 mm	II 3G Ex ic IIC T4 Gc II 3D Ex ic IIIC T60°C Dc
WX-009-0287	**PL.600.HRP.EX.H**	600 kg	5 g	7.5 g	1000×800 mm	II 3G Ex ic IIC T4 Gc II 3D Ex ic IIIC T60°C Dc
WX-009-0288	**PL.1100.HRP.EX.H**	1100 kg	10 g	15 g	1000×800 mm	II 3G Ex ic IIC T4 Gc II 3D Ex ic IIIC T60°C Dc
WX-009-0289	**PL.2000.HRP.EX.H**	2000 kg	20 g	30 g	1250×1000 mm	II 3G Ex ic IIC T4 Gc II 3D Ex ic IIIC T60°C Dc

Load-Cell Platform Scales

Product Code	Model	Max. capacity	Readability	Weighing pan dimensions	ATEX Certification
WW-007-0001	**HX5.EX-1.3.HR2**	3 kg	1 g	250×300 mm	II 2G Ex ib IIC T4 Gb II 2D Ex ib IIIC T135°C Db
WW-007-0002	**HX5.EX-1.6.HR2**	6 kg	2 g	250×300 mm	II 2G Ex ib IIC T4 Gb II 2D Ex ib IIIC T135°C Db
WW-007-0003	**HX5.EX-1.15.HR2**	15 kg	5 g	250×300 mm	II 2G Ex ib IIC T4 Gb II 2D Ex ib IIIC T135°C Db
WW-007-0004	**HX5.EX-1.30.HR2**	30 kg	10 g	250×300 mm	II 2G Ex ib IIC T4 Gb II 2D Ex ib IIIC T135°C Db

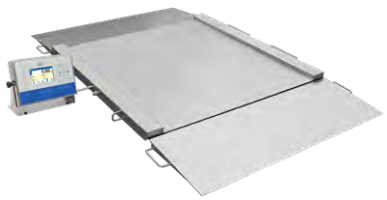
Product Code	Model	Max. capacity	Readability	Weighing pan dimensions	ATEX Certification
WW-007-0005	**HX5.EX-1.6.HR3**	6 kg	2 g	410×410 mm	II 2G Ex ib IIC T4 Gb II 2D Ex ib IIIC T135°C Db
WW-007-0014	**HX5.EX-1.15.HR3/5**	15 kg	5 g	400×600 mm	II 2G Ex ib IIC T4 Gb II 2D Ex ib IIIC T135°C Db
WW-007-0006	**HX5.EX-1.15.HR3**	15 kg	5 g	410×410 mm	II 2G Ex ib IIC T4 Gb II 2D Ex ib IIIC T135°C Db
WW-007-0010	**HX5.EX-1.15.HR4**	15 kg	5 g	500×500 mm	II 2G Ex ib IIC T4 Gb II 2D Ex ib IIIC T135°C Db
WW-007-0018	**HX5.EX-1.15.HR5**	15 kg	5 g	600×600 mm	II 2G Ex ib IIC T4 Gb II 2D Ex ib IIIC T135°C Db
WW-007-0011	**HX5.EX-1.30.HR4**	30 kg	10 g	500×500 mm	II 2G Ex ib IIC T4 Gb II 2D Ex ib IIIC T135°C Db
WW-007-0019	**HX5.EX-1.30.HR5**	30 kg	10 g	600×600 mm	II 2G Ex ib IIC T4 Gb II 2D Ex ib IIIC T135°C Db
WW-007-0007	**HX5.EX-1.30.HR3**	30 kg	10 g	410×410 mm	II 2G Ex ib IIC T4 Gb II 2D Ex ib IIIC T135°C Db
WW-007-0015	**HX5.EX-1.30.HR3/5**	30 kg	10 g	400×600 mm	II 2G Ex ib IIC T4 Gb II 2D Ex ib IIIC T135°C Db
WW-007-0012	**HX5.EX-1.60.HR4**	60 kg	20 g	500×500 mm	II 2G Ex ib IIC T4 Gb II 2D Ex ib IIIC T135°C Db
WW-007-0020	**HX5.EX-1.60.HR5**	60 kg	20 g	600×600 mm	II 2G Ex ib IIC T4 Gb II 2D Ex ib IIIC T135°C Db
WW-007-0005	**HX5.EX-1.60.HR3**	60 kg	20 g	410×410 mm	II 2G Ex ib IIC T4 Gb II 2D Ex ib IIIC T135°C Db
WW-007-0016	**HX5.EX-1.60.HR3/5**	60 kg	20 g	400×600 mm	II 2G Ex ib IIC T4 Gb II 2D Ex ib IIIC T135°C Db
WW-007-0013	**HX5.EX-1.150.HR4**	150 kg	50 g	500×500 mm	II 2G Ex ib IIC T4 Gb II 2D Ex ib IIIC T135°C Db
WW-007-0021	**HX5.EX-1.150.HR5**	150 kg	50 g	600×600 mm	II 2G Ex ib IIC T4 Gb II 2D Ex ib IIIC T135°C Db
WW-007-0009	**HX5.EX-1.150.HR3**	150 kg	50 g	410×410 mm	II 2G Ex ib IIC T4 Gb II 2D Ex ib IIIC T135°C Db
WW-007-0017	**HX5.EX-1.150.HR3/5**	150 kg	40 g	400×600 mm	II 2G Ex ib IIC T4 Gb II 2D Ex ib IIIC T135°C Db

Stainless Steel 4-Load-Cell Platform Scales

Product Code	Model	Max. capacity	Readability	Weighing pan dimensions	ATEX Certification
WW-009-0001	**HX5.EX-1.4.60.H6**	60 kg	20 g	800×800 mm	II 2G Ex ib IIC T4 Gb II 2D Ex ib IIIC T135°C Db
WW-009-0002	**HX5.EX-1.4.150.H6**	150 kg	50 g	800×800 mm	II 2G Ex ib IIC T4 Gb II 2D Ex ib IIIC T135°C Db
WW-009-0005	**HX5.EX-1.4.150.H7**	150 kg	50 g	1000×1000 mm	II 2G Ex ib IIC T4 Gb II 2D Ex ib IIIC T135°C Db
WW-009-0009	**HX5.EX-1.4.300.H8**	300 kg	100 g	1200×1200 mm	II 2G Ex ib IIC T4 Gb II 2D Ex ib IIIC T135°C Db
WW-009-0017	**HX5.EX-1.4.300.H9**	300 kg	100 g	1500×1500 mm	II 2G Ex ib IIC T4 Gb II 2D Ex ib IIIC T135°C Db
WW-009-0003	**HX5.EX-1.4.300.H6**	300 kg	100 g	800×800 mm	II 2G Ex ib IIC T4 Gb II 2D Ex ib IIIC T135°C Db

Product Code	Model	Max. capacity	Readability	Weighing pan dimensions	ATEX Certification
WW-009-0013	**HX5.EX-1.4.300.H8/9**	300 kg	100 g	1200×1500 mm	II 2G Ex ib IIC T4 Gb II 2D Ex ib IIIC T135°C Db
WW-009-0006	**HX5.EX-1.4.300.H7**	300 kg	100 g	1000×1000 mm	II 2G Ex ib IIC T4 Gb II 2D Ex ib IIIC T135°C Db
WW-009-0007	**HX5.EX-1.4.600.H7**	600 kg	200 g	1000×1000 mm	II 2G Ex ib IIC T4 Gb II 2D Ex ib IIIC T135°C Db
WW-009-0014	**HX5.EX-1.4.600.H8/9**	600 kg	200 g	1200×1500 mm	II 2G Ex ib IIC T4 Gb II 2D Ex ib IIIC T135°C Db
WW-009-0010	**HX5.EX-1.4.600.H8**	600 kg	200 g	1200×1200 mm	II 2G Ex ib IIC T4 Gb II 2D Ex ib IIIC T135°C Db
WW-009-0018	**HX5.EX-1.4.600.H9**	600 kg	200 g	1500×1500 mm	II 2G Ex ib IIC T4 Gb II 2D Ex ib IIIC T135°C Db
WW-009-0004	**HX5.EX-1.4.600.H6**	600 kg	200 g	800×800 mm	II 2G Ex ib IIC T4 Gb II 2D Ex ib IIIC T135°C Db
WW-009-0022	**HX5.EX-1.4.600.H10**	600 kg	200 g	1500×2000 mm	II 2G Ex ib IIC T4 Gb II 2D Ex ib IIIC T135°C Db
WW-009-0023	**HX5.EX-1.4.1500.H10**	1500 kg	500 g	1500×2000 mm	II 2G Ex ib IIC T4 Gb II 2D Ex ib IIIC T135°C Db
WW-009-0008	**HX5.EX-1.4.1500.H7**	1500 kg	500 g	1000×1000 mm	II 2G Ex ib IIC T4 Gb II 2D Ex ib IIIC T135°C Db
WW-009-0015	**HX5.EX-1.4.1500.H8/9**	1500 kg	500 g	1200×1500 mm	II 2G Ex ib IIC T4 Gb II 2D Ex ib IIIC T135°C Db
WW-009-0011	**HX5.EX-1.4.1500.H8**	1500 kg	500 g	1200×1200 mm	II 2G Ex ib IIC T4 Gb II 2D Ex ib IIIC T135°C Db
WW-009-0019	**HX5.EX-1.4.1500.H9**	1500 kg	500 g	1500×1500 mm	II 2G Ex ib IIC T4 Gb II 2D Ex ib IIIC T135°C Db
WW-009-0024	**HX5.EX-1.4.3000.H10**	3000 kg	1000 g	1500×2000 mm	II 2G Ex ib IIC T4 Gb II 2D Ex ib IIIC T135°C Db
WW-009-0012	**HX5.EX-1.4.3000.H8**	3000 kg	1000 g	1200×1200 mm	II 2G Ex ib IIC T4 Gb II 2D Ex ib IIIC T135°C Db
WW-009-0020	**HX5.EX-1.4.3000.H9**	3000 kg	1000 g	1500×1500 mm	II 2G Ex ib IIC T4 Gb II 2D Ex ib IIIC T135°C Db
WW-009-0016	**HX5.EX-1.4.3000.H8/9**	3000 kg	1000 g	1200×1500 mm	II 2G Ex ib IIC T4 Gb II 2D Ex ib IIIC T135°C Db
WW-009-0025	**HX5.EX-1.4.6000.H10**	6000 kg	2000 g	1500×2000 mm	II 2G Ex ib IIC T4 Gb II 2D Ex ib IIIC T135°C Db
WW-009-0021	**HX5.EX-1.4.6000.H9**	6000 kg	2000 g	1500×1500 mm	II 2G Ex ib IIC T4 Gb II 2D Ex ib IIIC T135°C Db

Stainless Steel Ramp Scales



Product Code	Model	Max. capacity	Readability	Weighing pan dimensions	ATEX Certification
WW-009-0026	HX5.EX-1.4N.60.H1	60 kg	20 g	840×860 mm	II 2G Ex ib IIC T4 Gb II 2D Ex ib IIIC T135°C Db
WW-009-0027	HX5.EX-1.4N.150.H1	150 kg	50 g	840×860 mm	II 2G Ex ib IIC T4 Gb II 2D Ex ib IIIC T135°C Db
WW-009-0033	HX5.EX-1.4N.150.H2	150 kg	50 g	1100×1200 mm	II 2G Ex ib IIC T4 Gb II 2D Ex ib IIIC T135°C Db
WW-009-0031	HX5.EX-1.4N.300.H2	300 kg	100 g	1100×1200 mm	II 2G Ex ib IIC T4 Gb II 2D Ex ib IIIC T135°C Db
WW-009-0034	HX5.EX-1.4N.300.H3	300 kg	100 g	1200×1500 mm	II 2G Ex ib IIC T4 Gb II 2D Ex ib IIIC T135°C Db
WW-009-0028	HX5.EX-1.4N.300.H1	300 kg	100 g	840×860 mm	II 2G Ex ib IIC T4 Gb II 2D Ex ib IIIC T135°C Db
WW-009-0037	HX5.EX-1.4N.300.H4	300 kg	100 g	1500×1500 mm	II 2G Ex ib IIC T4 Gb II 2D Ex ib IIIC T135°C Db
WW-009-0032	HX5.EX-1.4N.600.H2	600 kg	200 g	1100×1200 mm	II 2G Ex ib IIC T4 Gb II 2D Ex ib IIIC T135°C Db
WW-009-0035	HX5.EX-1.4N.600.H3	600 kg	200 g	1200×1500 mm	II 2G Ex ib IIC T4 Gb II 2D Ex ib IIIC T135°C Db
WW-009-0029	HX5.EX-1.4N.600.H1	600 kg	200 g	840×860 mm	II 2G Ex ib IIC T4 Gb II 2D Ex ib IIIC T135°C Db
WW-009-0038	HX5.EX-1.4N.600.H4	600 kg	200 g	1500×1500 mm	II 2G Ex ib IIC T4 Gb II 2D Ex ib IIIC T135°C Db
WW-009-0039	HX5.EX-1.4N.1500.H4	1500 kg	500 g	1500×1500 mm	II 2G Ex ib IIC T4 Gb II 2D Ex ib IIIC T135°C Db
WW-009-0033	HX5.EX-1.4N.1500.H2	1500 kg	500 g	1100×1200 mm	II 2G Ex ib IIC T4 Gb II 2D Ex ib IIIC T135°C Db
WW-009-0036	HX5.EX-1.4N.1500.H3	1500 kg	500 g	1200×1500 mm	II 2G Ex ib IIC T4 Gb II 2D Ex ib IIIC T135°C Db

Stainless Steel Pallet Scales

Product Code	Model	Max. capacity	Readability	Weighing pan dimensions	ATEX Certification
WW-009-0040	HX5.EX-1.4P.600.H	600 kg	200 g	860×1200 mm	II 2G Ex ib IIC T4 Gb II 2D Ex ib IIIC T135°C Db
WW-009-0041	HX5.EX-1.4P.1500.H	1500 kg	500 g	860×1200 mm	II 2G Ex ib IIC T4 Gb II 2D Ex ib IIIC T135°C Db
WW-009-0042	HX5.EX-1.4P.3000.H	3000 kg	1000 g	860×1200 mm	II 2G Ex ib IIC T4 Gb II 2D Ex ib IIIC T135°C Db

Stainless Steel Beam Scales

Product Code	Model	Max. capacity	Readability	Weighing pan dimensions	ATEX Certification
WW-009-0043	HX5.EX-1.4P2.600.H	600 kg	200 g	2 pcs 1,2 m	II 2G Ex ib IIC T4 Gb II 2D Ex ib IIIC T135°C Db
WW-009-0044	HX5.EX-1.4P2.1500.H	1500 kg	500 g	2 pcs 1,2 m	II 2G Ex ib IIC T4 Gb II 2D Ex ib IIIC T135°C Db
WW-009-0049	HX5.EX-1.4P2.2000.H2	2000 kg	1000 g	2 pcs 2,5 m	II 2G Ex ib IIC T4 Gb II 2D Ex ib IIIC T135°C Db
WW-009-0046	HX5.EX-1.4P2.2000.H1	2000 kg	1000 g	2 pcs 2 m	II 2G Ex ib IIC T4 Gb II 2D Ex ib IIIC T135°C Db
WW-009-0045	HX5.EX-1.4P2.3000.H	3000 kg	1000 g	2 pcs 1,2 m	II 2G Ex ib IIC T4 Gb II 2D Ex ib IIIC T135°C Db
WW-009-0050	HX5.EX-1.4P2.4000.H2	4000 kg	2000 g	2 pcs 2,5 m	II 2G Ex ib IIC T4 Gb II 2D Ex ib IIIC T135°C Db
WW-009-0047	HX5.EX-1.4P2.4000.H1	4000 kg	2000 g	2 pcs 2 m	II 2G Ex ib IIC T4 Gb II 2D Ex ib IIIC T135°C Db
WW-009-0048	HX5.EX-1.4P2.6000.H1	6000 kg	2000 g	2 pcs 2 m	II 2G Ex ib IIC T4 Gb II 2D Ex ib IIIC T135°C Db
WW-009-0051	HX5.EX-1.4P2.6000.H2	6000 kg	2000 g	2 pcs 2,5 m	II 2G Ex ib IIC T4 Gb II 2D Ex ib IIIC T135°C Db

Technical Specification

Communication Module

Product Code	**Model**	Protection class	interfaces	ATEX Certification
WX-016-0133	**IM01.EX-1**	IP 66 / IP 68 (1.5m)	2x RS232, USB, 4 IN, 4 OUT (digital), Ethernet	II (2)G [Ex ib] IIC Gb II (2)D [Ex ib] IIIC Db
WX-016-0134	**IM01.EX-2**	IP 66 / IP 68 (1.5m)	2x RS232,USB,4 IN, 4 OUT (digital), Ethernet, Analog output 4-20mA/0-10V	II (2)G [Ex ib] IIC Gb II (2)D [Ex ib] IIIC Db
WX-016-0135	**IM01.EX-3**	IP 66 / IP 68 (1.5m)	2x RS232, USB, Ethernet, 12 IN, 12 OUT (digital)	II (2)G [Ex ib] IIC Gb II (2)D [Ex ib] IIIC Db
WX-016-0136	**IM01.EX-4**	IP 66 / IP 68 (1.5m)	2x RS232, USB, 4 IN, 4 OUT (digital), Ethernet, Profibus DP	II (2)G [Ex ib] IIC Gb II (2)D [Ex ib] IIIC Db
WX-016-0137	**IM01.EX-5**	IP 66 / IP 68 (1.5m)	2x RS232, USB, 4 IN, 4 OUT (digital), PROFINET	II (2)G [Ex ib] IIC Gb II (2)D [Ex ib] IIIC Db
WX-016-0140	**IM01.EX-8**	IP 66 / IP 68 (1.5m)	2x RS232, USB, 4 IN, 4 OUT (digital), Ethernet, PROFINET, RS485	II (2)G [Ex ib] IIC Gb II (2)D [Ex ib] IIIC Db
-WX-016-0170	**IM01.EX-9**	IP 66 / IP 68 (1.5m)	2x RS232, USB, 4 IN, 4 OUT (digital), ETHERNET IP	II (2)G [Ex ib] IIC Gb II (2)D [Ex ib] IIIC Db

Technical Specification

Intrinsically Safe Power Supply Intended for Ex Scale

Product Code	**Model**	Protection class	Power consumption	Compatible	Working in zones	ATEX Certification
WX-004-0215	**PM01.EX-1**	IP66 / IP68	15 W	HX5.EX indicator	Operation in hazardous area	II 2G Ex eb mb [ib] IIC T4 Gb II 2D Ex tb [ib] IIIC T70°C Db
WX-004-0203	**PM01.EX-2**	IP66 / IP68	15 W	HX5.EX indicator	Operation outside hazardous area	II (2)G [Ex ib Gb] IIC II (2)D [Ex ib Db] IIIC
WX-004-0257	**PM02.EX-1-2**	IP66 / IP68	15 W	HRP.EX	Operation in hazardous area	II 2G Ex eb mb [ib] IIC T4 Gb II 2D Ex tb [ib] IIIC T70°C Db
WX-004-0258	**PM02.EX-2-2**	IP66 / IP68	15 W	HRP.EX	Operation outside hazardous area	II (2)G [Ex ib Gb] IIC II (2)D [Ex ib Db] IIIC

Compact design
High measurement precision
Easy integration with measuring devices
and into a production line

Magnetoelectric Weighing Modules

PROFESSIONAL HIGH RESOLUTION MODULES FOR LABOLATORY

www.radwag.com

MAGNETOELECTRIC WEIGHING MODULES

Possibility of installation at any place Cooperation with peripheral devices

High Resolution

High resolution is the characteristic feature of the advanced line of MAS, MPS and MUYA weighing modules. Their operation is based on an EMFC converter. the modules are intended to be a component of laboratory workstations and to be integrated into production lines.

Ease of Integration

MAS and MPS's designs enable fast and easy installation at any surface. a weighing terminal is connected to the modules with up to 5-metre long cable facilitating ergonomics of use. Both modules offer option of under-pan weighing.

Precise Measurement

Auto adjustment system ensures accuracy even under changing ambient conditions. the most precise measurement is guaranteed thanks to repeatability of sd <=1d*.

Customized Control Panels

Weighing modules are offered with R or Y control panels. the first one has been equipped with LCD and its functionality is equal to functionality of a standard laboratory balance. the second is a multifunctional weighing terminal providing you with applications such as formulations, checkweighing, SQC and differential weighing.

Databases and Alibi Memory

Both panels, R and Y, feature internal databases of products and operators. the databases are secure thanks to implemented modules of Alibi Memory. the panels, being functional devices, provide you with option of easy data import and export.

Communication Interfaces

Offered range of available interfaces enables connecting the printer, fast transfer of data using USB flash drive and cooperation with PC software.

* repeatability is expressed as standard deviation from 10 weighing cycles

Module designed for special tasks
Simple integration into a production line
Fast and precise measurement

Magnetoelectric Weighing Modules

PROFESSIONAL MODULES INTENDED FOR INDUSTRY

www.radwag.com

MAGNETOELECTRIC WEIGHING MODULES

Adaptation to Industrial Environment Cooperation with External Devices

Vast Max Capacity Range

Magnetoelectric weighing modules are intended for mass measurement ranging from 2g to 35kg. Minimum readability of 0.01g guarantees amazing accuracy for your measurement.

Ease of Installation

Compact dimensions and ergonomic installation handles enable easy and fast integration of the module into a production line. Innovative internal design allows control of automation systems installed directly on a weighing pan. Applied solution, i.e. system transferring electric signal to the weighing platform, eliminates necessity to feed external cables disturbing the weighing process.

Fast and Precise Measurement

High measurement accuracy with sd=1d* guarantees both readout of real weighing results and repeatability of indications. Cutting-edge design solutions provide fast measurement which is an asset allowing to install the module on automated production lines. Intended for fast and dynamic measuring processes the weighing module's converter throughput is 3200 meas./s **.

Internal Auto-Adjustment

A built-in system of automatic internal adjustment guarantees correct weighing results even for the highest readability. Adjustment is carried out within specified time intervals or with reference to a schedule, it can also be triggered by temperature change. Option of adjustment time setup enables adapting adjustment processes to production line schedule.

Protection Against Challenging Conditions

Hermetic versions of modules feature stainless steel housing with IP65. This allows operation even in the most challenging conditions. Mechanical design lacks sharp edges and gaps which ensures adherence to HACCP, GMP and FDA standards for safety and quality of operation.

Cooperation with Terminals

Connecting the module to a multifunctional weighing terminal expands communication interfaces range and increases usage in industrial applications.

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

Technical Specification
Laboratory Modules

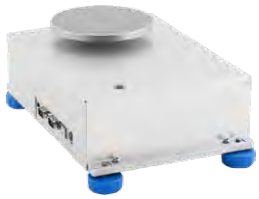
Modules MAS

Product Code	Model	Max. capacity	Readability	Repeatability	Weighing pan dimensions
WX-016-0066	**MAS 220**	220 g	0.1 mg	0.1 mg	ø42 mm
WX-016-0067	**MAS 220.R**	220 g	0.1 mg	0.1 mg	ø42 mm

Modules MAS1

Product Code	Model	Max. capacity	Readability	Repeatability	Weighing pan dimensions
WX-016-0146	**MAS.1.21**	21 g	0.01 mg	0.012 mg	ø33 mm
WX-016-0147	**MAS.1.21.R**	21 g	0.01 mg	0.012 mg	ø33 mm
WX-016-0149	**MAS.1.51**	51 g	0.01 mg	0.012 mg	ø33 mm
WX-016-0150	**MAS.1.51.R**	51 g	0.01 mg	0.012 mg	ø33 mm
WX-016-0164	**MAS.1.82/220**	82 / 220 g	0.01 / 0.1 mg	0.02 mg	ø42 mm
WX-016-0165	**MAS.1.82/220.R**	82 / 220 g	0.01 / 0.1 mg	0.02 mg	ø42 mm

Modules MPS



Product Code	Model	Max. capacity	Readability	Repeatability	Weighing pan dimensions
WX-016-0235	**MPS 2000**	2000 g	1 mg	0.5 mg	ø115 mm
WX-016-0237	**MPS 2000.R**	2000 g	1 mg	0.5 mg	ø115 mm
WX-016-0069	**MPS 6000**	6000 g	10 mg	15 mg	ø115 mm
WX-016-0070	**MPS 6000.R**	6000 g	10 mg	15 mg	ø115 mm

Modules MUYA

Product Code	Model	Max. capacity	Readability	Repeatability	Weighing pan dimensions
WX-016-0112	**MUYA 2.4Y**	2.1 g	0.1 µg	0.25 µg	ø16 mm
WX-016-0113	**MUYA 5.4Y**	5.1 g	1 µg	0.7 µg	ø26 mm

Technical Specification
Industrial Modules

Modules MWSH

Product Code	Model	Max. capacity	Readability	Repeatability	Weighing pan dimensions
WX-016-0108	**MWLH 10**	10 kg	0.01 g	0.01 g	212×174 mm
WX-016-0109	**MWLH 25**	25 kg	0.1 g	0.1 g	212×174 mm
WX-016-0110	**MWLH 30**	30 kg	0.1 g	0.1 g	212×174 mm

Modules MWMH

Product Code	Model	Max. capacity	Readability	Repeatability	Weighing pan dimensions
WX-016-0061	**MWMH 100-1**	1 kg	0.1 g	0.01 g	212×174 mm
WX-016-0216	**MWMH 100-2**	1 kg	0.1 g	0.01 g	212×174 mm
WX-016-0217	**MWMH 100-3**	1 kg	0.1 g	0.01 g	212×174 mm
WX-016-0218	**MWMH 100-4**	1 kg	0.1 g	0.01 g	212×174 mm
WX-016-0083	**MWMH 200-1**	2 kg	0.2 g	0.1 g	212×174 mm
WX-016-0220	**MWMH 200-2**	2 kg	0.2 g	0.1 g	212×174 mm
WX-016-0221	**MWMH 200-3**	2 kg	0.2 g	0.1 g	212×174 mm
WX-016-0222	**MWMH 200-4**	2 kg	0.2 g	0.1 g	212×174 mm
WX-016-0114	**MWMH 500-1**	5 kg	0.5 g	0.1 g	212×174 mm
WX-016-0224	**MWMH 500-2**	5 kg	0.5 g	0.1 g	212×174 mm
WX-016-0225	**MWMH 500-3**	5 kg	0.5 g	0.1 g	212×174 mm
WX-016-0226	**MWMH 500-4**	5 kg	0.5 g	0.1 g	212×174 mm
WX-016-0229	**MWMH 1000-3**	10 kg	1 g	0.1 g	212×174 mm
WX-016-0230	**MWMH 1000-4**	10 kg	1 g	0.1 g	212×174 mm
WX-016-0062	**MWMH 1000-1**	10 kg	1 g	0.1 g	212×174 mm
WX-016-0228	**MWMH 1000-2**	10 kg	1 g	0.1 g	212×174 mm

Modules MWLH 10

Product Code	Model	Max. capacity	Readability	Repeatability	Weighing pan dimensions
WX-016-0106	**MWSH 6000**	6000 g	0.01 g	15 mg	100×100 mm

PRODUCT CATALOGUE

ADVANCED WEIGHING TECHNOLOGIES

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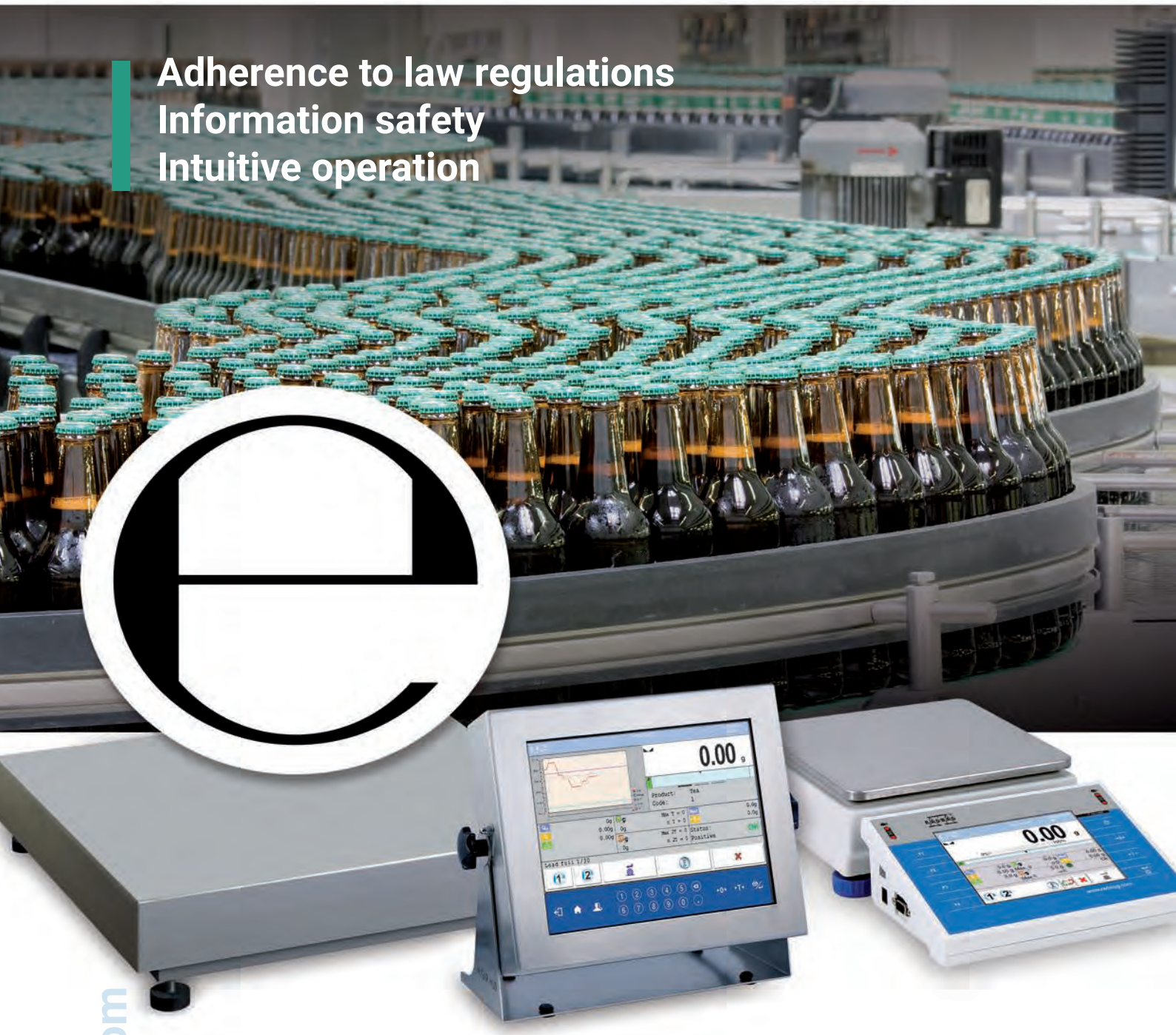
RADWAG®

Adherence to law regulations
Information safety
Intuitive operation



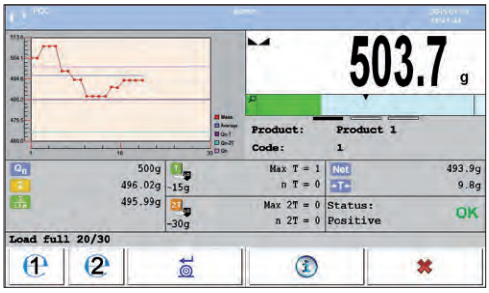
PGC

Prepackaged Goods Control

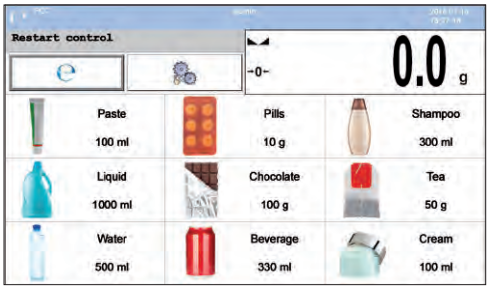
STATISTICAL CONTROL

www.radwag.com

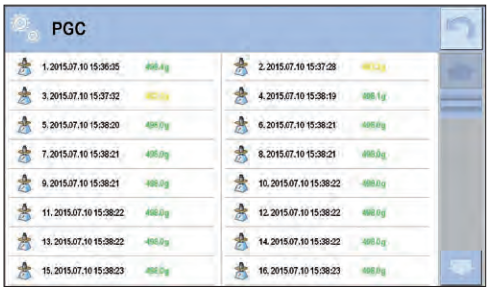
Law-accordant and internal control criteria Non-destructive and destructive control



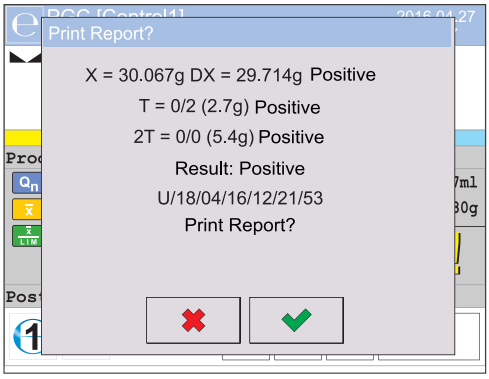
PGC control, HY10.PGC.H



HY10.PGC.H Scale's Home Screen



PGC weighings carried out by means of HY10.PGC.H scale



Control completion screen on WLY/PGC and WPY/PGC scales

Versatile Use of PGC Control Scales

PGC control scales are used in food, chemical, pharmaceutical and cosmetic industry wherever statistical control is a must.

Adherence to International Law Regulations

Software accordant with Polish law on prepackaged goods control, PGC Law of 7th May 2009 (OJ No. 91, item 740), Directive 76/211/EEC and WELMEC 6.4 Guide titled "Guide for Packers and Importers of e-marked Prepacked Products".

Innovative Solutions for Control Scales

PGC control scales have been equipped with high-tech colour touchscreen providing perfect readability even in low light conditions. Clear menu arrangement improves performance and adds to maximum comfort of operation.

Independent Operation of PGC Scales

PGC scales operation is based on local database whereas computer database is a source of information on operators, products and time schedules for scales cooperating in a network.

Authorized Access Control

Access levels to particular functions, defined individually for particular users, prevent interference of unauthorized operators.

Databases Management

Option of adding, deleting, and editing local products, operators and time schedules database.

Safe Mechanisms for Data Record and Storage

Upon control completion final report featuring all necessary data is saved. Control and average tares reports can be printed or recorded to USB flash drive.

User-friendly Interface

At each control stage important control-related information is displayed, with this comfort of operation is guaranteed.

Optimization and Production Cost Reduction

Declaring tolerance high threshold allowing to maintain control over product giveaway.

Internal Criteria

PGC scales offer option of carrying out control in accordance with internal criteria, including tolerance thresholds. the said option enables adaptation of the whole control process to internal regulations and operations performed by the customer.

Various Methods of Batch Assessment

Using the scale it is possible to perform control by means of few methods (non-destructive average tare, non-destructive empty-full and destructive full-empty).

Performance Boost

The scale facilitates performance of two concurrent controls, restarted upon power supply loss.

Controls Schedule

Going according to a predefined control schedule or cyclic control of selected products within specified time interval.

Auto Reminders

By means of prompts displayed on a screen or on an external signaling device the scale reminds you about necessity to carry out a measurement in the course of control. You are also prompted when it is time to start the control.

Average Tare Estimation Module

An in-built tare estimation module enables performance of average tare control directly prior product control, it also facilitates cyclic supervision within predefined time interval.

PC Software
PGC Viewer

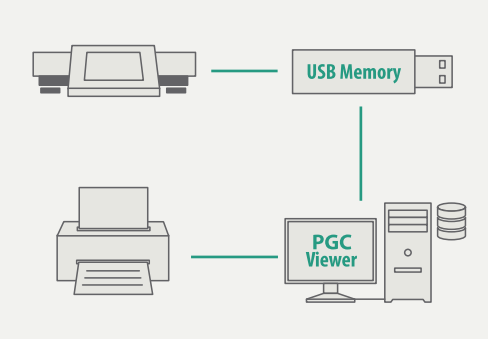
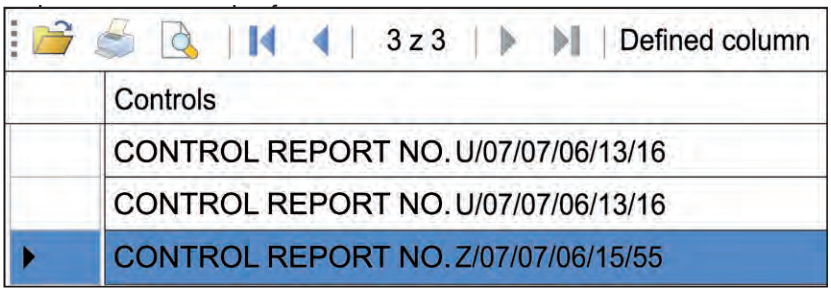


Diagram of data acquisition carried out by means of PGC Viewer

PGC Viewer is an application designed to support workstations for prepackaged goods control. Using the application you can preview and print reports on accomplished controls of prepackaged goods



PC Software PGC Viewer

E2R PGC
An integrated module

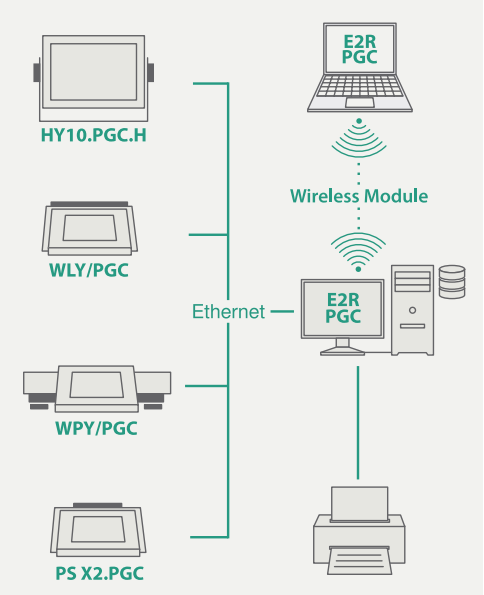


Diagram of E2R PGC system

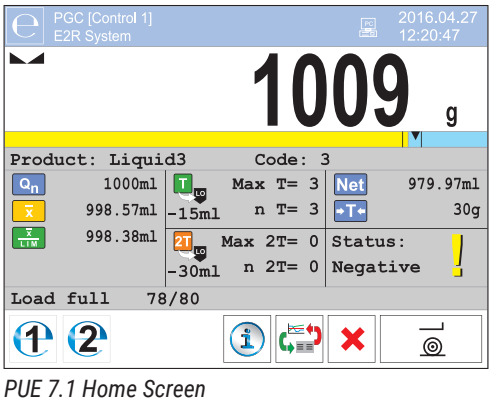
Modular E2R Software

E2R PGC module of a modern, fully integrated weighing system, E2R, is a tool providing you with maximum security. the system, due to innovative modules characteristic for their extensive functionality, enables automation, full support and control of the manufacturing processes.

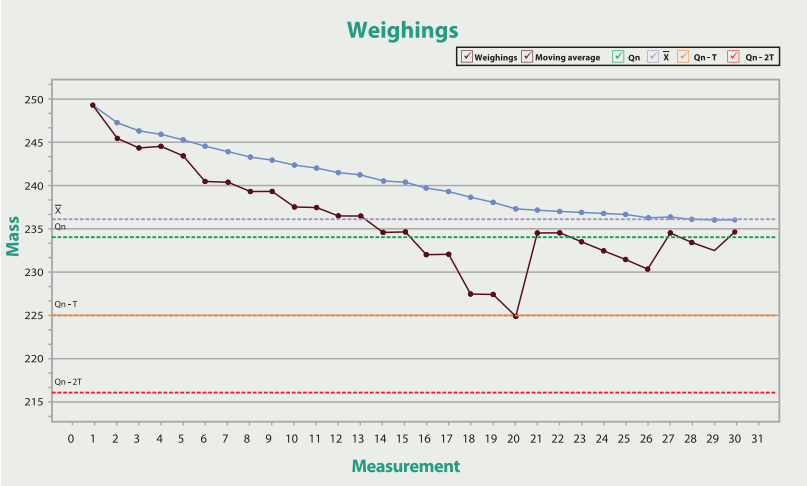
Advanced functions facilitate monitoring of current devices state, remote control start and preview of complex analysis, i.e. reports and charts, of archive controls.

Cutting-edge technology is a warranty of faultless system operation and stored data safety. Data recorded on a balance is sent to a computer database based on Microsoft SQL server. By means of E2R PGC application it is possible to control particular users access to the system.

When it comes to exchange of data, the system offers option of cooperation with external it systems. All the above plus user-friendly environment add to your comfort.



PUE 7.1 Home Screen



Online preview of measurements

PGC

Scales Dedicated for Prepackaged Goods Control

Scales for Statistical Control - Wide Range of Maximum Capacities
Max capacity of scales for statistical control ranges from 0.6g to 120kg, accuracy starts from 10mg.

Reliability and Hygiene in Challenging Working Conditions
Stainless steel mechanical design and IP68/69 in-use facilitate operation of HY10.PGC.H under challenging industrial conditions such as great dust and high humidity. These two characteristics make the scales meet high hygiene standards for food and pharmaceutical industries.

Ergonomics and Comfort of Operation
Due to compact and ergonomic design, access to the interfaces of WPY/PGC scales is convenient. the device can be operated using barcode reader, transponder card reader and IR sensors. This enables touch free operation of the workstation.

Redefined Accuracy
WLY/PGC series is intended for fast and precise mass measurement under both laboratory and industrial conditions, wherein the readability is even 0.01g.

Professional Weighing and the Highest Measurement Accuracy
With the highest possible weighing accuracy and measurement repeatability of d < 1, redefines quality of mass measurement. Control over the right scale's level is carried out by means of a semi-automatic levelling system. An in-built system for ambient conditions monitoring facilitates control of the workroom. As for the measurement accuracy it is provided with auto adjustment function.

Technical Specification

Packaged Goods Control Scales - Statistic Control

PS X2 Balances for PGC

Product Code	Model	Max. capacity	Readability	Weighing pan dimensions	Verification scale interval
WK-306-0005	**PS 750.X2.PGC**	750 g	0.01 g	128×128 mm	0,01 g

Product Code	Model	Max. capacity	Readability	Weighing pan dimensions	Verification scale interval
WK-306-0006	**PS 2100.X2.M.PGC**	2100 g	0.1 g	195×195 mm	0,1 g
WK-306-0007	**PS 4500.X2.M.PGC**	4500 g	0.1 g	195×195 mm	0,1 g
WK-306-0008	**PS 6100.X2.M.PGC**	6100 g	0.1 g	195×195 mm	0,1 g
WK-306-0009	**PS 8100.X2.M.PGC**	8100 g	0.1 g	195×195 mm	0,1 g

WLY Scales for PGC

Product Code	Model	Max. capacity	Readability	Weighing pan dimensions	Verification scale interval
WK-307-1034	**WLY 0.6/1.2/PGC/D2**	0.6 / 1.2 kg	0.1 / 0.2 g	195×195 mm	0,1 / 0,2 g
WK-307-1001	**WLY 3/6/PGC/D2**	3 / 6 kg	0.5 / 1 g	195×195 mm	0,5 / 1 g
WK-307-1040	**WLY 6/12/PGC/D2**	6 / 12 kg	1 / 2 g	195×195 mm	1 / 2 g

Product Code	Model	Max. capacity	Readability	Weighing pan dimensions	Verification scale interval
WK-307-1042	**WLY 6/12/PGC/F1/R**	6 / 12 kg	1 / 2 g	300×300 mm	1 / 2 g
WK-307-1041	**WLY 6/12/PGC/F1/K**	6 / 12 kg	1 / 2 g	300×300 mm	1 / 2 g

Product Code	Model	Max. capacity	Readability	Weighing pan dimensions	Verification scale interval
WK-307-0002	**WLY 60/PGC/C2/K**	60 kg	10 g	400×500 mm	10 g
WK-307-0001	**WLY 60/PGC/C2/R**	60 kg	10 g	400×500 mm	10 g
WK-307-1022	**WLY 60/120/PGC/C2/K**	60 / 120 kg	10 / 20 g	400×500 mm	10 / 20 g
WK-307-1021	**WLY 60/120/PGC/C2/R**	60 / 120 kg	10 / 20 g	400×500 mm	10 / 20 g

WPY Scales for PGC

Product Code	Model	Max. capacity	Readability	Weighing pan dimensions	Verification scale interval
WK-308-1046	**WPY 0.6/1.5/PGC/D2**	0.6 / 1.5 kg	0.2 / 0.5 g	195×195 mm	0.2 / 0.5 g
WK-308-1002	**WPY 1,5/3/PGC/D2**	1.5 / 3 kg	0.5 / 1 g	195×195 mm	0.5 / 1 g
WK-308-1003	**WPY 3/6/PGC/D2**	3 / 6 kg	1 / 2 g	195×195 mm	1 / 2 g

Product Code	Model	Max. capacity	Readability	Weighing pan dimensions	Verification scale interval
WK-308-1049	**WPY 3/6/PGC/F1/K**	3 / 6 kg	1 / 2 g	300×300 mm	1 / 2 g
WK-308-1050	**WPY 3/6/PGC/F1/R**	3 / 6 kg	1 / 2 g	300×300 mm	1 / 2 g
WK-308-1051	**WPY 6/15/PGC/F1/K**	6 / 15 kg	2 / 5 g	300×300 mm	2 / 5 g
WK-308-1052	**WPY 6/15/PGC/F1/R**	6 / 15 kg	2 / 5 g	300×300 mm	2 / 5 g
WK-308-1053	**WPY 15/30/PGC/F1/K**	15 / 30 kg	5 / 10 g	300×300 mm	5 / 10 g
WK-308-1054	**WPY 15/30/PGC/F1/R**	15 / 30 kg	5 / 10 g	300×300 mm	5 / 10 g

Product Code	Model	Max. capacity	Readability	Weighing pan dimensions	Verification scale interval
WK-308-1035	**WPY 15/30/PGC/C2/K**	15 / 30 kg	5 / 10 g	400×500 mm	5 / 10 g
WK-308-1036	**WPY 15/30/PGC/C2/R**	15 / 30 kg	5 / 10 g	400×500 mm	5 / 10 g
WK-308-1034	**WPY 30/60/PGC/C2/K**	30 / 60 kg	10 / 20 g	400×500 mm	10 / 20 g
WK-308-1033	**WPY 30/60/PGC/C2/R**	30 / 60 kg	10 / 20 g	400×500 mm	10 / 20 g

HY10.H Scales for PGC

Product Code	Model	Max. capacity	Readability	Weighing pan dimensions	Verification scale interval
WK-311-1002	**HY10.1,5/3.PGC.H1**	1.5 / 3 kg	0.5 / 1 g	150×200 mm	0,5 / 1 g
WK-311-1004	**HY10.3/6.PGC.H1**	3 / 6 kg	1 / 2 g	150×200 mm	1 / 2 g
WK-311-1006	**HY10.3/6.PGC.H2**	3 / 6 kg	1 / 2 g	250×300 mm	1 / 2 g
WK-311-1007	**HY10.6/15.PGC.H2**	6 / 15 kg	2 / 5 g	250×300 mm	2 / 5 g
WK-311-1008	**HY10.6/15.PGC.H3**	6 / 15 kg	2 / 5 g	410×410 mm	2 / 5 g
WK-311-1009	**HY10.15/30.PGC.H3**	15 / 30 kg	5 / 10 g	410×410 mm	5 / 10 g
WK-311-1005	**HY10.30/60.PGC.H3**	30 / 60 kg	10 / 20 g	410×410 mm	10 / 20 g

PRODUCT CATALOGUE

ADVANCED WEIGHING TECHNOLOGIES

www.radwag.com

Checkweighers

INNOVATIVE TECHNOLOGIES FOR INDUSTRY

Functionality

POSSIBILITIES AND ADVANTAGES OF RADWAG CHECKWEIGHERS

ADVANCED FUNCTIONALITY AND POSSIBILITIES FOR ENSURING MAXIMUM BENEFITS

RADWAG checkweighers have been designed to meet the highest demands of users.

Not only do they ensure control and optimization of the production process but also minimise loss and provide significant cost reductions.

Electromagnetic weighing module

Belt conveyors

PGC: Packaged Goods Control

The highest weighing precision and mass control

- 0.01 g accuracy.
- Electromagnetic module developed by Radwag.
- Dedicated solutions for pharmaceutical industry.

Throughput and speed

- Shorter operating time - greater line productivity.
- Minimisation of production downtime.
- Economy - raw material loss reduction.
- Impressive operating speed achieved thanks to Radwag's innovative technology.

High quality

- IP67 protection rate.
- Materials: AISI 304 or AISI 316 steel.
- Quick assembly and installation.
- The maintenance and cleaning process of the mechanical parts is simple and fast.
- Components protected against adverse external conditions.

Vast range of functions

- Data control and protection.
- Customisation of the control type according to user demands.
- 100% control of products.
- Batching processes control via feedback.
- Alibi storage.
- Interfaces: Ethernet, Profibus, USB, Wi-Fi.
- Multilingual, intuitive menu of the device.
- Multi-product.

Control process management: E2R system

- Option of creating multi-workstation networks.
- Keeping records of data stored in scales.
- Exporting data to external systems.

Production safety

- HACCP - food industry attestation for direct contact with food products.
- Protection of out-of-tolerance products that have been rejected.
- Protection of the scale moving elements.
- Removal of metallic impurities with the use of metal detectors.

Accordance with the quality standards

- MID - directive on measuring instruments.
- OIML R51 - in accordance with the test procedures.
- HACCP - system of hazard and critical control points analysis.
- PGC - accordance with the legal requirements of Packaged Goods Regulation.
- GMP - Good Manufacturing Practice.
- FDA - guidelines of US Food and Drug Administration (CFR21).

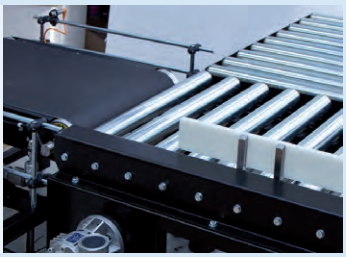
Modular construction

- Easily expandable.
- Light and sound signaling.
- individual selection of the discriminators and bins for out-of-tolerance products.
- Cooperation with metal detectors, label printers, bar code scanners, proximity card readers.

E2R system:
PC software
for process control
management

Pressure control
sensor

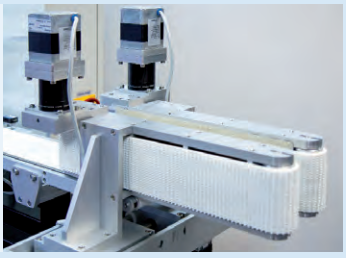
Line with belt
conveyors and
roller conveyors
with a pneumatic
rejecter



Open design,
offering simplicity
for maintenance
and cleaning

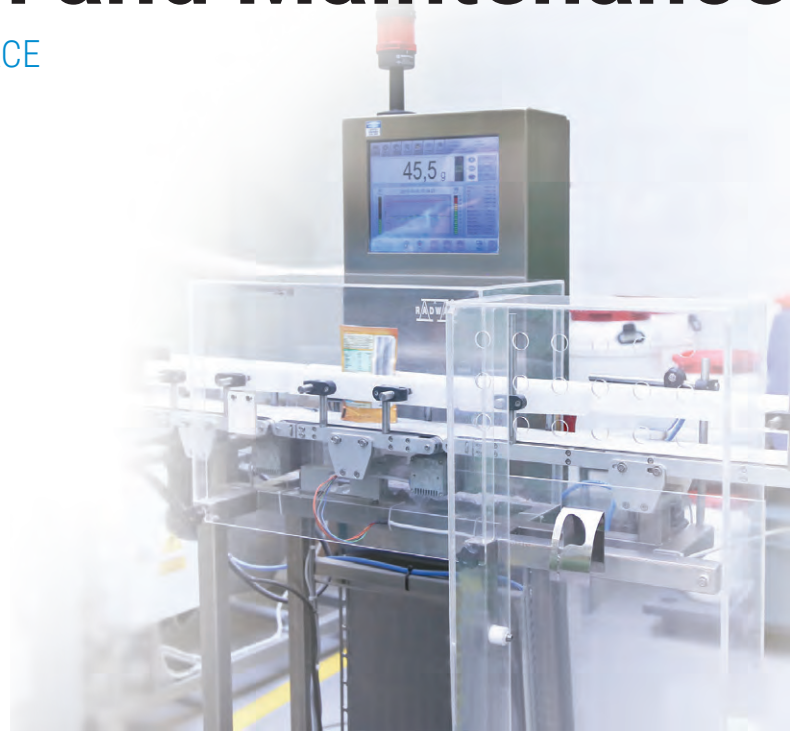
Metal and metallic
compounds detector

Vertical, flexible
system of side
guides used for
transporting bottles



Communication and Maintenance

SOFTWARE AND COMMUNICATION INTERFACE



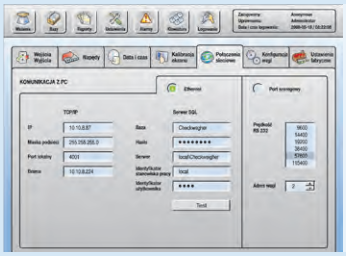
WIDE RANGE OF CONFIGURATION OPTIONS AND USER OPTIONS TOGETHER WITH THE SIMPLICITY OF MAINTENANCE

Large touch screen and intuitive, user friendly menu ensure ease of operation and quick way of completing specific tasks.

Interfaces: Ethernet RS 232 USB

Communication interfaces ports of DWM scales

Communication interfaces ports of DWM scales



Configuration window of network connections

Ethernet

- Full data exchange.
- Sending weighing records, databases, scales settings; real-time monitoring of scales operation.
- Communication realized both: via the communication protocol and at SQL Server database level.

USB

- Cooperation with mass storage devices, external drives etc.
- Exporting batch reports and weighing data.
- Software updates.

RS 232

- Cooperation with peripheral devices:
  - label and receipt printers,
  - thermal and ink-jet printers,
  - bar code readers.

PLC Controller

- Exchange of both: binary data or analogue operating signals.

The main window of the program

- Clear screen layout.
- Various views of the displayed data, user-configurable.
- Intuitive menu.
- Process progress indicators.
- Quick access to statistical data.
- Report export and data export directly from the scales..

Operating modes

- Various operating modes and systems of reporting:
  - statistical mode,
  - dynamic mode,
  - CPG control (conformable to Packaged Goods Regulation),
  - CPG control in accordance with custom criteria,
  - measurements registration.

Configuration

- Quick adaptation of scales to working conditions.
- Easy setup of belt speeds with the use of scrollbars.
- Configurable parameters of products rejection, signalization and cooperation with other production line devices (e.g. batchers).

Diagnostics

- Automatic control of all the systems and scale elements.
- Continuous control from the start of the device.
- Recording all errors and breakdowns in the error log.
- Control of other production line devices, with alarming function in the case of production disturbance.

Operators control

- Defining operators access rights.
- Multiple levels of access control for selected functions, defined by administrator.

Database system

- Database based on SQL system.
- Easy configuration and data exchange with computer systems.
- Start-up configuration of the pre-defined data enables immediate device initiation.
- Quick access to configuration settings.
- Reliability and failure-free operation.

The main weighing window with signalisation of the thresholds and statistics

Settings window of signal inputs and outputs

Settings window of drives operation and conveyors speed

Configuration window of faulty products rejecters

Database window for śassortment preview and selection

Database window for editing selected products

Versatile Possibilities

CHECKWEIGHERS WITH ELECTROMAGNETIC WEIGHING MODULE

Mechanical options

- Central control system.
- Conveyor systems adjusted to the user needs.
- Design adapted to existing production lines.
- Various lengths and width of the conveyors.
- Stainless steel or powder coated mild steel design.
- Optional equipment: metal detectors, barcode scanners, video cameras, extra display etc.
- Ingress Protection rating – IP 65/67.

Products separation systems

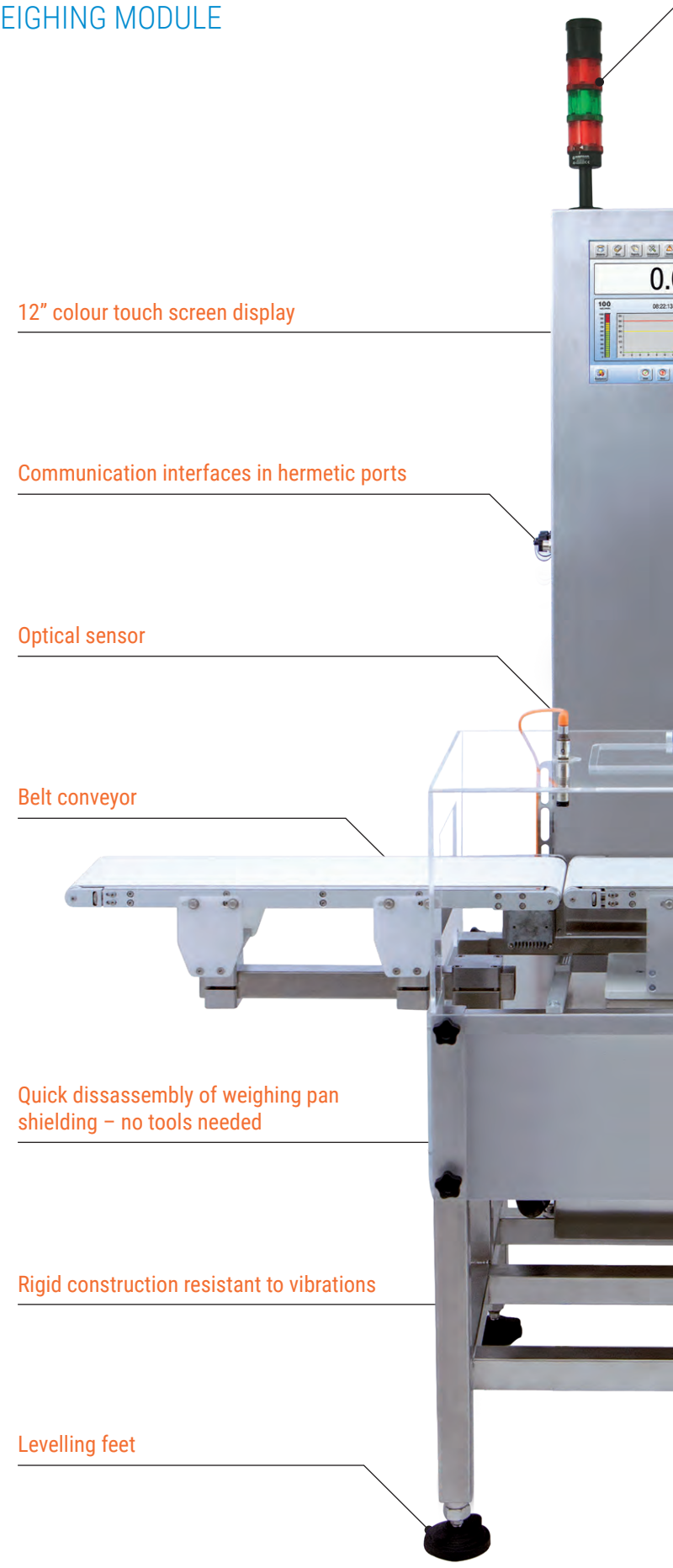
- Air-blast rejecter.
- Pneumatic pusher.
- Diverting arm.
- Drop belt rejecter.
- Production line stop.

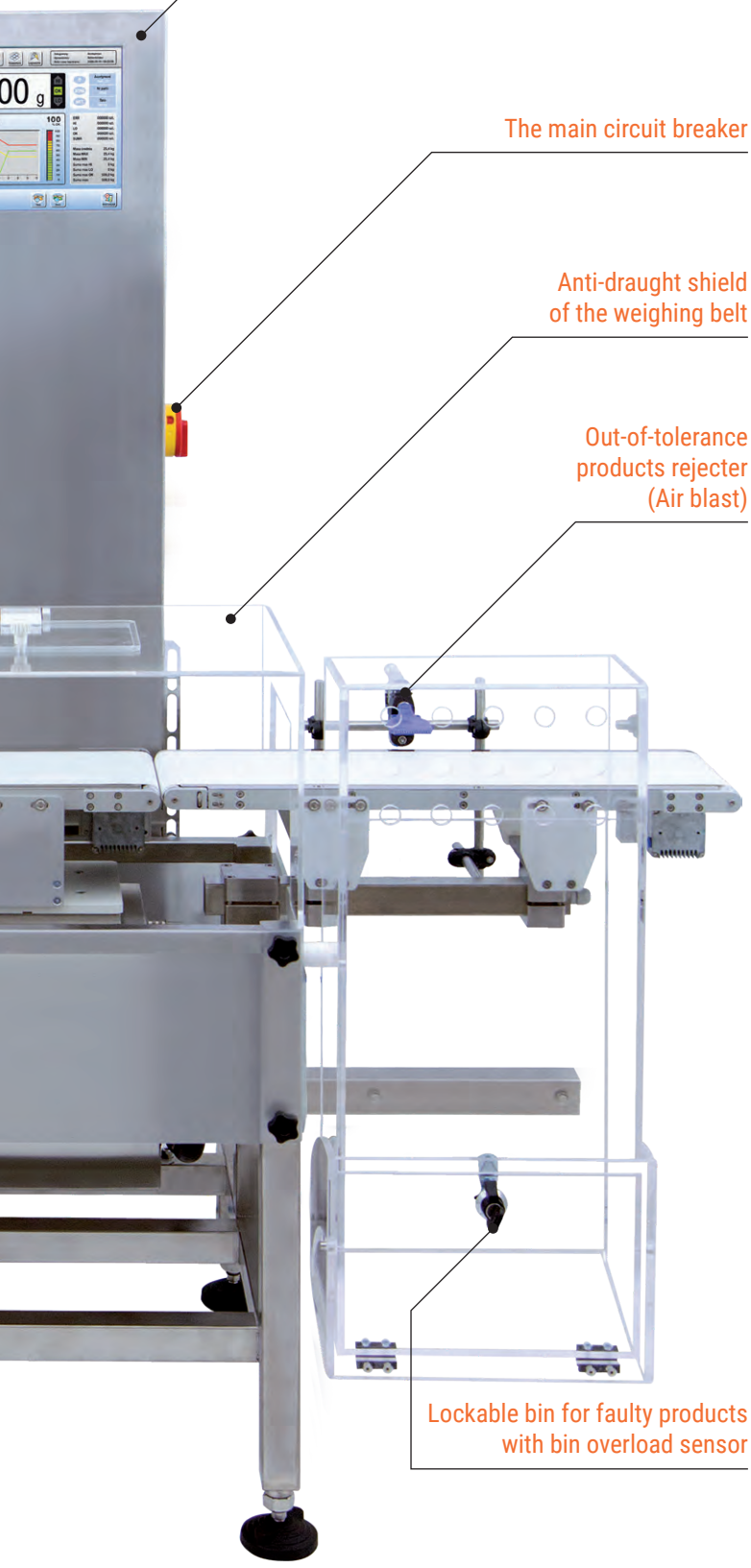
Communication

- USB mass storage devices.
- Implemented communication protocol.
- Cooperation with the thermal and ink-jet printer.
- Support for printers compatible with the Windows OS.
- Interfaces: Ethernet, USB, RS 232, optionally RS 422 and RS 485.
- Profibus DP.
- Data exchange at the SQL level.
- Extended I/O module.

Accesories

- Side guides.
- Transition plates between the conveyors.
- Slat band conveyors.
- Barcode readers support.
- Additional infeed conveyor systems
- Vertical speeding side guides.
- Table tops for rejected products.
- Storage bins.
- Roller conveyor tops.





Conformity with **MID Directive**

Tests in accordance with **OIML R51**

Control and safety systems

- Errors logging.
- Product flow control.
- Line productivity meter.
- Emergency power off system.
- Product rejection control.
- Breakdown signalisation output.
- Emergency stop input.
- Bin overload sensor.
- Downstream conveyor product jam sensor.
- Product length sensor.
- Products gap sensor.
- Servo motor position control.

Electrical options

- Faulty products stacklights.
- Mass range stacklights.
- Alarm and events audio signalling base.
- User conveyor control.
- Conveyors speed line regulation.
- Extra Inputs/Outputs.

Cooperation with the production line devices

- Communication with palletiser.
- Cooperation with batchers (settings error correction mode).
- Emergency line stop upon detection of faulty products.

Extra functions

- Extended statistical system.
- Reporting module.
- Extended PGC module.
- The product average mass control.
- Cooperation with E2R computer system.
- Complete auto diagnostics.
- Production line operation control.

Custom Made Design

INTENDED FOR PHARMACEUTICAL INDUSTRY

DWM

DYNAMIC SCALES WITH AN ELECTROMAGNETIC WEIGHING MODULE

The highest standard of manufacturing.
Unprecedented weighing speed and weighing accuracy!

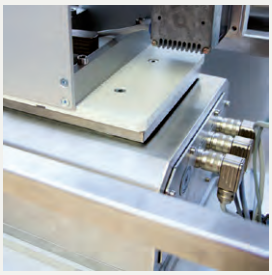
The scales are intended to control single loads of mass up to 7,5 kg. the scales are based on an industrial computer, and they are equipped with 12” colour touch screen.

Electromagnetic module provides extremely fast and accurate mass measurement.

Conformity with **MID** Directive
Tests in accordance with **OIML R51**

Specification

Throughput:	up to 500 items/minute
Weighing accuracy [d]:	0.01 g
Verification scale interval [e]:	0.1 g
Weighing range:	2 – 7500 g
Weighing module:	electromagnetic
Screen:	12” colour touch-screen
Operating system:	Windows XP Embedded
Database system:	SQL Server



Electromagnetic weighing module

Air blast rejecter

Ports (Ethernet, USB, RS 232)

Areas of use

- Packaged goods control.
- Complete 100% production process control.
- Production waste minimisation.
- Batchers control.
- Weighing of medical products, blisters, syrups etc.
- Inspection of production packaging.

Characteristics

- Type approval conformable to MID directive.
- Tests in accordance with OIML R51.
- AISI 304 or AISI 316 stainless steel design.
- Food industry attestation for direct contact with food products.
- Possibility of seamless integration of the checkweigher into existing production lines.
- Open construction, easy maintenance and cleaning.
- Wiring system designed inside conveyor frames.
- Quick disassembly of weighing pan shielding.
- Anti-draught shielding of the weighing belt (in accordance with industrial safety regulations).
- Lockable storage bin (conformable to HACCP).
- Extra conveyor systems for optimal product distribution.
- Static side guides system and mechanically driven guides system.
- Pressure control, line jam sensor and bin overload sensor.
- Complete system of auto diagnostics.
- Continuous control of all scales systems.
- Online monitoring of the technological process.

Conformity with **MID** Directive

Tests in accordance with **OIML R51**

DWT/HL

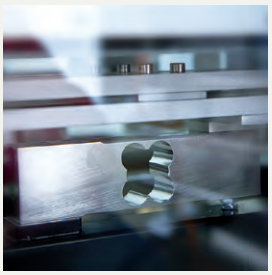
DYNAMIC SCALES WITH STRAIN GAUGE TRANSDUCER

The scales are intended for controlling single loads of mass up to 7,5 kg. the scales are based on the industrial computer, and they are equipped with 12” colour touch screen.

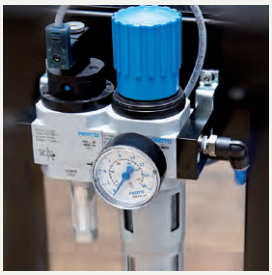
Load cell is a lower cost alternative of an electromagnetic system.

Specification

Throughput:	up to 180 items/minute
Weighing accuracy [d]:	0.2 g
Verification scale interval [e]:	0.2 g
Weighing range:	max 7500 g
Weighing module:	strain gauge
Screen:	12” colour touch-screen
Operating system:	Windows XP Embedded
Database system:	SQL Server



Strain gauge transducer



Compressed air service units

Lockable bin for the rejected products

Areas of use

- Packaged goods control.
- Complete 100% production process control.
- Production waste minimisation.
- Batchers control.
- Weighing of medical products, blisters, syrups etc.
- Inspection of production packaging.

Characteristics

- Type approval conformable to MID directive.
- Tests in accordance with OIML R51.
- AISI 304 or AISI 316 stainless steel design.
- Food industry attestation for direct contact with food products.
- Possibility of complete integration of the checkweigher into existing production lines.
- Open construction, easy maintenance and cleaning.
- Quick disassembly of weighing pan shielding.
- DWT/HL scales are lower cost alternative to DWM scales based on electromagnetic module, offering complete functionality for production lines where lower accuracy and weighing capacity is required.
- Weighing system is designed with the use of load cells and dedicated module for signal processing.

Universal Solutions

FOR WEIGHING PACKAGED PRODUCTS

DWT/RC

DYNAMIC SCALES INTENDED FOR LARGE-SIZED PRODUCTS

The scales are intended for controlling loads of mass up to 60 kg. The scales are based on the industrial computer, and they are equipped with 12” colour touch screen.

Checkweighers DWT/RC series are autonomous stations controlling mass of packages moving down the conveyor lines.

Conformity with MID Directive

Tests in accordance with OIML R51

Specification

Throughput:	up to 100 items/minute
Weighing accuracy [d]:	5 g
Weighing range:	max 60 kg
Weighing module:	strain gauge
Screen:	12” colour touch-screen
Operating system:	Windows XP Embedded
Database system:	SQL Server

Strain gauge transducer

Pneumatic rejecter

Quick coupling allowing easy detachment of conveyors

Areas of use

- Weighing of packaged products: sacks, boxes, multi-packs etc.
- The scales are intended for any kind of packaging lines and for the fishing industry fishing industry as well as the meat processing industry.
- Marking packages with the use of the ink-jet printers and labelling machines.
- Packaged Goods Control.
- Complete production process control.
- Batchers control.

Characteristics

- Type approval conformable to MID directive.
- Tests in accordance with OIML R51.
- AISI 304 or AISI 316 stainless steel design or powder coated mild steel design.
- Food industry attestation for direct contact with food products.
- Automatic sequencing of products gaps.
- Automatic identification of products with the use of bar code scanners.
- Cooperation with metal detectors.
- Light and sound signaling.
- Batchers operation control.
- Roller belt conveyors, modular belts.
- Open construction, easy maintenance and cleaning.
- Motor drive options: electric drum motors or motoreducers.

DWT/RC

DYNAMIC SCALES INTENDED FOR LARGE-SIZED PRODUCTS

The scales are intended for controlling loads of mass up to 60 kg, mostly packaged products.

Checkweighers DWT/RC series are single conveyor scales, intended for recording the weight of transported loads through cooperation with peripheral devices.

Specification

Throughput:	up to 100 items/minute
Weighing accuracy [d]:	5 g
Weighing range:	max 60 kg
Weighing module:	strain gauge
Screen:	12” or 5.7” colour touch-screen
Operating system:	Windows CE or XP Embedded
Database system:	SQL Server


Warning tower lights with a sounder


Belt conveyor


The main circuit breaker

Areas of use

- Cheese production lines.
- Meat processing lines.
- Integrated identification systems of mass and volume measurement in sorting lines of courier packages.
- Packaged Goods Control.
- Complete 100% production process control.
- Inspection of production packaging.

Characteristics

- Type approval conformable to MID directive.
- Tests in accordance with OIML R51.
- AISI 304 or AISI 316 stainless steel design or powder coated mild steel design.
- Automatic identification of products with the use of bar code scanners.
- Cooperation with the palletisers.
- Light and sound signaling.
- Batchers operation control.
- Roller belt conveyors, modular belts.
- Motor drive options: electric drum motors or motoreducers.
- Possibility of connection to the external safety systems.

Custom Made Solutions

FOR WEIGHING SPECIFIC PRODUCTS IN VARIOUS BRANCHES OF INDUSTRY

DWR

ROTATIONAL SCALES FOR CYLINDRICAL PRODUCTS

The scales are intended for controlling single loads of cylindrical items (jars, tubes, sprays, aerosols, bottles).

The checkweigher construction makes it a perfect solution for all the products with a small diameter of the base and a high centre of gravity.

Conformity with MID Directive

Tests in accordance with OIML R51

DWT/HL C

AUTOMATIC SCALES FOR THE CONFECTIONERY INDUSTRY

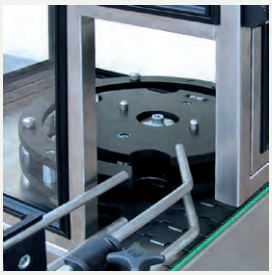
The scales are mostly intended for weighing wafers.

Special construction, where the weighing module is mounted over the conveyor line, keeps it clean (wafer, toppings and cream leftovers fall into the container placed under the conveyor).

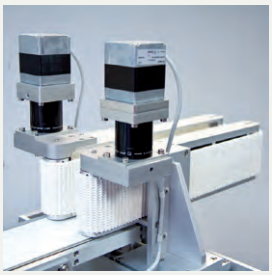
Metal detection

Installation of the tunnel metal detector allows detection of any impurities in the weighed products.

Metal and metal compounds detection is carried out, in motion, therefore, there is no need for stopping the conveyor belt. the report on the detector operation and the weighing report on the product series are combined.



Rotational feeder of cylindrical products

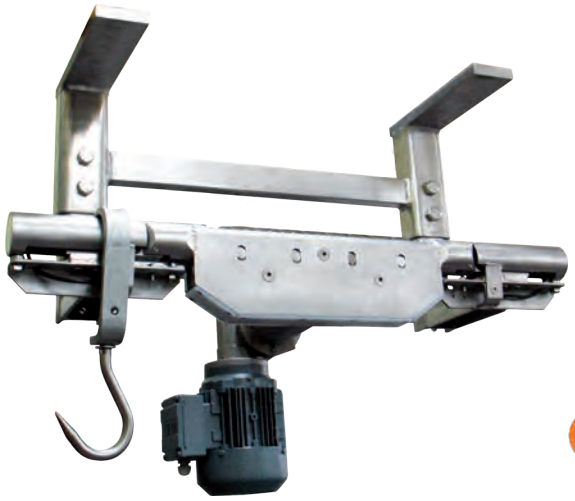


Side guides system for transporting bottles

Tunnel metal detector

Characteristics

- Type approval conformable to MID directive.
- Tests in accordance with OIML R51.
- AISI 304 or AISI 316 stainless steel design.
- Food industry attestation for direct contact with food products.
- Possibility of complete integration of the checkweigher into existing production lines.
- Custom-designed for a given product specification.
- Various systems of rejection.
- Quick disassembly of weighing pan shielding.
- Extra conveyor systems for optimal product distribution.
- Static side guides system and mechanically driven guides system.
- Pressure control, line jam sensor and bin overload sensor.
- Complete system of auto diagnostics.
- Continuous control of all scales systems.
- On-line monitoring of the technological process.



Conformity with **MID Directive**

Tests in accordance with **OIML R51**

DWT/RC K

AUTOMATIC OVERHEAD TRACK SCALES

Scales intended for the meat processing industry, they are used for processed animal products transport and weighing (carcass, half carcass, poultry etc.).

Special construction was designed to fit in the tracks of transport rails. the scales allows for unattended weighing in motion, without the need to stop the conveyor.

DWT/RC R

AUTOMATIC CONVEYOR SCALES

The scales are intended to control any type of large loads, mostly palletized products.

Wide range range of applications allows for the scales operation in numerous branches of industry.

Double-track scales

- The scales are intended for cooperation with a double-track batching and packing devices.
- Combination of two measuring systems in one construction allows for a close distance between the scales tracks, which not only makes the product distribution from the batching systems simple but also requires little space for the device.

Conveyor side guides

Stainless steel rejected products bin

Open construction, simplicity of maintenance and cleaning

Characteristics

- Type approval conformable to MID directive.
- Tests in accordance with OIML R51.
- AISI 304 or AISI 316 stainless steel design.
- Food industry attestation for direct contact with food products.
- Possibility of complete integration of the checkweigher into existing production.
- Extra conveyor systems for optimal product distribution.
- Complete system of auto-diagnostics.
- Continuous control of the scales systems.
- On-line monitoring of the technological process.

Software

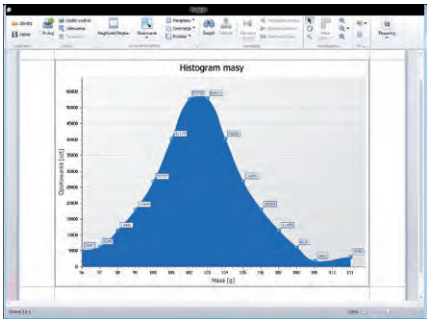
EXTENDED FUNCTIONALITY OF CHECKWEIGHERS

E2R Checkweighers

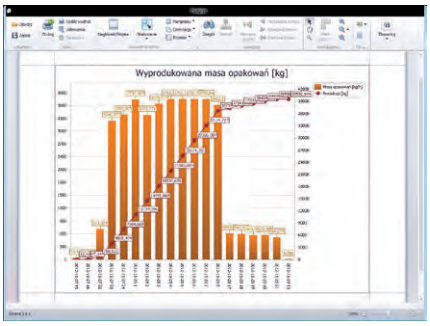
ADVANCED SOFTWARE MODULE OF E2R PRODUCTION MANAGEMENT SYSTEM

E2R system not only lowers the real cost of production and maintenance but also provides production process optimization.

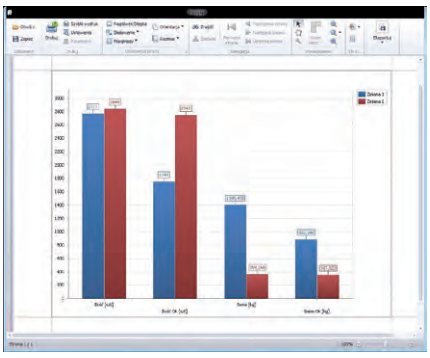
Numerous functions such as database synchronization, scales online status preview, storing measure-ments and advanced static reports of production process are available within one application only.



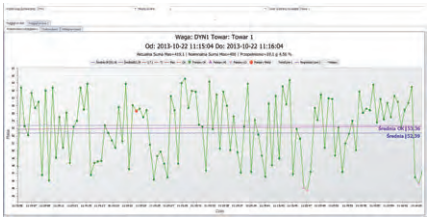
Mass histogram



Production report provided in weight units



Shift reporting of the production process



Linear weight diagram processed in real-time

Production efficiency coefficient preview

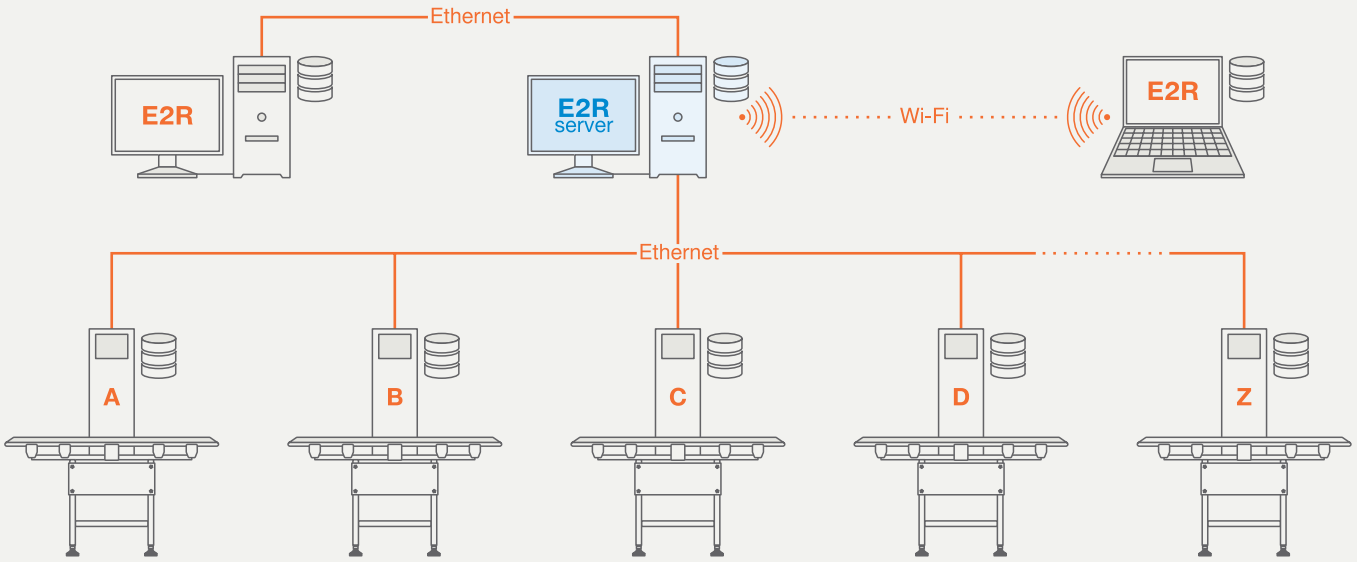
Specification

E2R Checkweighers is one of the modules within multifunctional E2R database computer sys-tem, which operates with any RADWAG scales. the module is intended for cooperation with RADWAG checkweighers. It communicates over Ethernet and is based on the SQL database.

Characteristics

- Real-time monitoring of multiple checkweighers in operation:
  - weight diagrams: linear, histogram, bargraph,
  - diagrams on quantity of items, efficiency diagrams,
  - current measurement readout and checkweigher settings.
- Adding, deleting and editing records:
  - for products,
  - for operators.
- Assigning the products to checkweighers.
- Defining access levels for multiple users.
- Storing weighments.
- Operation on a vast amount of data in a real time.
- Recorded weighments filtration according to:
  - operator name,
  - product batch,
  - product name,
  - weighing date,
  - net mass,
  - tare,
  - status.
- The sum of filtered weighments in the form of:
  - processed weighments sum,
  - processed weighments quantity,
  - average of processed weighments,
  - minimal measured mass,
  - maximal measured mass.
- Access to reports sent from the scales:
  - PGC report in accordance with legal regulations,
  - PGC report in accordance with custom criteria,
  - statistics report,
  - changeable products weighing report.
- Generating the recorded reports of:
  - average mass weighments with the overflow,
  - shift weighments,
  - hourly production weighments,
  - device effectiveness indicator (availability, efficiency, quality),
  - total production,
  - operating time, brakes and the scales status,
  - products metal impurity.
- Reports export to files:
  - PDF, HTML, MHT, RTF, XLS, CSV, TXT.

Functional scheme of the system



E2R system consists of:

- database server, where the management software is located,
- checkweighers operating in the production lines,
- ethernet network connecting the weighing workstations with the database server,
- clients workstations enabling both; a current preview of system operation and database edition.

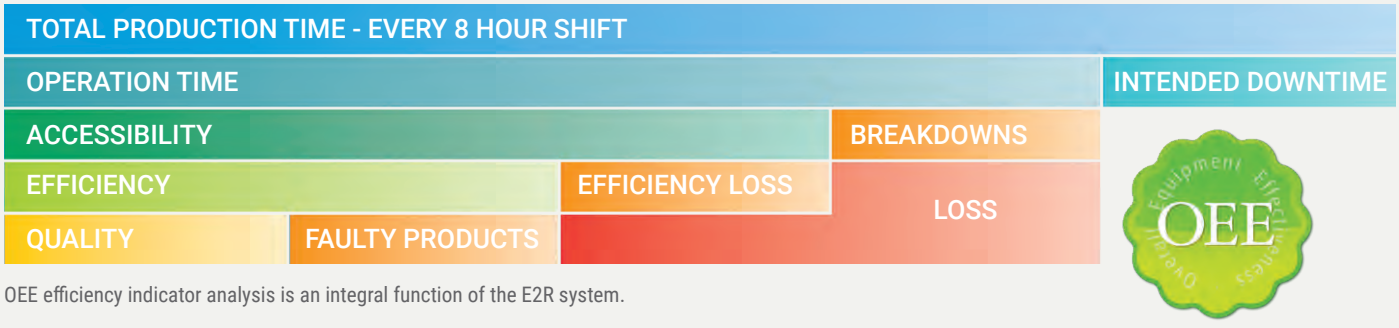
E2R Checkweighers module ensures:

- continuous control of checkweighers via computer network,
- option of wireless communication with the scales and their databases.

Characteristics

- **Extended reporting module** generated in accordance with legal regulations or the custom criteria.
- **Production process administration** through acquiring information on operational time, intended or unitended downtimes, production quality indicators, temporary line productivity etc.
- **On-line control of the production process** through the current access to:
  - weighing workstation on-line preview,
  - currently processed weighment diagram,
  - production bargraph,
  - normal (Gaussian) distribution,
  - throughput diagrams and analytical samples correctness diagrams.
- **Simple edition of databases** at the server level or at the level of any operating scales connected to the system.
- **Data compatibility** of all the system elements, provided by an option of automatic database updates.
- **Production process optimization** through the OEE efficiency indicator analysis and through the information about the line efficiency and production quality.
- **Data security ensured** thanks to:
  - authorized access to the server system and the checkweighers,
  - databases backup option.
- **Reliability of operation**:
  - reliable data storage system, allowing autonomous scales operation even during network or database server breakdowns,
  - scales real-time status preview, allowing for instant system failure detection.
- **Flexibility**:
  - Possibility of quick modification of both; the program interface and the reports layouts.
- **Scalability**:
  - simple modification of the system and expanding it with new weighing workstations without any necessity for stopping measurement recording,
  - possibility of numerous computer workstation connection within the system.

OEE efficiency indicator analysis



OEE efficiency indicator analysis is an integral function of the E2R system.

Validation

RADWAG OFFERS SUPPORT in VALIDATION OF CHECKWEIGHERS and WEIGHING SYSTEMS

The validation guarantees that the measurements errors will be within the defined criteria and that the scales will meet the expectations.

One of the validation processes is complete qualification:

Validation process is recommended by the Good Manufacturing Practice principles.

Technical Specification

Model	Max. capacity	Readability	Conveyor velocity	Protection class
Multi-Track DWM H2	750 ÷ 7500 g	0.1 ÷ 5 g	1.6 m/s	IP 55, IP 65
DWM HPE	1500 ÷ 7500 g	0.5 ÷ 5 g	1.6 m/s	-
DWM HPS	1500 ÷ 6000 g	0.5 ÷ 2 g	2.5 m/s	IP 65
DWM HPX	1500 ÷ 6000 g	1 ÷ 2 g	1.6 m/s	IP 69K
DWM	750 ÷ 7500 g	0.1 ÷ 1 g	1.6 m/s	IP 55, IP 65
DWR 1500 H1	600 ÷ 7500 g	0.2 ÷ 5 g	Capacity max 80 pcs/min	IP 55, IP 65
DWR 1500 H2	600 ÷ 7500 g	0.2 ÷ 5 g	Capacity max 160 pcs/min	IP 55, IP 65
DWT/HL HP	300 ÷ 6000 g	0.2 ÷ 2 g	1 m/s	-
DWT/HL/HPC	1500 ÷ 3000 g	1 ÷ 2 g	Capacity max 60 pcs/min	IP 55
DWT/RC	30 ÷ 75 kg	10 ÷ 50 g	1.7 m/s	IP 55/65
DWT/RC R	300 ÷ 6000 kg	0.1 ÷ 2 kg	0.5 m/s	IP 55/56

Installation of checkweigher based on implementation arrangements

What dimensions should your device have? What kind of products will you weigh on it? A scale configured in what way do you need? What conditions of operation will you provide for it? What devices, additional functions and interfaces should it have? How about accuracy? **Do you have special requests not covered above?**

Checkweigher is a personalized device. Before we design and manufacture it specifically for your order, we need to know what you expect from it. Among other things, we will ask you about the height of the weighing platform, the speed of the conveyor behind and in front of the scale, and the minimum distance between goods. Whether your product will be transported in regular gaps and what properties and form it has. Whether you need a verified scale, what it should be made of and how you would like it to be cleaned. Whether it will be used in a clean conditions or one with high moisture or high dustiness. Do you need a metal detector, a separation goods sensor, a feedback function to the batcher? A communication port, Ethernet, USB?

The list of possibilities we give you when implementing a checkweigher is endless.

PRODUCT CATALOGUE

ADVANCED WEIGHING TECHNOLOGIES

www.radwag.com

Mass Comparators

Automatic Vacuum

Mass Comparators

AVK-1000

Automatic Vacuum Mass Comparator

The AVK-1000 automatic vacuum mass comparator is mainly intended for national metrological institutes that transport and maintain the national reference mass standard of 1 kg.

Resolution of 10 billion units plus elimination of human error and other external factors due to the use of vacuum chamber effectively prevent any potential errors that may occur during the measurement.

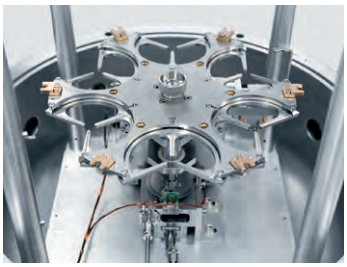
The comparator enables comparison of up to 6 artefacts of cylinder or sphere shape, and of max 1 kg mass, with repeatability of 0.5 µg and readability of 0.1 µg. Thanks to a suspended weighing pan, the eccentricity error being an effect of incorrectly positioned mass standard is eliminated.

A specially designed vacuum chamber enables carrying out measurements in a vacuum of 10(-6) mBar capacity or in atmosphere containing noble gases, also in constant pressure upon closing the system with use of the top-class quality valves.

LOAD LOCK mass standard transfer system enables switching or adding artefacts without changing the atmosphere inside the main chamber. Use of mass standard transfer chamber reduces time required for obtaining the respective value of vacuum to ca. 4 hours. the LOAD LOCK is equipped with a high-efficiency pump system and a top-class vacuum gauge. a specially designed inspection hole enables monitoring of the whole transfer process. Supplementing the AVK-1000 vacuum mass comparator with LOAD LOCK system significantly improves the comparison performance.

Used chamber enables comparison in vacuum of maximum $10^{(-6)}$ mBar or in noble gases such as argon.

The LOAD LOCK system for transfer of mass standards enables switching and adding artefacts without changing the atmosphere inside the main chamber.



The mass comparator features magazine for 6 cylindrical objects of Ø(22 - 95) x 110 mm or sphere objects of maximum diameter of Ø 100 mm.

Suspended weighing pan of custom design eliminates eccentricity errors and facilitates dropping the weight onto the magazine insert correctly.

Density Measurement
Mass Comparators

AGV

Automatic Comparators

RADWAG-designed AGV automatic comparator uses the most accurate method of determining density of mass standard. First, the mass standard is weighed in air and then in liquid of known density. Specially designed construction of the weighing pan minimizes the influence of surface tension of the liquid.

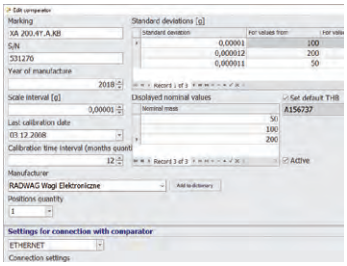
The comparator is equipped with a top-class thermometer of 0.001°C resolution and three temperature sensors. Measurement carried out in three points of the container (at the bottom, in the middle and near the surface) allows to assess the difference in temperature. With this, it is possible to mix and even the liquid temperature in the container. Otherwise, the density measurement results may be incorrect.

The comparator software enables to determine mass standards density and calculate uncertainty using a method according to OIML R111. it also allows to determine (verify) liquid density.

5.7" colour touch screen ensures comfort of comparator operation. Easy access to numerous applications and functions is ensured by home screen customization. the indicator is equipped with two programmable proximity sensors.

Special design of the insert ensures very high measuring range of the comparator (1g-1kg). it is also intended for comparison of silicone spheres.

The comparator features specially designed feeder to load and unload the maga-zine with mass standards.



Dedicated software for deter-mination of mass standard's density and volume.

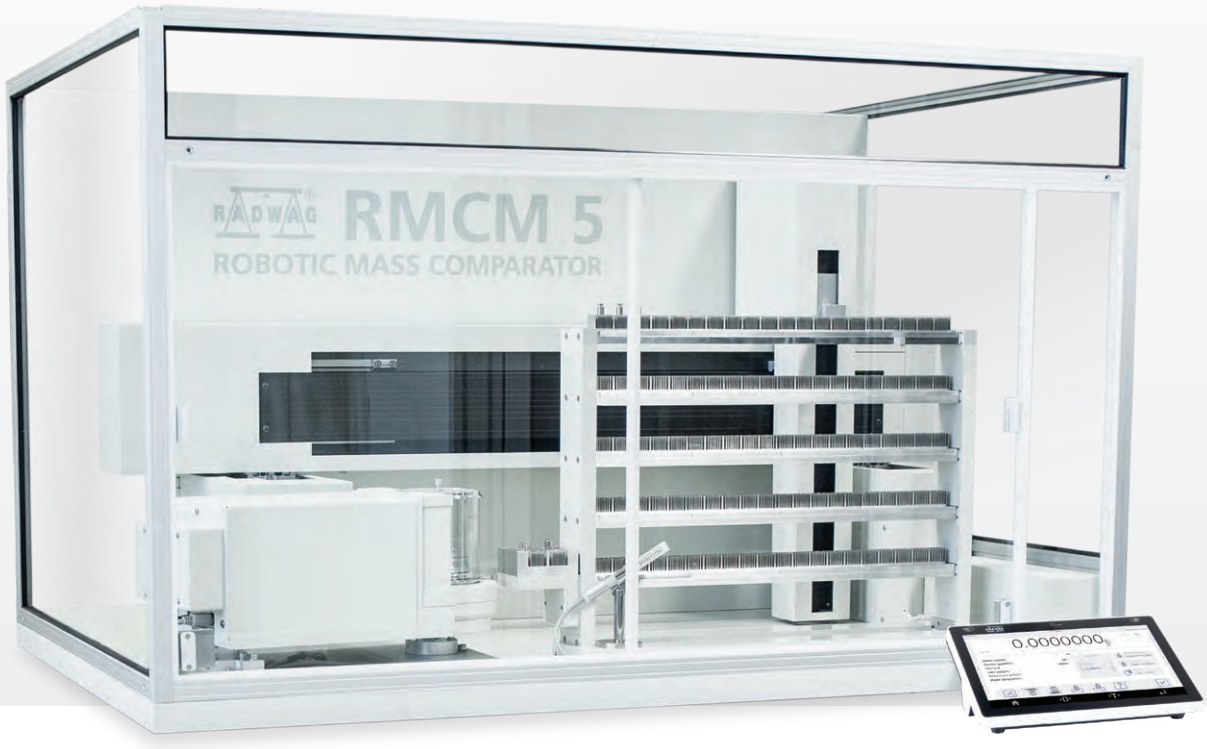
A weighing pan suspended on wires of 0.3 mm diameter significantly minimizes the eccentricity and eliminates the influence of liquid surface tension.

Mini Robotic

Mass Comparators

RMCM

Robotic Mass Comparators



The mass standard magazine offers up to 120 magazine positions.

The mass comparator facilitates a complete dissemination process.

Remote preview of comparison process in real time is possible thanks to a video camera.

The mass comparator allows real-time monitoring of ambient conditions.

Combination of the mass comparator and the robotic transport system has resulted with development of a new RADWAG mass comparator, the RMCM. the device is unique due to its compact dimensions and aesthetic look.

This combination brings a number of advantages:

- reduction of air drafts and vibrations from a robotic system in the course of comparison,
- minimised human error risk,
- compact dimensions,
- easier maintaining of stable environmental conditions inside the weighing chamber.

The mass comparator comes standard with a top-class thermo-hygro-barometer enabling real-time control of ambient conditions in three locations. The characteristic feature of the device is high readability of pressure, 0.001 hPa, humidity, 0.01 %, and temperature, 0.001 °C. Reliability of ambient conditions measurement carried out using the thermo-hygro-barometer is confirmed by a calibration certificate.

Mechanical design of the mass standard magazine insert allows measurement of extremely small mass with very high accuracy, and prevents weight jamming. the device enables comparison of weights of all shapes compliant with OIML recommendations, using just one universal insert.

Robotic
Mass Comparators

RMC

Robotic Mass Comparators

The new line of RADWAG-manufactured RMC robotic mass comparator ensures repeatability of measurements ranging from 1 g to 1 kg with readability of 0.1 µg. the device is equipped with two magazines, 100-position one and additional 2-position magazine enabling dissemination of the mass standard into maximum 3 mass standards (e.g. 50 g mass standard can be disseminated into 3 mass standards of 20 g, 20 g and 10 g). Locating additional magazine near mass comparator weighing pan significantly shortens the calibration process.

RMC robotic mass comparator, due to the elimination of the human factor, temperature changes and air drafts, guarantees excellent measurement repeatability. Intermediate mass standard magazine enables storing mass standards near the weighing pan. With this the calibration time is reduced to minimum.

Insert design of the mass standard magazine allows measurement of weight of very small mass with high accuracy and prevents weight jamming. the device enables comparison of weight of various shapes using just one universal insert.

RADWAG as the worldwide pioneer has adopted the possibilities of the automatic mass comparator into the robotic comparison system. This modern approach has improved comparison result repeatability by 100% in relation to standard solutions applied worldwide.

Feeder of custom design enables fast and precise comparison and dissemination.

The mass comparator enables a complete dissemination process, which is possible due to placing the intermediate mass standard magazine inside the mass comparator chamber. This significantly shortens comparison duration and reduces wear and tear of the transport robot.

The mass standard magazine offers up to 100 magazine positions, this number is conditioned by a comparator model. the device enables comparison of weights of all shapes compliant with OIML recommendations, using just one universal insert.

Automatic

Nano-Mass Comparator

NANO.AK-4/500

Automatic Nano-Mass Comparator

The NANO.AK-4/500 Automatic Nano-Mass Comparator enables determining mass deviations of weights with the minimum possible operator participation. the comparator allows to compare weights of mass ranging between 0.05 mg to 500 mg.

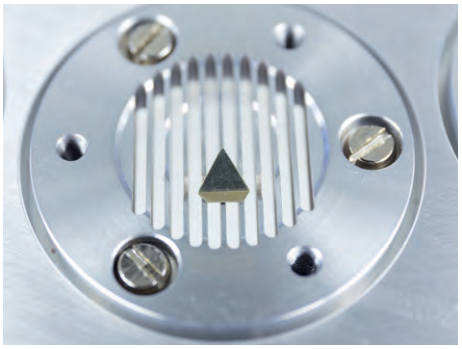
NANO.AK-4/500 Automatic Nano-Mass Comparator, due to the elimination of the human factor, temperature changes and air drafts, guarantees excellent measurement repeatability when compared to manual mass comparator.

An element that controls mass comparator operation is a digital management module, which is placed inside comparator's chamber along with an automatic mass standard feeder. Mass comparator is operated by means of indicator connected to the comparator controller. Control elements are not mechanically integrated with the construction thanks to what the influence of ambient conditions on mass comparator chamber is significantly reduced.

No other mass comparator in the world calibrates mass standards starting from 50 µg with the readability of up to 10 ng. in addition to the highest resolution and the possibility of calibration of micro-standards with the lowest measurement uncertainty, it ensures the best repeatability and the lowest sd value.

Compact device dimensions facilitate its use on a standard measurement workstation.

User-friendly and functional software guides you through preparation process of complete calibration plan within just a few minutes.



Comparison can be carried out for weights of all shapes with use of just one universal weighing pan.

UMA

Automatic Mass Comparators

Mass comparators of UMA series stand for the highest standard of professional automatic mass comparators. They provide comparison of 1 mg – 1000 g weights of E1 and lower classes.

The device is equipped with 18 or 36 magazine positions allowing to deposit up to 36 weights. This solution allows to perform either comparison for complete set of weights carried out within one process or comparison for just a few weights ofthe same mass.

Owing to elimination of human factor and with temperature changes and air drafts reduced to zero, UMA automatic mass comparators provide the highest possible measurement repeatability.

The UMA series, thanks to a vibration sensor inside the electronics, analyses and recognises vibrations origin. the sensor allows to determine whether the vibrations come from ground or other sources affecting the measurement result.

The weighing pan has been designed to enable measurement of very small samples with very high precision. This also secures a weight against wedging.

User-friendly and functional software guides you through preparation process of complete calibration plan within just a few minutes.

Comparison can be carried out for weights of all shapes with use of just one universal weighing pan.

Compact size guarantees operation of the device at any laboratory workstation. Possibility of comparison of many weights at a time adds to comparator's versatility.

AK-4

Automatic Mass Comparators

Mass comparators of AK-4 series stand for the highest standard of professional automatic mass comparators. They provide comparison of 10 g – 10 kg weights of E1 and lower classes. the comparators are offered in two versions:

- 4-positional weight alternator: for 1 reference mass standard and 3 tested weights
- 2-positional weight alternator: for reference weight being a combination of mass value of 3 separate weights.

Owing to elimination of human error and with temperature change and air drafts reduced to zero, AK-4 automatic mass comparators provide the highest possible measurement repeatability, incomparable to repeatability offered by manual comparators.

A supplementary external anti-draft chamber comes standard with each AK-4 comparator.

Weight positioning of sliding nature prevents errors of eccentricity.

RADWAG solutions intended for automatic comparators, i.e. positioning mechanism, guarantee extremely precise setting of weight on a weighing pan, performed each time the turntable has been rotated.

Extraordinary design of the weighing pan enables both, comparison of mass being combination of 3 weights, and standard comparison of 1 weight.

Weighing range switch allows you to select different load ranges for weights comparison. Regardless of selected option, constant comparator resolution is maintained.

Automatic
Mass Comparators

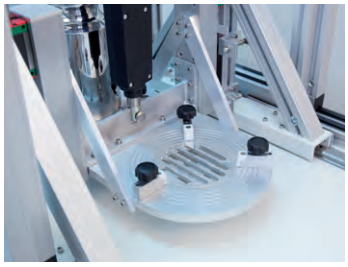
AKM-2

Automatic Mass Comparators

Mass comparators of AKM-2 series stand for the highest standard of professional automatic mass comparators. They provide comparison of 500 g – 50 kg weights of E1 and lower classes. the comparator is offered in a form of 2-positional weight alternator: for 1 reference mass standard and 1 tested weight.

For maximum comfort of operation, the AKM-2 has been equipped with automatic sliding feeding mechanism allowing easy placement of heavy weights.

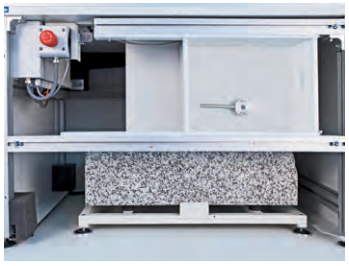
Owing to elimination of human error and with temperature change and air drafts reduced to zero, AKM-2 automatic mass comparators provide the highest possible measurement repeatability, incomparable to repeatability offered by manual comparators.



Weight positioning of sliding nature prevents errors of eccentricity.

Dedicated weighing pan design facilitates extremely precise weights comparison, no matter how light the weights are.

Weighing range switch allows you to select different load ranges for weights comparison. Regardless of selected option, constant comparator resolution is maintained.



Sturdy design of the table, featuring heavy granite stone and robust rubber shock absorbers, reduces effect of vibrations to the absolute minimum.

Manual

Mass Comparators

COMPARISON OF 1 mg – 5 g WEIGHTS
OF CLASS E1, E2, F1, F2, M1 AND M2

UYA 5Y.KO

Manual Mass Comparators

Mass comparators of UYA 5Y.KO series stand for high standard of professional manual mass comparators. They provide comparison of 1 mg – 5 g weights of E1 and lower classes.

The UYA 5Y.KO series is characteristic for 0.1 µg readability. Significant feature of UYA 5Y.KO comparator is the automatically opened transparent weighing chamber providing maximum resistance to air drafts.

A supplementary external anti-draft chamber comes standard with each UYA 5Y.KO comparator.

COMPARISON OF 100 g – 50 kg WEIGHTS
OF CLASS E1, E2, F1, F2, M1 AND M2

APP 5Y.KO

Manual Mass Comparators

Mass comparators of APP 5Y.KO series stand for high standard of professional manual mass comparators. They provide comparison of 100 g – 50 kg weights of E1 and lower classes.

APP 5Y.KO mass comparators feature model-related weighing pan type, it is either self-centering pan or weighing pan with mechanical centering aid, the former one allowing for dissemination of weights.

A supplementary external anti-draft chamber comes standard with each APP 5Y.KO comparator.

Automatically opened transparent weighing chamber of UYA 5Y.KO mass comparator provides utmost visibility of the weight subjected to comparison.

Complex databases offer unlimited access to information on mass standards, customers and tasks along with preview of reports on carried out comparisons.

Weighing pan with mechanical centering system facilitates precise placing of mass standards, plus it reduces effect of eccentricity to zero.

Optional “floating” self-centering pan offers reduction of eccentricity effect, plus it supports dissemination of reference mass to more than one weight.

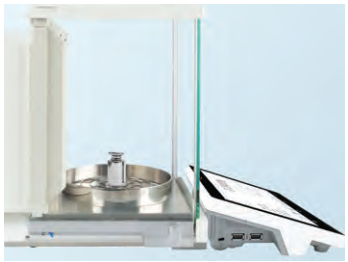
XA 5Y.KO

Manual Mass Comparators

Mass comparators of XA 5Y.A.KO series are standard manual mass comparators. They provide comparisonof 1 mg – 200 g weights of E1 and lower classes.

XA 5Y.A.KO mass comparators have been equipped with transparent weighing chamber featuring automatically opened door.

XA 5Y.A.KO mass comparators serve not only comparison purposes, they can be used for weighing processes and other related operations that are typical for standard analytical balances of XA 5Y.A series.



Spacious and airtight weighing chamber of XA 5Y.A.KO mass comparator features automatically opened door.

Openwork weighing pan significantly reduces ambient conditions influence on the measurement.

Transparent weighing chamber of PS 5Y.KB mass comparator, protecting the weighing pan, provides utmost visibility of the tested weight.

Semi-automatic levelling system is a standard feature of each 5Y series mass comparator.

WAY 5Y.KO

Manual Mass Comparators

Mass comparators of WAY 5Y.KO series stand for high standard of professional manual mass comparators. They provide comparison of 1 mg – 5 kg weights of E1 and lower classes.

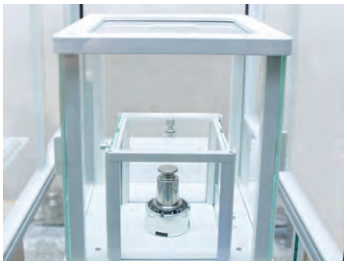
WAY 5Y.KO mass comparators feature transparent weighing chamber and ring-shaped draft shield encircling the weighing pan. Models characterized with the highest accuracy additionally comprise an internal box-shaped draft shield made of glass.

A supplementary external anti-draft chamber comes standard with each WAY 5Y.KO comparator*.

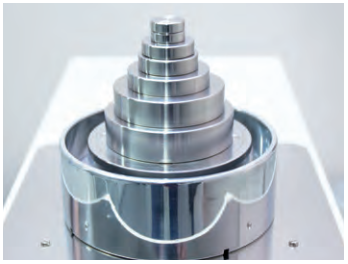
** Not applicable to WAY 1200.5Y.KO comparator.*

Ring-shaped draft shield encircling the weighing pan, apart from protecting the pan against air drafts, prevents potential shocks that could be applied accidentally to the weighing pan while loading the weight.

Weighing pan, made of the best quality non-magnetic stainless steel, features centrically positioned markings allowing easy and precise weights placement.



Glass draft shield minimizes influence of air drafts on comparison process. the glass with special conductive coating supports discharge of static electricity.



Selected WAY 5Y.KO models allow use of supplementary external loads, with this it is possible to carry out comparison of non-standard weights.

COMPARISON OF 1 kg – 50 kg WEIGHTS
OF CLASS F2, M1 AND M2

PM 5Y.KB

Manual Mass Comparators

Mass comparators of PM 5Y.KB series are standard manual mass comparators. They provide comparison of 1 kg – 50 kg weights of F2 and lower classes.

PM 5Y.KB mass comparators have been equipped with an open-work weighing pan featuring centering holders that facilitate precise weights placement.

PM 5Y.KB mass comparators serve not only comparison purposes, they can be used for weighing processes and other related operations that are typical for standard precision balances of PM 5Y series.

COMPARISON OF 200 kg – 1000 kg WEIGHTS
OF CLASS M1 AND M2

HRP 5Y.KB

Manual Mass Comparators

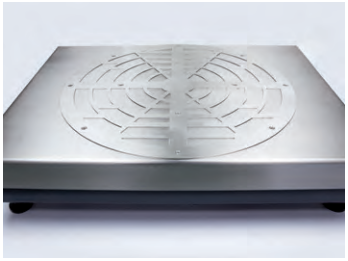
Mass comparators of HRP 5Y.KB series stand for high standard of professional manual mass comparators. They provide comparison of 200 kg – 1000 kg weights of M1 and lower classes.

HRP 5Y.KB mass comparators have been equipped with large weighing platform featuring markings allowing you to place the weights centrically and precisely.

HRP 5Y.KB mass comparators serve not only comparison purposes, they can be used for weighing processes and other related operations.

Centering holders of the openwork weighing pan allow precise placement of the weights, it is especially helpful when working with heavy and large mass standards.

Dedicated box for PM 5Y.KB mass comparator is a warranty for safe transport. With in-built interfaces you have a green light for immediate operation right after opening the box.



Precisely marked weighing platform of HRP 5Y.KB comparator is of great help when trying to place the weight accurately in the center.

Colour 5.7” touchscreen comes standard with all RADWAG manufactured comparators.

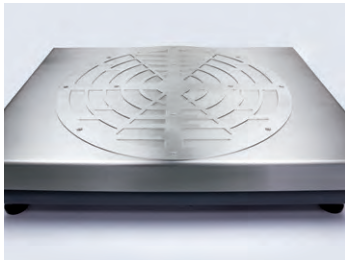
HRP 5Y.KO

Manual Mass Comparators

Mass comparators of HRP 5Y.KO series stand for high standard of professional manual mass comparators. They provide comparison of 10 kg – 2000 kg weights of F2 and lower classes.

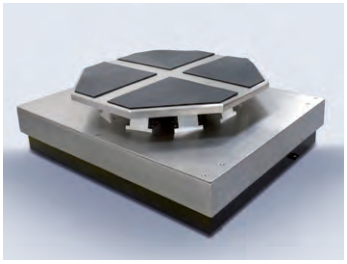
HRP 5Y.KO mass comparators have been equipped with large weighing platform featuring markings allowing you to place the weights centrically and precisely.

HRP 5Y.KO mass comparators serve not only comparison purposes, they can be used for weighing processes and other related operations.

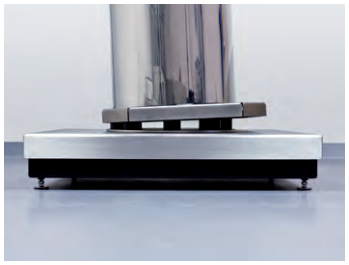


Precisely marked weighing platform of HRP 5Y.KO comparator is of great help when trying to place the weight accurately in the center.

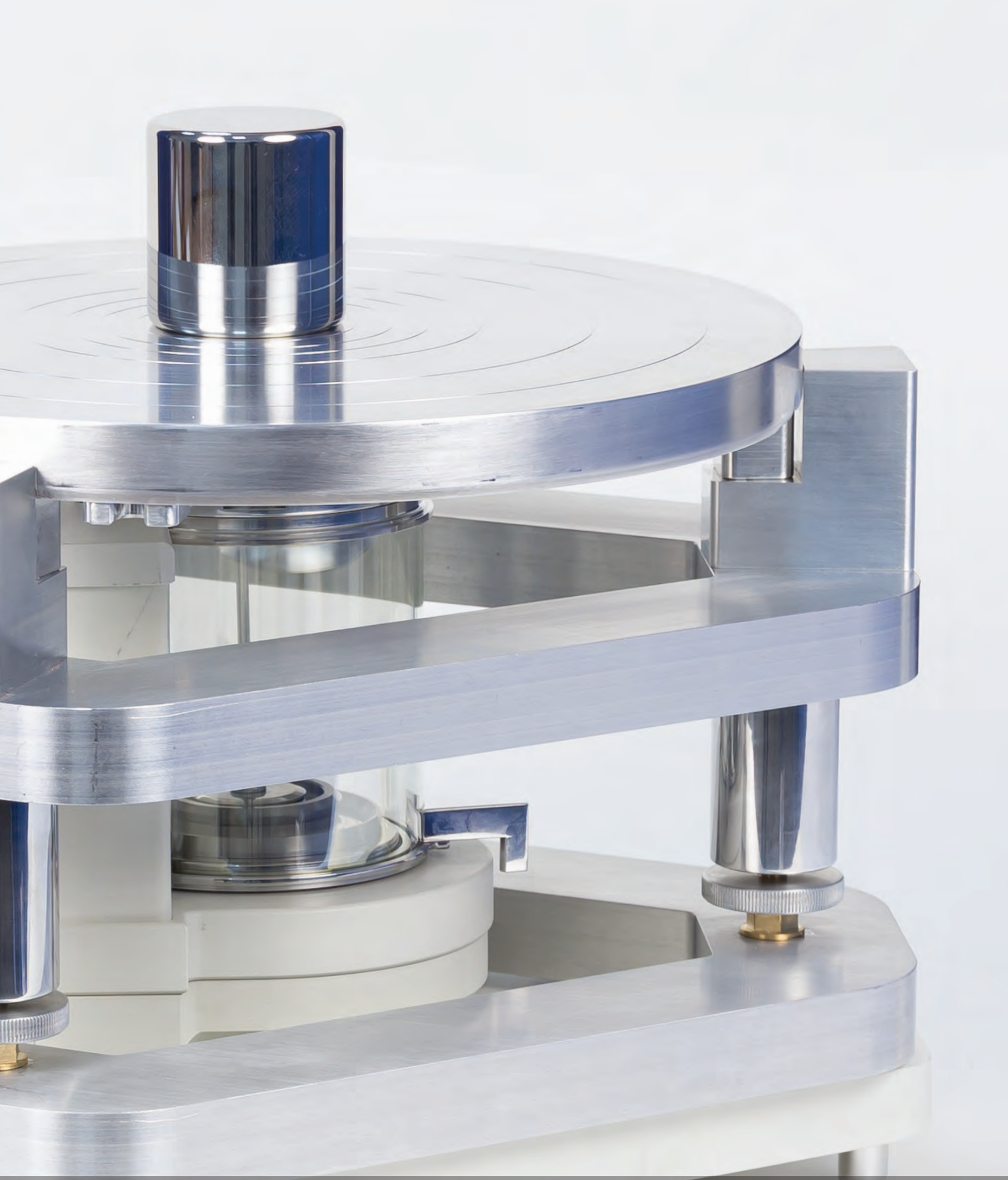
Colour 5.7” touchscreen comes standard with all RADWAG manufactured comparators.



HRP mass comparators have been equipped with special self-centering weighing pan to provide both greater comfort of operation and reduced off-center load error.



The self-centering weighing pan has been designed in order to enable stabilising and levelling of weights that are put off the center, plus to allow comparison of weights of atypical shape.



Susceptometer

Magnetization

SM-UYA, SM-MYA

Susceptometer

RADWAG-designed SM susceptometer enables determination of magnetic characteristics of mass standards of the following classes: E1, E2, F1 and F2. the device features 3 different heights, from the mass standard base to the centre of the magnet. the recommended distance between the mass standard and the magnet depends on the mass standard's class. the measurement result is magnetic susceptibility and polarisation, i.e. residual magnetism.

Modular design, upon disassembling respective module and depending on the model, enables using the susceptometer as a mass comparator or a balance.

Innovative design of the susceptometer enables verification of magnetic characteristics of 2g-50kg mass standards.

With use of modern indicator with very efficient processor, the susceptometer does not require additional external devices supporting calculations. Indicator software calculates magnetic susceptibility and polarisation, which facilitates and accelerates mass standards testing. the software automatically verifies measurements compliance with OIML R111. Mass standard status can be read on the test report.

A top-class magnet guarantees repeatability.

Positioners on the susceptometer weighing pan facilitate centring of the mass standard.

The modular design enables to use the susceptometer as a microbalance or a mass comparator.

Specially designed susceptometer weighing pan does not require any additional elements to change the measuring range of the device.

RMCS

PC Software

Radwag Multiple Comparator Software, RMCS, has been designed to enable management of laboratory-performed calibration procedures, starting from the moment of accepting an order, through its progress, until issuing a calibration certificate.

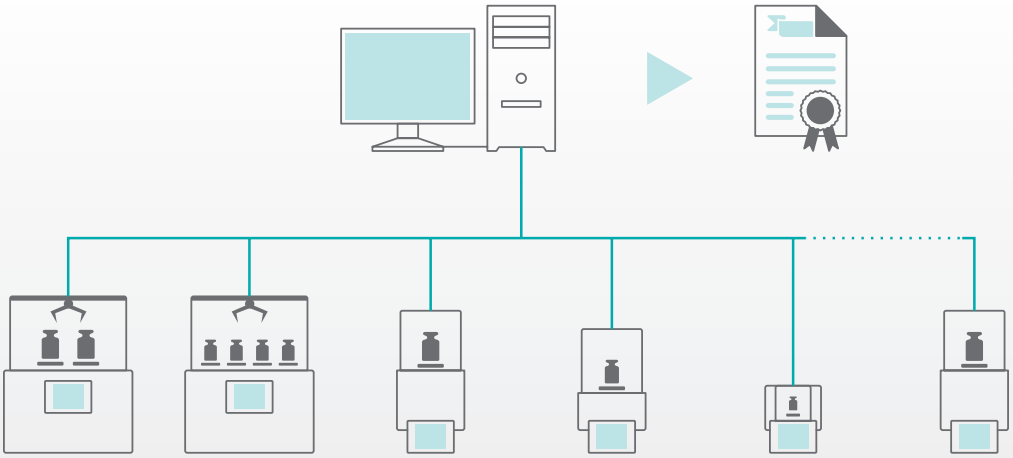
The calibration process supported by means of RMCS provides improved efficiency, reliable measurement results and complete documentation on calibration process, together with lower labour costs.

RMCS PC Software is intended for cooperation with RADWAG manufactured mass comparators. With the software you can carry out calibration processes using ABBA and ABA methods.

Radwag Multiple Comparator Software – operation scheme

RMCS PC software makes it possible to initiate the calibration procedure by means of task sent to a particular mass comparator. Additionally it features option for autonomous performance of calibration process, triggered by the mass comparator itself.

In both cases, data is transferred to the software for the purpose of registering, controlling and finally issuing a calibration certificate.



RMCS System functions

- Complete management of a calibration laboratory calibrating mass standards and weights
- Complex management of RADWAG comparators
- Calibration using ABBA and ABA methods
- Cooperation with monitoring system for ambient conditions
- Databases support: comparators, mass standards, users and calibration orders
- Bilateral data synchronization with RADWAG mass comparators
- Archiving orders, calibration certificates and ambient conditions records
- Record of events and calibration process reporting
- Export of report results and calibration certificates

Mass comparators linked in the RMCS system autonomously cooperate with THB ambient conditions modules recording ambient conditions state (temperature, humidity and atmospheric pressure) throughout the whole control process.

Measurement results are displayed and sent,in real time, to RMCS software for the purpose of process control and data archiving.

THB

Ambient Conditions Monitoring

Maintaining optimal ambient conditions at a workplace is a warranty of precise results for comparison processes.

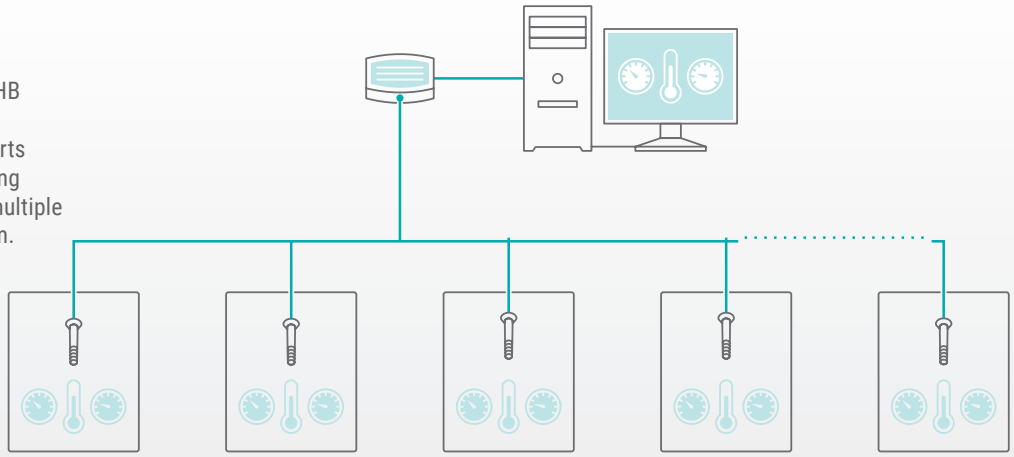
THB monitoring system has been designed to offer option of constant ambient conditions supervision provided at the place of mass comparator operation or in any laboratory room. the system performs real-time measurement of air temperature, relative humidity and atmospheric pressure. the measured values are then used for calculation of air density and dew point temperature.

The measurements carried out for a particular workstation are performed by means of its local sensors – THB Ambient Conditions Modules. Current state of given measurements is displayed on the comparators terminal along with messages informing on critical values, all this thanks to connection established between the THB module and the comparator.

Ambient Conditions Monitoring performed for separate laboratory rooms - operation scheme

Measurements results of particular THB modules are transferred in real time to THB-R recorder. the recorder supports up to 16 modular sensors, thus allowing monitoring of ambient conditions in multiple points in the proximity of up to 1200 m.

THB-Multi software enables displaying the measurements results on the computer screen. Additionally it offers data analysis, reports and graphs preparation and measurements record in database.



Basic parameters for THB Ambient Conditions Modules

Measured temperature range	+5 °C – +45 °C
Temperature measurement accuracy	d = 0.01 °C / error ± 0.1 °C
Measured pressure range	850 – 1050 hPa
Pressure measurement accuracy	d = 0.1 hPa / error ± 2 hPa
Measured humidity range	0 – 100 %
Humidity measurement accuracy	d = 0.1 % / error ± 2 % (from 0 % to 10 % and from 90 % to 100 % the accuracy is 5 %)

According to OIML and ASTM

Errors for weights

According to OIML and ASTM guidelines mass standards and weights, used for mass measurement purposes, are divided into accuracy classes: E1, E2, F1, F2, M1, M2 and M3 (OIML classification) or 1 – 7 (ASTM classification).

In the course of calibration of mass standards and weights the measurement uncertainty for coverage factor k = 2 (with confidence of about 95%) shall not be greater than 1/3 of maximum error value specified for a particular mass standard or weight of a given class or nominal value.

Maximum permissible errors according to OIML R 111-1

±δm in mg

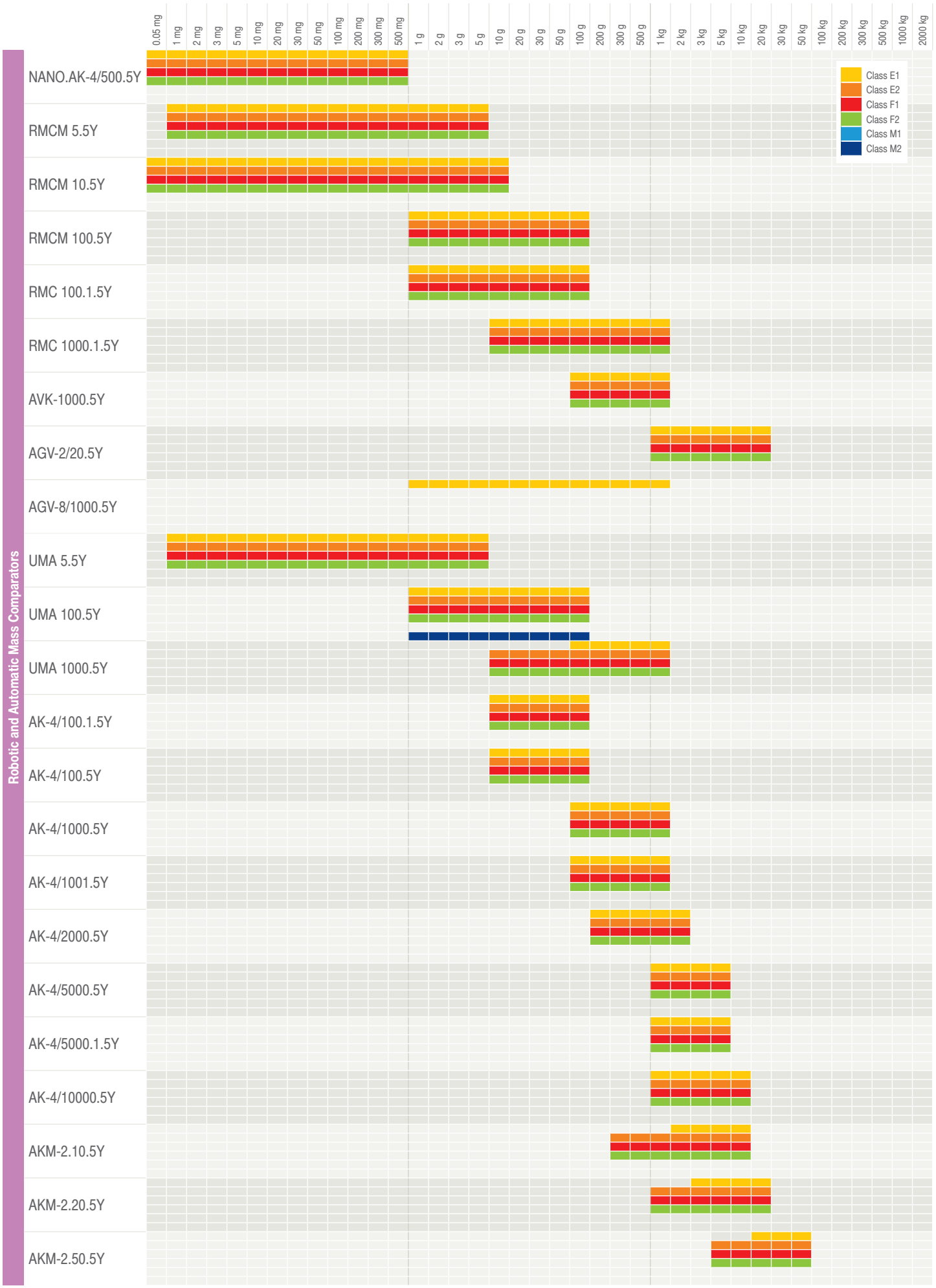
Nominal value	Class E1	Class E2	Class F1	Class F2	Class M1	Class M1–2	Class M2	Class M2–3	Class M3
1 mg	0.003	0.006	0.02	0.06	0.2				
2 mg	0.003	0.006	0.02	0.06	0.2				
5 mg	0.003	0.006	0.02	0.06	0.2				
10 mg	0.003	0.008	0.025	0.08	0.25				
20 mg	0.003	0.01	0.03	0.1	0.3				
50 mg	0.004	0.012	0.04	0.12	0.4				
100 mg	0.005	0.016	0.05	0.16	0.5		1.6		
200 mg	0.006	0.02	0.06	0.2	0.6		2		
500 mg	0.008	0.025	0.08	0.25	0.8		2.5		
1 g	0.01	0.03	0.1	0.3	1		3		10
2 g	0.012	0.04	0.12	0.4	1.2		4		12
5 g	0.016	0.05	0.16	0.5	1.6		5		16
10 g	0.02	0.06	0.2	0.6	2		6		20
20 g	0.025	0.08	0.25	0.8	2.5		8		25
50 g	0.03	0.1	0.3	1	3		10		30
100 g	0.05	0.16	0.5	1.6	5		16		50
200 g	0.1	0.3	1	3	10		30		100
500 g	0.25	0.8	2.5	8	25		80		250
1 kg	0.5	1.6	5	16	50		160		500
2 kg	1	3	10	30	100		300		1 000
5 kg	2.5	8	25	80	250		800		2 500
10 kg	5	16	50	160	500		1 600		5 000
20 kg	10	30	100	300	1 000		3 000		10 000
50 kg	25	80	250	800	2 500	5 000	8 000	16 000	25 000
100 kg		160	500	1 600	5 000	10 000	16 000	30 000	50 000
200 kg		300	1 000	3 000	10 000	20 000	30 000	60 000	100 000
500 kg		800	2 500	8 000	25 000	50 000	80 000	160 000	250 000
1 000 kg		1 600	5 000	16 000	50 000	100 000	160 000	300 000	500 000
2 000 kg			10 000	30 000	100 000	200 000	300 000	600 000	1 000 000
5 000 kg			25 000	80 000	250 000	500 000	800 000	1 600 000	2 500 000

Maximum permissible errors according to ASTM E617 – 13

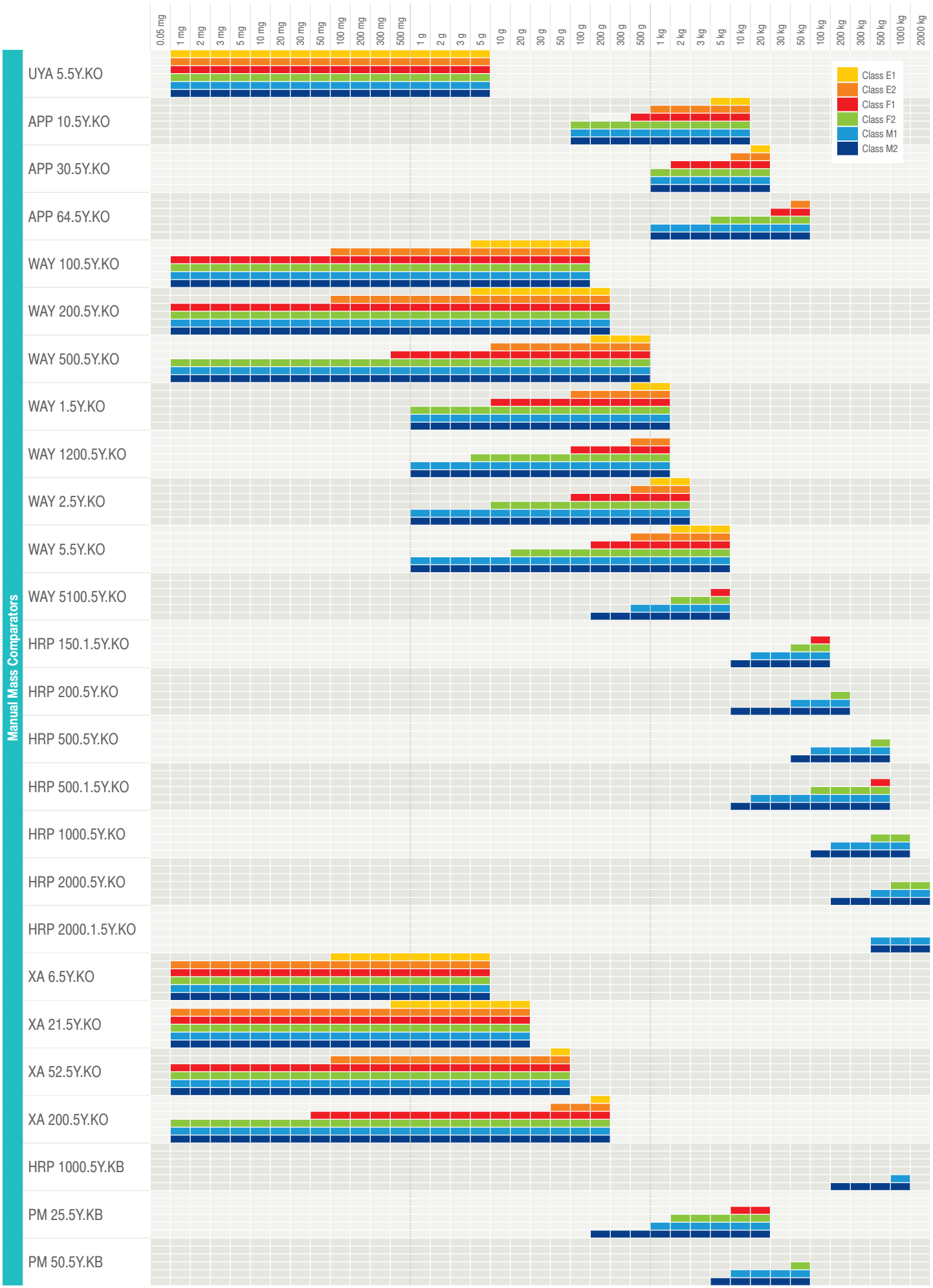
±δm in mg

Nominal value	Class 000	Class 00	Class 0	Class 1	Class 2	Class 3	Class 4	Class 5	Class 6	Class 7
0.05 mg	0.002	0.003	0.005							
0.1 mg	0.002	0.003	0.005	0.01						
0.2 mg	0.002	0.003	0.005	0.01	0.014					
0.3 mg	0.002	0.003	0.005	0.01	0.014	0.025				
0.5 mg	0.002	0.003	0.005	0.01	0.014	0.025	0.05	0.05	0.1	
1 mg	0.002	0.003	0.005	0.01	0.014	0.025	0.05	0.05	0.1	
2 mg	0.002	0.003	0.005	0.01	0.014	0.025	0.05	0.06	0.2	
3 mg	0.002	0.003	0.005	0.01	0.014	0.026	0.052	0.07	0.2	
5 mg	0.002	0.003	0.005	0.01	0.014	0.028	0.055	0.08	0.2	
10 mg	0.002	0.003	0.005	0.01	0.014	0.03	0.06	0.1	0.5	0.4
20 mg	0.002	0.003	0.005	0.01	0.014	0.035	0.07	0.12	0.5	0.56
30 mg	0.002	0.003	0.005	0.01	0.014	0.038	0.075	0.14	0.5	0.68
50 mg	0.002	0.003	0.005	0.01	0.014	0.042	0.085	0.16	0.5	0.88
100 mg	0.002	0.003	0.005	0.01	0.025	0.05	0.1	0.2	1	1.2
200 mg	0.002	0.003	0.005	0.01	0.025	0.06	0.12	0.26	1	1.8
300 mg	0.002	0.003	0.005	0.01	0.025	0.07	0.14	0.3	1	2.2
500 mg	0.002	0.003	0.005	0.01	0.025	0.08	0.16	0.38	1	3
1 g	0.005	0.01	0.017	0.034	0.054	0.1	0.2	0.5	2	4.5
2 g	0.005	0.01	0.017	0.034	0.054	0.13	0.26	0.75	2	7
3 g	0.005	0.01	0.017	0.034	0.054	0.15	0.3	0.95	2	9.4
5 g	0.005	0.01	0.017	0.034	0.054	0.18	0.36	1.3	2	13
10 g	0.01	0.02	0.025	0.050	0.074	0.25	0.5	2	2	21
20 g	0.013	0.025	0.037	0.074	0.1	0.35	0.7	3	3	33
30 g	0.014	0.026	0.037	0.074	0.15	0.45	0.9	4	5	44
50 g	0.015	0.03	0.06	0.12	0.25	0.6	1.2	5.6	7	62
100 g	0.025	0.05	0.13	0.25	0.5	1	2	9	10	100
200 g	0.05	0.1	0.25	0.50	1	2	4	15	20	160
300 g	0.075	0.15	0.38	0.75	1.5	3	6	20	30	210
500 g	0.13	0.25	0.6	1.2	2.5	5	10	30	50	300
1 kg	0.25	0.50	1.3	2.5	5	10	20	50	100	470
2 kg	0.5	1	2.5	5	10	20	40	100	200	750
3 kg	0.75	1.5	3.8	7.5	15	30	60	150	300	1 000
5 kg	1.3	2.5	6	12	25	50	100	250	500	1 400
10 kg	2.5	5	13	25	50	100	200	500	1 000	2 200
20 kg	5	10	25	50	100	200	400	1 000	2 000	3 800
25 kg	6.25	12.5	31	62	125	250	500	1 200	2 500	4 500
30 kg	7.5	15	38	75	150	300	600	1 500	3 000	4 500
50 kg	13	25	63	125	250	500	1 000	2 500	5 000	7 500
100 kg					500	1 000	2 000	5 000	10 000	15 000
200 kg					1000	2 000	4 000	10 000	20 000	30 000
300 kg					1500	3 000	6 000	15 000	30 000	45 000
500 kg					2 500	5 000	10 000	25 000	50 000	75 000
1 000 kg					5 000	10 000	20 000	50 000	100 000	150 000
2 000 kg					10 000	20 000	40 000	100 000	200 000	300 000
3 000 kg					15 000	30 000	60 000	150 000	300 000	450 000
5 000 kg					25 000	50 000	100 000	250 000	500 000	750 000

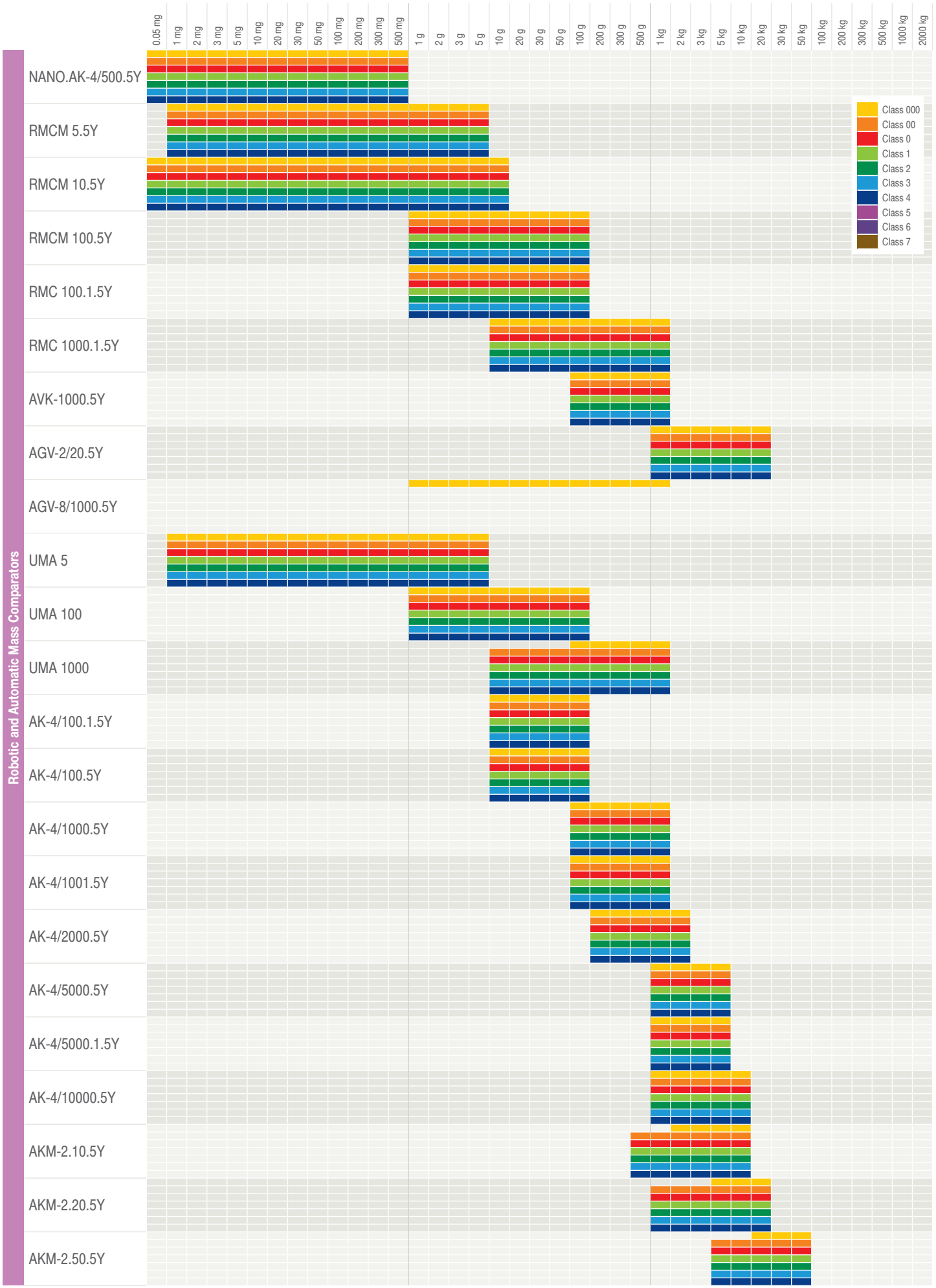
Calibration range for weights according to OIML R111



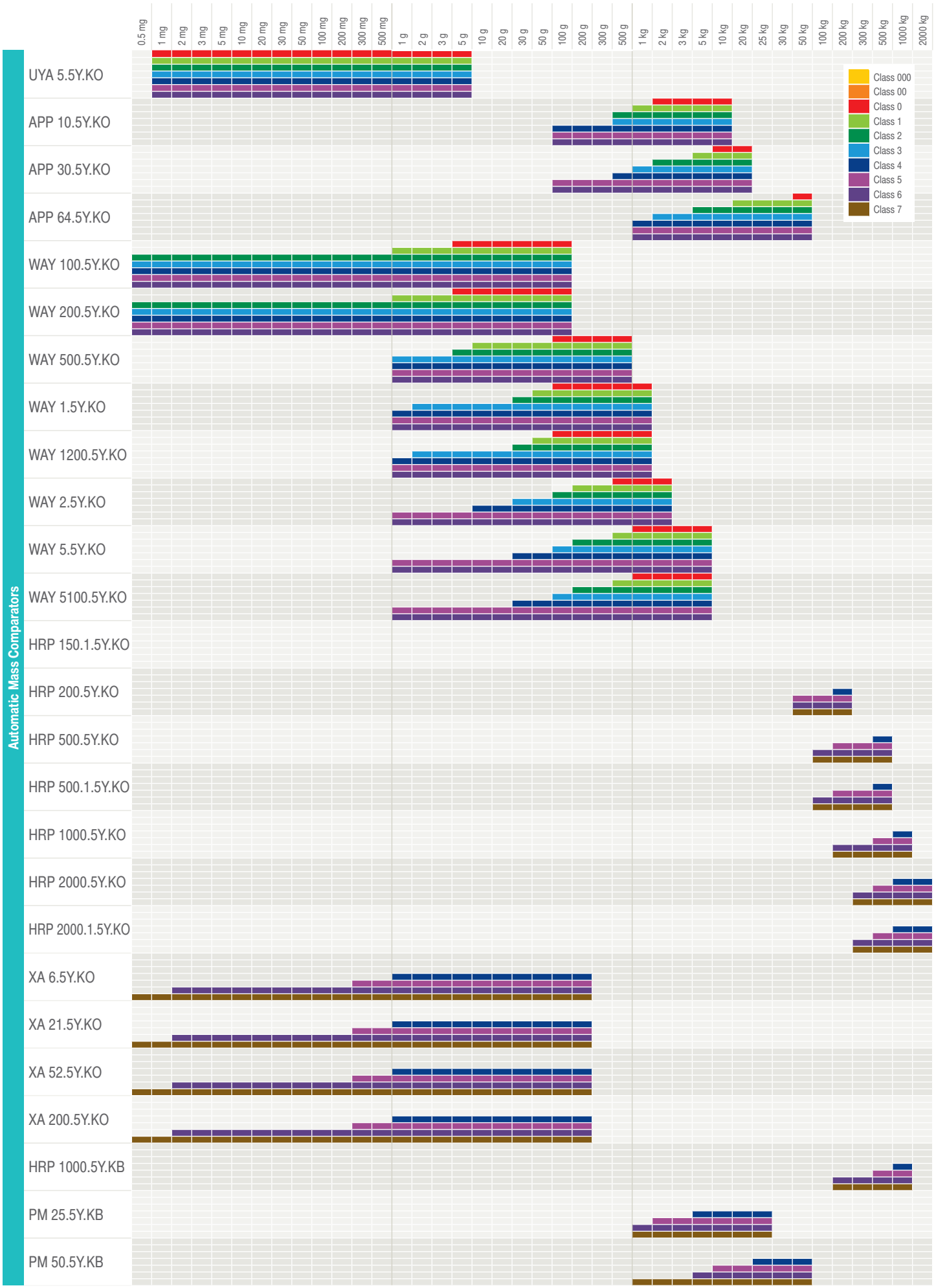
Calibration range for weights according to OIML R111



Calibration range for weights according to ASTM E617



Calibration range for weights according to ASTM E617



Technical Specification

Automatic and Robotic Mass Comparators

Automatic Vacuum Mass Comparators

Product Code	Model	Max. capacity	Readability	Repeatability	Weighing pan dimensions
WL-417-0003	**AVK 1000.5Y**	1002 g	0.1 µg	0.4 µg	ø100 mm

Density Measurement

Product Code	Model	Max. capacity	Readability	Repeatability	Weighing pan dimensions
WL-418-0004	**AGV-8 1000.5Y**	1110 g	0.01 mg	0.04 mg	ø60 mm
WL-418-0005	**AGV-2 20.5Y**	26.1 kg	1 mg	2 mg	ø220 mm self centering

Robotic Mass Comparators

Product Code	Model	Max. capacity	Readability	Repeatability	Weighing pan dimensions
WL-419-0011	**RMCM 5.5Y**	6.1 g	0.1 µg	0.25 µg	24×50 mm
WL-419-0009	**RMCM 10**	10.3 g	0.1 µg	0.15 µg	50×40 mm
WL-419-0012	**RMCM 100.5Y**	110 g	1 µg	1.5 µg	24×63 mm

Product Code	Model	Max. capacity	Readability	Repeatability	Weighing pan dimensions
WL-419-0013	**RMC 100.1.5Y**	106 g	0.1 µg	0.5 µg	24×63 mm
WL-419-0014	**RMC 1000.1.5Y**	1060 g	1 µg	1.2 µg	50×125 mm

Automatic Nano-Mass Comparators

Product Code	Model	Max. capacity	Readability	Repeatability	Weighing pan dimensions
WL-413-0023	**NANO.AK-4.500.5Y**	510 mg	10	0.04 µg	ø20 mm

Automatic Mass Comparator UMA

Product Code	Model	Max. capacity	Readability	Repeatability	Weighing pan dimensions
WL-415-0004	**UMA 5.5Y**	6.1 g	0.0001 mg	0.2 µg	ø20 mm

Product Code	Model	Max. capacity	Readability	Repeatability	Weighing pan dimensions
WL-415-0005	**UMA 100.5Y**	110 g	0.001 mg	1.5 µg	ø21 mm
WL-415-0006	**UMA 1000.5Y**	1060 g	0.005 mg	8 µg	ø48 mm

Automatic Mass Comparator AK-4

Product Code	Model	Max. capacity	Readability	Repeatability	Weighing pan dimensions
WL-413-0014	**AK-4.100.5Y**	110 g	0.001 mg	1.5 µg	ø24 mm
WL-413-0010	**AK-4.100.1.5Y**	110 g	0.1 µg	0.8 µg	ø24 mm
WL-413-0016	**AK-4.1000.5Y**	1.02 kg	0.005 mg	8 µg	ø50 mm
WL-413-0017	**AK-4.1001.5Y**	1.02 kg	0.001 mg	1.7 µg	ø50 mm
WL-413-0005	**AK-4.2000.5Y**	2.05 kg	0.01 mg	12 µg	ø75 mm

Product Code	Model	Max. capacity	Readability	Repeatability	Weighing pan dimensions
WL-413-0018	**AK-4.5000.5Y**	5.05 kg	0.01 mg	15 µg	ø75 mm
WL-413-0019	**AK-4.5000.1.5Y**	5.05 kg	0.1 mg	0.08 mg	ø75 mm

Product Code	Model	Max. capacity	Readability	Repeatability	Weighing pan dimensions
WL-413-0021	**AK-4.10000.5Y**	10.05 kg	0.01 mg	15 µg	ø100 mm

Automatic Mass Comparator AKM-2

Product Code	Model	Max. capacity	Readability	Repeatability	Weighing pan dimensions
WL-411-0012	**AKM-2.10.5Y**	10.2 kg	0.1 mg	0.15 mg	ø90 mm
WL-411-0013	**AKM-2.20.5Y**	20.5 kg	0.1 mg	0.3 mg	ø90 mm
WL-411-0014	**AKM-2.50.5Y**	51 kg	1 mg	2.5 mg	ø100 mm

Technical Specification

Manual Mass Comparators

Manual Mass Comparators UYA 5Y.KO

Product Code	Model	Max. capacity	Readability	Repeatability	Weighing pan dimensions
WL-408-0007	**UYA 6.5Y.KO**	6.1 g	0.1 µg	0.2 µg	ø16 mm

Manual Mass Comparators XA 5Y.KO

Product Code	Model	Max. capacity	Readability	Repeatability	Weighing pan dimensions
WL-405-0020	**XA 6.5Y.KO**	6 g	0.001 mg	1.2 µg	ø16 mm
WL-405-0021	**XA 21.5Y.KO**	21 g	0.001 mg	1.2 µg	ø24 mm
WL-405-0022	**XA 52.5Y.KO**	52 g	0.005 mg	2.5 µg	ø24 mm
WL-405-0023	**XA 200.5Y.KO**	210 g	0.01 mg	0.005 mg	ø90 mm

Manual Mass Comparators WAY 5Y.KO

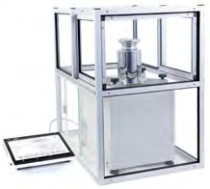
Product Code	Model	Max. capacity	Readability	Repeatability	Weighing pan dimensions
WL-406-0039	**WAY 100.5Y.KO**	110 g	0.001 mg	2.5 µg	ø30 mm
WL-406-0040	**WAY 200.5Y.KO**	210 g	0.001 mg	3 µg	ø40 mm

Product Code	Model	Max. capacity	Readability	Repeatability	Weighing pan dimensions
WL-406-0041	**WAY 500.5Y.KO**	520 g	0.01 mg	0.012 mg	ø50 mm
WL-406-0038	**WAY 1.5Y.KO**	1.02 kg	0.01 mg	0.25 mg	ø60 mm
WL-406-0042	**WAY 1200.5Y.KO**	1200 g	0.1 mg	0.08 mg	ø80 mm
WL-406-0043	**WAY 2.5Y.KO**	2.3 kg	0.1 mg	0.08 mg	ø70 mm

Product Code	Model	Max. capacity	Readability	Repeatability	Weighing pan dimensions
WL-406-0044	**WAY 5.5Y.KO**	5.05 kg	0.1 mg	0.15 mg	ø90 mm

Product Code	Model	Max. capacity	Readability	Repeatability	Weighing pan dimensions
WL-406-0045	**WAY 5100.5Y.KO**	5100 g	1 mg	0.8 mg	ø100 mm

Manual Mass Comparators APP



Product Code	Model	Max. capacity	Readability	Repeatability	Weighing pan dimensions
WL-407-0036	**APP 10.5Y.KO**	10.2 kg	0.1 mg	0.35 mg	ø190 (ø300) mm
WL-407-0037	**APP 30.5Y.KO**	30.5 kg	1 mg	3 mg	ø220 (ø300) mm

Product Code	Model	Max. capacity	Readability	Repeatability	Weighing pan dimensions
WL-407-0038	**APP 64.5Y.KO**	64 kg	10 mg	13 mg	ø300 (ø400) mm

Manual Mass Comparators PM 5Y.KB

Product Code	Model	Max. capacity	Readability	Repeatability	Weighing pan dimensions
WL-416-0004	**PM 25.5Y.KB**	25.5 kg	10 mg	4 mg	302×252 mm
WL-416-0005	**PM 50.5Y.KB**	51 kg	100 mg	70 mg	302×252 mm

Mass Comparators HRP 5Y.KO

Product Code	Model	Max. capacity	Readability	Repeatability	Weighing pan dimensions
WL-414-0023	**HRP 150.1.5Y.KO**	151 kg	0.05 g	0.1 g	800×600 mm
WL-414-0026	**HRP 500.1.5Y.KO**	510 kg	0.1 g	0.2 g	1000×800 mm

Product Code	Model	Max. capacity	Readability	Repeatability	Weighing pan dimensions
WL-414-0024	**HRP 200.5Y.KO**	210 kg	0.2 g	0.4 g	800×600 mm
WL-414-0025	**HRP 500.5Y.KO**	510 kg	0.5 g	0.6 g	800×600 mm
WL-414-0027	**HRP 1000.5Y.KO**	1050 kg	1 g	1.5 g	1000×800 mm

Product Code	Model	Max. capacity	Readability	Repeatability	Weighing pan dimensions
WL-414-0028	**HRP 2000.5Y.KO**	2100 kg	2 g	2.5 g	1250×1000 mm
WL-414-0029	**HRP 2000.1.5Y.KO**	2100 kg	5 g	5 g	1250×1000 mm

Mass Comparators HRP 5Y.KB

Product Code	Model	Max. capacity	Readability	Repeatability	Weighing pan dimensions
WL-414-0030	**HRP 1000.5Y.KB**	1050 kg	10 g	6 g	1000×800 mm

Technical Specification

Susceptometer

Product Code	Model	Max. capacity	Readability	Repeatability	Weighing pan dimensions
WL-101-1083	**SM-UYA 3.5Y**	50 kg	0.1 µg	ø300 mm	2000, 800, 200 A/m
WL-408-0008	**SM-UYA 6.5Y.KO**	50 kg	0.1 µg	ø300 mm	2700, 2000, 800, 380, 200 A/m
WL-101-1084	**SM-MYA 5.5Y**	50 kg	1 µg	ø300 mm	2000, 800, 200 A/m
WL-101-1085	**SM-MYA 11.5Y**	50 kg	1 µg	ø300 mm	2000, 800, 200 A/m

PRODUCT CATALOGUE

ADVANCED WEIGHING TECHNOLOGIES

www.radwag.com

Environmental Protection

In ambient air quality and particulate matter emission testing.

Air quality test at the workstation.

MEASUREMENT

robotic

automatic

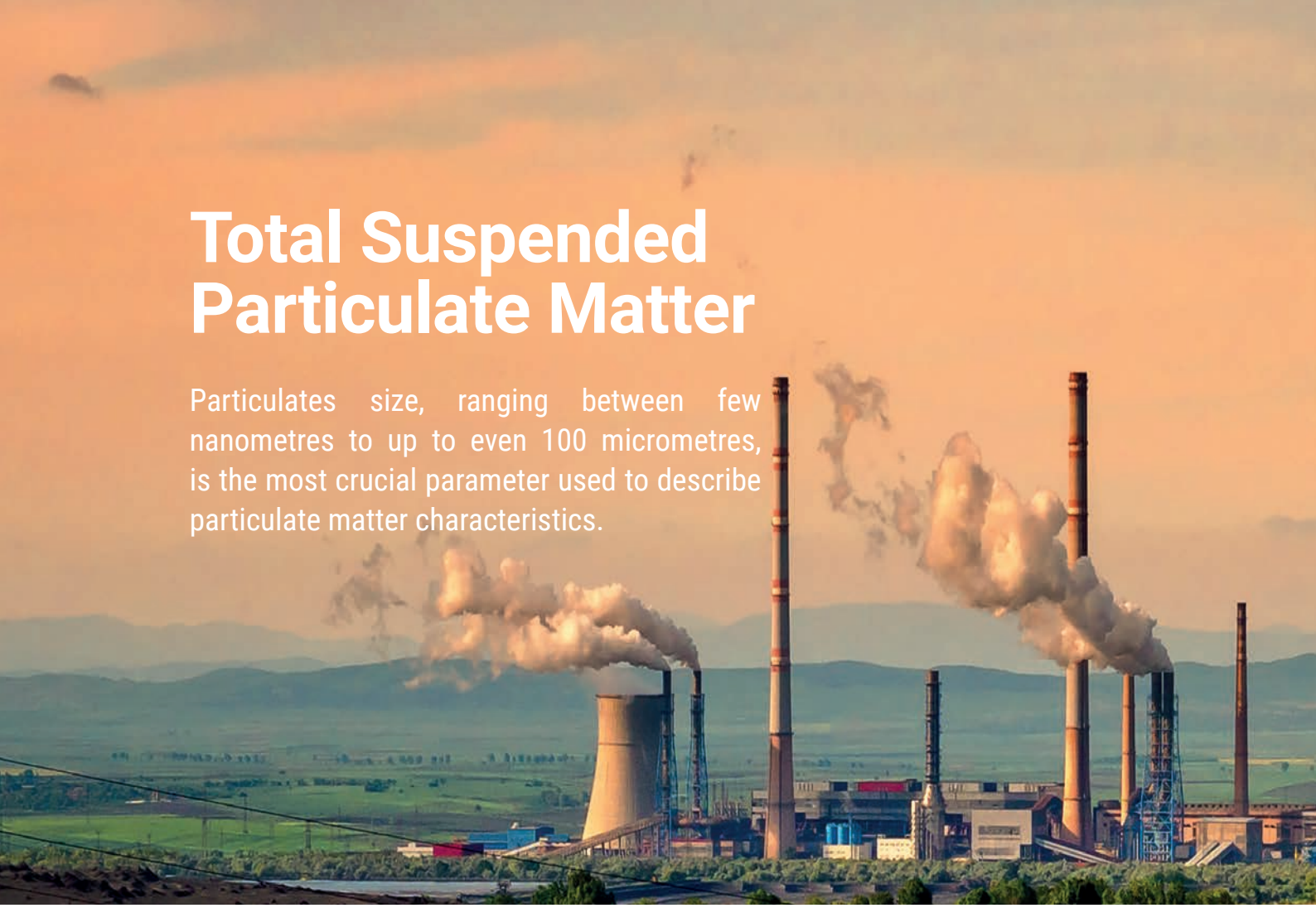
manual

MEASUREMENT RESOLUTION

10 µg

1 µg

0.1 µg



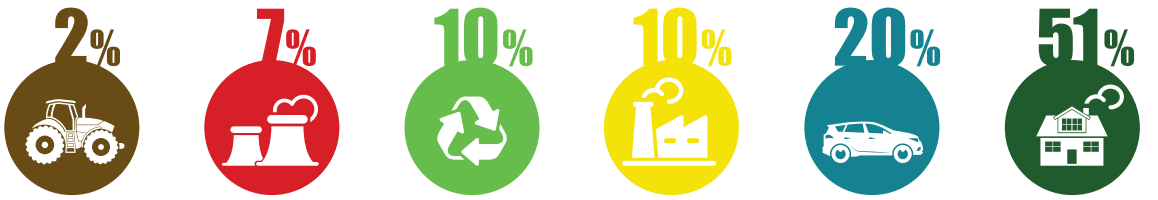
Total Suspended Particulate Matter

Particulates size, ranging between few nanometres to up to even 100 micrometres, is the most crucial parameter used to describe particulate matter characteristics.

Particulate matter classification by size

Name	PM 10	PM 2,5 - 10	PM 2,5	PM1	PM 0,1
PM diameter	< 10 µm	2.5 µm - 10 µm	< 2.5 µm	< 1.0 µm	< 0.1 µm

Natural and anthropogenic sources of particulate matter



Agriculture and land reclamation

Combustion processes in industry

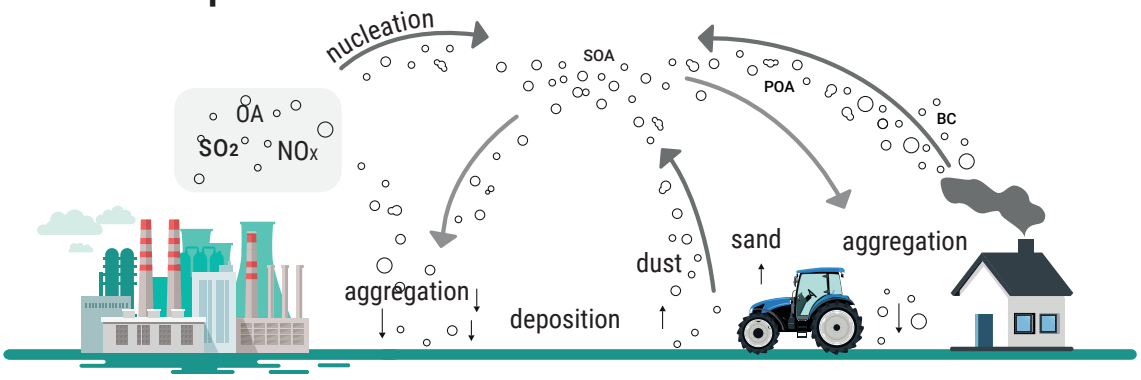
Production processes in waste management

Combustion processes in energy sector

Shipping services

Combustion processes of non-industrial origin

Diagram of the formation and transformation of particulate matter in the atmosphere.



SO2 - sulphur compounds
NOx - nitrogen compounds

OA - organic aerosol
BC - black carbon

POA - primary organic aerosol
SOA - secondary organic aerosol

Standard gravimetric measurement method according to EN 12341:2014

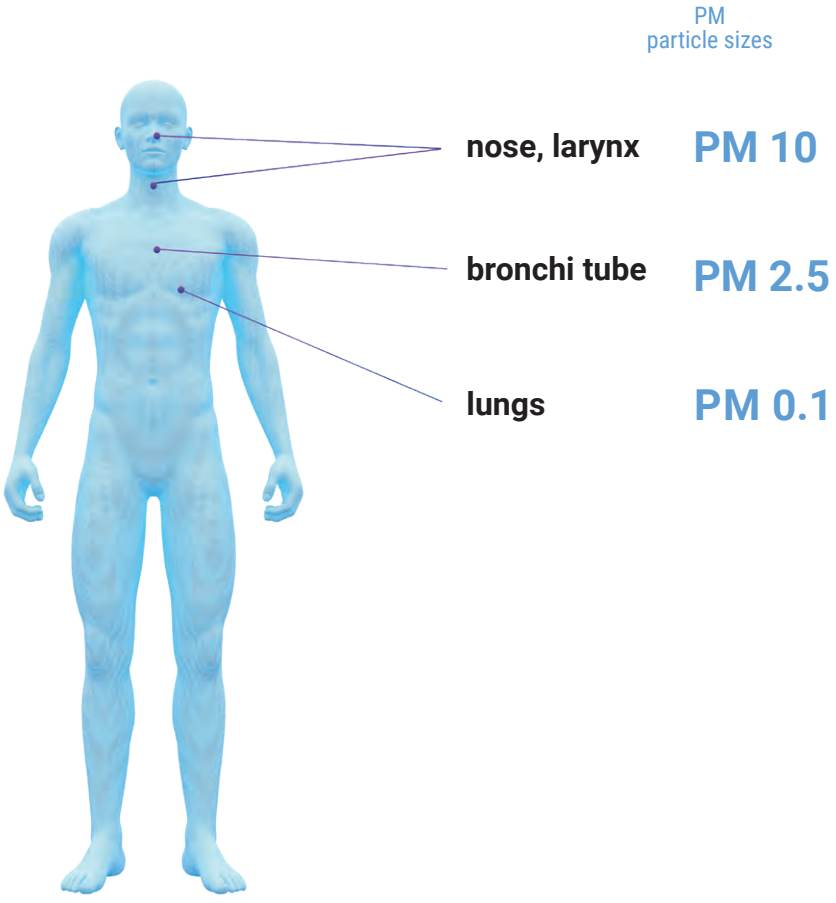
The particulate matter concentration is calculated from the difference in filter masses before and after exposure and the air flow rate over a given period of time. the precision and accuracy of the mass measurement, the conditioning of the filters under fixed conditions (temperature at 19-21 °C, relative air humidity at 45-50%), the exposure of the filter over a fixed period of time and under fixed exposure conditions (temperature, humidity, air flow), the safe trans port of the filter to and from the exposure point are important for the accuracy of the particulate matter concentration determination.

filter marking	QR code (filter)	RFID (filter case)	QR code (container)	EAN code (container)
filter weighing method	robotic / automatic		manual	
measurement accuracy and precision				
filter conditioning	inside the device UMA 2.5Y.FC; RB 2.5Y.FC; RMC 2.5Y.FC		based on the lab ambient conditions MYA 2.5Y.F; AK-6/510.5Y.F; UMA 2.5Y.F; RB 2.5Y.F; RMC 2.5Y.F	
operator	automatic procedures		knowledge on methodology required who?, when?, why?, how?	
daily cycle performance	Q > 300		Q = ~ 50	

Mass Emission of Particulate Matter

Particulates emitted from internal combustion engines are polydisperse systems containing particles of different shapes and sizes. Toxic components of exhaust fumes have a negative impact on the human body, contributing to disease states and mutagenic changes.

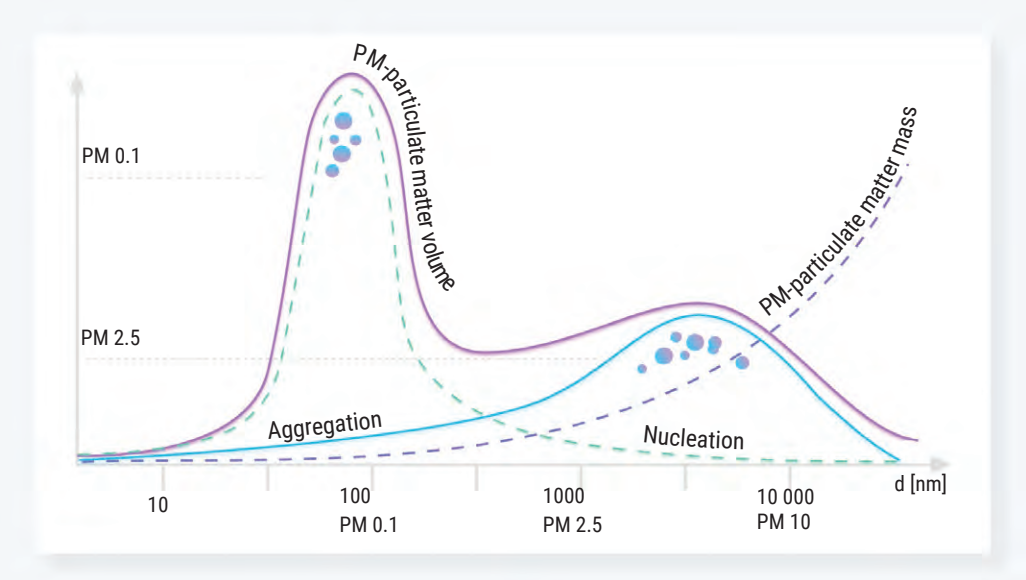
Effects of particulate matter on the human body



Formation and transformation of particulate matter during emission from the internal combustion engine

The term particle is not explicit, particles are not identical in size and shape, they are an irregular mixture of chemical components. the particles are formed under oxygen deficiency conditions with increased fuel dosage due to incomplete combustion of fuel.The form, size, and composition of the particle depend on the temperature and location in the cylinder-exhaust system.

Volume, particulate matter emission



Measurement method (EU) 2017/1151 - 40 CFR Part 1065

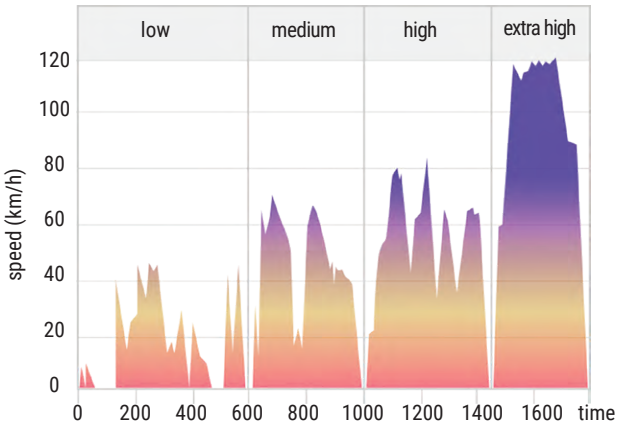
The effect of external conditions on the stability of the test filters is verified for each test cycle by observation of the mass changes of at least two reference filters. the weighing accuracy of all filters (test and reference) is controlled by periodical weighing of a certified mass standard of a weight value close to that of the test filters. the maximum permissible variation in filter mass between tests is 5 µg.

Particulate matter emission limits

Region	Standard	PM
UE	Euro 6	4.5 mg/km
China	China 6	4.5 mg/km
EPA USA	Tier 3	10 mg/mile

Weighing system requirements:	
reading unit	d ≤ 1 µg
measurement precision	st. dev. ≤ 2 µg
air buoyancy correction	

Engine test stand - BOSMAL Automotive Research and Development Institute



WLTP test process

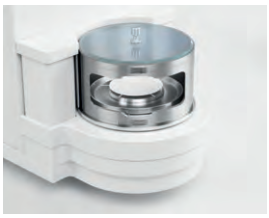
Manual Method

Ultra-microbalances UYA 5Y.F / 0.1µg
Microbalances MYA 5Y.F / 1 µg

- The UYA 5Y.F ultra-microbalances and MYA 5Y.F microbalances are designed for accurate weighing of filters with a diameter of max 70 mm.
- Automatically open weighing chamber
- Ambient conditions monitoring
- Monitoring of weighing quality, online correction of air buoyancy
- Statistics, reports, data sheets
- Programmable infrared sensors

Air buoyancy compensation

Allows for automatic correction of the weighing result in real time, which is particularly important in the case of samples with density significantly different from the density of the mass standard.



Ambient conditions module (temperature, humidity, pressure, vibrations, and air density)

Facilitates real-time measurement, record and visualisation of the above values.

Weighing correctness monitoring

Allows avoiding weighing errors resulting from incorrect placement of the sample on the weighing pan.

Vibrations in the weighing process

The 5Y series balances are equipped with a vibration sensor, which is a unique solution enabling monitoring of the workplace for vibrations caused by people, devices and machines.

Remote control of the balance

Enables transfer of data from the balance (measurement result, statistical data, etc.) directly to a tablet or a smartphone.

Databases of measurement series and reports

Full control and the possibility of filtering of always available measurement data.

Automatic Method

AK 5Y.F Automatic Balances

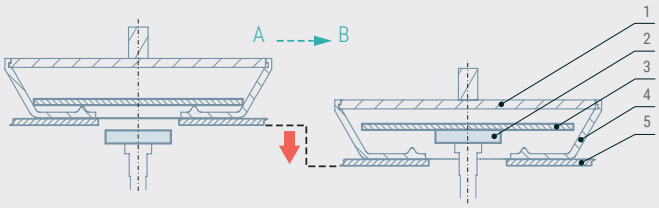
The AK-6 5Y.F weighing system is designed to facilitate a professional mass measurement of filters. Dynamic control and correction of mass indications both ensure fast and stable weighing, regardless of the weighed filter type. the automated filter weighing process is a guarantee for excellent accuracy and repeatability. the device features a 6-position magazine.

Weighing analysis efficiency

Elimination of the human factor guarantees repeatability of measurements, which is unachievable for manual weighing cycles. This is especially crucial when assessing emission of particulate pollutants, emitted by combustion engines (Euro 6 standard). Additionally, it allows carrying out tests and research while maintaining measurement repeatability of sd < 0.5 µg.

Filter case

A specially designed case allows the filters to be safely stored and guarantees stable filter mass.



Key:

1 - filter case cover 2 - weighing pan 3 - test filter

4 - filter case housing 5 - filter and mass standard magazine

Measurement of ambient conditions inside the chamber

The automatic weighing system, AK-6 5Y.F, is equipped with a high-class thermo-hygro-barometer allowing to register ambient conditions in real time with the readability of ± 1 hPa (pressure) / ± 1.8% (humidity) / ± 0.1 °C (temperature).

Filter identification

The filters are identified by a number being a combination of a digit code of a magazine position and EAN/QR code of the weighing container (option).

Metrological control

Control, aiming to specify whether the system operates correctly or not, can be carried out by means of an external adjustment mass, a certified external mass standard of a weight value close to that of the test filter or a reference filter.

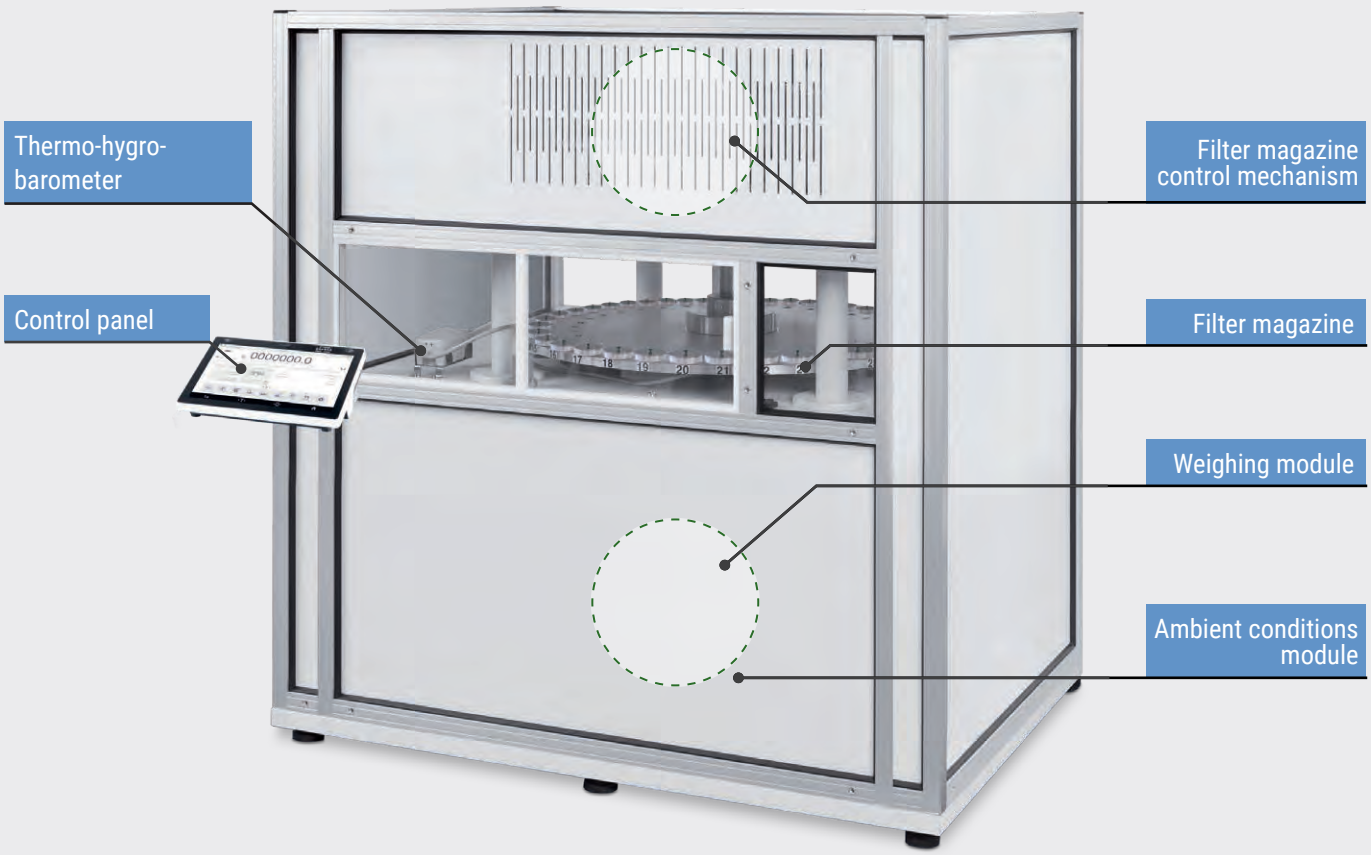
Dedicated software

Ergonomic software supported by an independent RMCS application allows managing time and test plans of each filter or filter series.

Automatic Method

UMA 5Y.FC Automatic Weighing Systems

The automatic weighing system has been designed to test changes in mass of filters made of quartz glass fibre, glass fibre, Teflon, and Teflon covered with glass fibre, that are used in various physical and chemical processes. it enables conditioning of the filters in accordance with the requirements of PN-EN 12341:2014 standard. the device features a 24-position magazine.



Efficient and safe measurements

The UMA weighing system is a first-class solution for professional mass measurement. Dynamic control and correction of mass indications both ensure fast and stable weighing regardless of the weighed filter type.

Effective weighing analysis

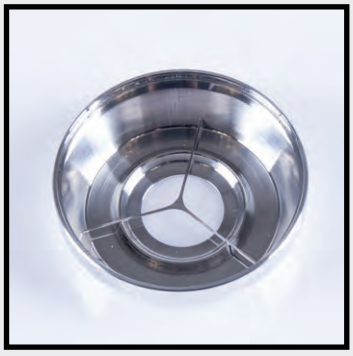
Full automation of the weighing cycle, thanks to the elimination of the ‚human factor', is a guarantee of measurement repeatability impossible to be obtained in case of manual weighing. Remote designing of measurement processes significantly increases operation efficiency. Test cycle design - a computer application. Online and remote control, report, statistics.

Filter case

Each filter during conditioning is stored in a steel container.

Filter identification

The filters are identified by a number being a combination of a digit code of a magazine position and EAN code of the weighing container (option).



Metrological control

The accuracy of mass measurements is periodically checked using a certified mass standard of a weight value close to that of the analysed filters.

Ambient conditions measurement

The UMA weighing system is equipped with a high-class thermo-hygro-barometer allowing to register ambient conditions in real time. the characteristic feature of the device is high readability of pressure (±1 hPa), humidity (±1.8 %), and temperature (±0.1 °C). the ambient conditions module of the weighing system is built into the lower part, so that a laminar air flow is possible without disturbing the filter mass measurement process. the range of temperature and humidity changes is forced automatically in accordance with the values programmed in the device terminal.

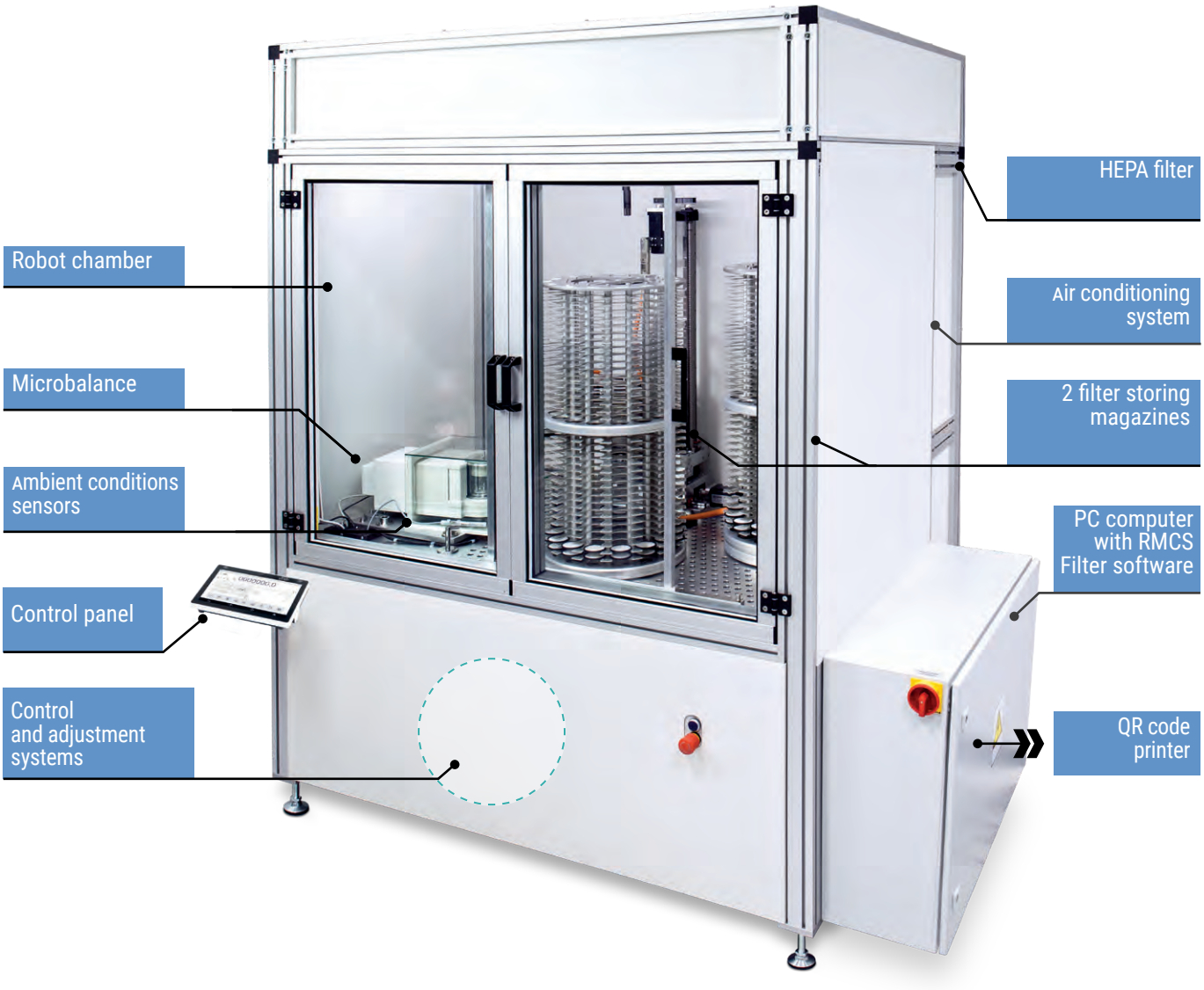
Dedicated software

Ergonomic software supported by an independent RMCS application allows managing time and comparison test plans of each filter or filter series. Summary reports and report components are defined by the system administrator.

Automatic Method RB/RMC Robotic System

RB 5Y.F Robotic Weighing System

It allows for an automatic conditioning procedure and weighing of filters with a maximum diameter of 47 mm. the air conditioning system ensures stable, invariant ambient conditions inside the chamber. the device is equipped with 2 magazines that can store up to 1020 filters.

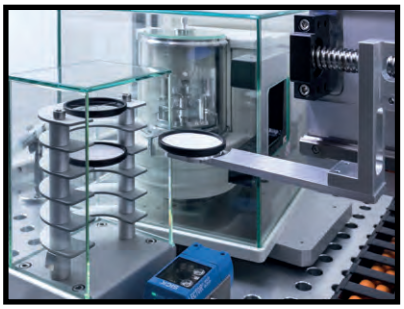


Filter magazine

The devices feature integrated conditioning magazines. the filters are placed on specially designed trays made of metal or polyoxymethylene (POM). the trays can optionally feature RFID marking.

Ambient conditions

THB sensors enable carrying out temperature and humidity monitoring inside the weighing chamber. to provide clear and sterile working environment, the system features a HEPA filter. Airflow inside the weighing chamber is controlled using an air conditioning system. With this, stable working conditions accordant with EN 12341 standard are ensured.



Robot

Filters are transported between device elements (filter magazine, reference filter magazine, ionizer, QR code reader, weighing instrument) via a robot moving in three dimensions (X, Y, Z). the transport unit moves in accordance with a set procedure.

RMC 5Y.F robotic weighing system

The RMC 5Y.F robot, while maintaining the functionality of the RB 5Y.F robot, offers measurements of filters placed in specially designed metal cases. This solution allows the filters to be stored in perfect conditions.

Dedicated software

The RMCS Filter software enables management of the filter weighing process, starting from QR code assigning, through weighing of both unsampled and sampled filters, to data analysis.

Technical Specification

Robotic and Automatic Weighing System

Product Code	Model	Max. capacity	Readability	Repeatability	Weighing pan dimensions	magazine
WL-501-0003	**RB 2.5Y.F**	2.1 g	1 µg	0.5 µg	customize	1025 filters

Product Code	Model	Max. capacity	Readability	Repeatability	Weighing pan dimensions	magazine
WL-504-0003	**RMC 2.5Y.F**	2.1 g	1 µg	0.5 µg	customize	156 filters

Product Code	Model	Max. capacity	Readability	Repeatability	Weighing pan dimensions	magazine
WL-504-0004	**RMC 2.5Y.FC**	2.1 g	1 µg	0.5 µg	customize	156 filters

Product Code	Model	Max. capacity	Readability	Repeatability	Weighing pan dimensions	magazine
WL-502-0005	**UMA 2.5Y.F**	2.1 g	1 µg	0.5	customize	36 filters

Product Code	Model	Max. capacity	Readability	Repeatability	Weighing pan dimensions	magazine
WL-502-0004	**UMA 2.5Y.FC**	2.1 g	1 µg	0.5	customize	36 filters

Product Code	Model	Max. capacity	Readability	Repeatability	Weighing pan dimensions	magazine
WL-503-0002	**AK-6.510.5Y.F**	510 mg	0.1 µg	0.2 µg	customize	6 filters

Technical Specification

Manual Weighing System

Product Code	Model	Max. capacity	Readability	Repeatability	Weighing pan dimensions
WL-110-0017	**XA 52.5Y.F**	52 g	0.01 mg	0.007 mg	210×254 mm & ø90 mm & ø85 mm (option)
WL-110-0018	**XA 110.5Y.F**	110 g	0.01 mg	0.007	210×254 mm & ø90 mm & ø85 mm (option)

PRODUCT CATALOGUE

ADVANCED WEIGHING TECHNOLOGIES

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C315 Terminal

MASS MEASUREMENTS IN INDUSTRY

PUE C315

Fast and Precise Weighing for Numerous Industrial Applications

Weighing Data Record

An in-built memory allows record of data of the on going weighing - up to 5 000 records. Additional Alibi Memory guarantees safety by cause of automatically saved measurement log. All log-stored data can be analysed (up to 100 000 records).

Wireless Communication

Use of the wireless communication Wi-Fi® enables export of recorded measurements and data stored by Alibi Memory, it also facilitates transfer of current mass indications either to a mobile application or a respective RADWAG software.

Generating Reports

The C315 indicator offers a function using which you can generate and print a report on performed adjustments and weighings, all it in accordance with GLP rules. the reports can be completed with the real time of carried out measurements, this is thanks to an in-built RTC.

Reliability and Safety

Platform of solid mechanical design, made of powder-coated steel AISI 304, ensures durability and endurance in everyday use in slightly challenging industrial conditions.

Ease of Operation and Clear Indication Presentation

Due to a backlit LCD the measurement result is clearly visible. Easy operation enables fast and reliable measurements to be carried out even by an inexperienced operator.

Numerous Configurations

Weighing pan of numerous dimensions and vast capacity range favour selection of an optimal solution suiting specific requirements and needs of various customers.

Robust Weighing Indicator for the Toughest Industrial Applications

www.radwag.com

PUE H315 Terminal

MASS MEASUREMENTS IN INDUSTRY

PUE H315

Robust Weighing Indicator for the Toughest Industrial Applications

The new PUE H315 indicator by RADWAG is extremely robust thanks to its stainless steel housing with IP 66/67/69. the indicator's high degree of ingress protection translates into failure-free operation in harsh industrial conditions. PUE H315 is also versatile, so it can be used as a component of a wide range of industry scales - from small table-top scales, through platform, ramp, track and pallet scales, to livestock scales.

Operation Ergonomics

The compact design of PUE H315 improves the user experience. the indicator is a multifunctional device which can be connected to the scale via cable. You can operate it when placed on a table, or mounted on a post or a wall. a special bracket enables adjusting the tilt angle of the device, which increases the ergonomics.

Vast Range of Working Modes and Functions

The indicator has been equipped with numerous working modes: Parts Counting, +/- Control, Percent Weighing, Totalizing, Animal Weighing and Peak Hold. Additionally, it enables defining of simple printouts in accordance with GLP procedures, and features weighing and Alibi Memory with export option, real-time clock and extensive tare functions.

Communication Interfaces and Exchange of Information with External Devices

By standard, the PUE H315 indicator features RS 232 and USB communication interfaces. the possibility of equipping it with additional interfaces facilitates its customization to specific requirements like for example communication with stack lights and external buttons controlling scale functions (zeroing, taring and printout), or integration with unsophisticated automation systems. the indicator allows for communication with external devices such as a receipt printer, additional display, computer or USB flash drive.

5” colour graphic display
Menu customization
100 thousand measurements kept in terminal’s memory

www.radwag.com

PUE C32 Terminal

ADVANCED LEVEL FOR INDUSTRIAL SCALES

PUE C32

Warranty of Continuous Data Storing
Optional Battery Power Supply

Work Ergonomics

The terminal has been equipped with 5” colour display ensuring perfect readability, and 16-key membrane keypad featuring programmable function keys. the terminal offers customized menu, with this all your personal needs can be met which makes operation even more intuitive and simple. Two proximity sensors allow touch-free operation, you can assign them with any terminal function.The housing is made of durable ABS plastic.

Battery as an Optional Power Source

Use of the optional battery enables the PUE C32 terminal to operate even when there is either no or unstable power supply.

Communication Interfaces

Communication interfaces of PUE C32 terminal facilitate cooperation with numerous peripheral devices, e.g. printer or computer, and enable exchange of data by means of USB flash drives. Equipped with Wi-Fi®* module, the PUE C32 can also communicate with wireless networks.

Data Management

Information system of PUE C32 terminals has been based on Alibi Memory and the following databases: users, products, weighings, packagings, formulations, customers. Data exchange within the system is bidirectional and it is carried out via USB interface. the terminals enable import and export of databases which is done using USB flash drives.

Alibi Memory

Alibi Memory provides data safety and allows saving up to 100 thousand weighing records. This guaranties continuous storing of data over a long period of time.

PUE 7.1 Terminal

ADVANCED LEVEL FOR INDUSTRIAL SCALES

www.radwag.com

PUE 7.1

Numerous Working Modes
High Efficiency

Ergonomics and Comfort of Operation

The terminal has been equipped with 5.7” colour TFT touchscreen, ensuring perfect readability, and membrane keypad. the device features two proximity sensors placed at the front of the housing, which can be freely configured using menu. the proximity sensors enable touch free operation making your work even more comfortable, and help to keep the terminal clean.

Ingress Protection Rating

The standard version of the terminal, PUE 7.1, features plastic housing for which the degree of protection is IP43. the panel version, i.e. PUE 7.1P terminal, has been equipped with housing made of stainless steel, rated with IP66/67. the stainless steel model can be installed in a control panel or a switchboard.

Vast Range of Applications

Terminal software offers numerous working modes designed to perform various weighing processes such as parts counting, dosing, formulations, transactions or determination of density of solids. the terminal can be an integral part of many scales and weighing systems operating in various branches of industry.

Communication Interfaces

PUE 7.1 and PUE 7.1P terminals have been equipped with RS232, USB-A and Ethernet interfaces and with 4 digital inputs and outputs. This facilitates both cooperation of the terminal with peripheral devices and data exchange using USB drives. the PUE 7.1 comprises wireless communication module allowing the terminal to connect with wireless networks.

High Efficiency

The terminal features dual-core processor with 1 GHz processing power, 256 MB RAM and Windows CE 7.0. With this high efficiency operation is guaranteed.

Compliance with ATEX directive
Operation in hazardous area
Stainless steel housing of high protection class

HX5 EX Terminal

INDICATOR FOR HAZARDOUS AREAS

www.radwag.com

HX5 EX

HX5.EX is an indicator intended for industry designed to be used in hazardous areas. HX5.EX is compliant with ATEX directive.

Intended Use

HX5.EX indicator is a device used to make multifunctional weighing instruments based on load cells. it is the latest RADWAG solution intended for hazardous areas and compliant with ATEX directive. Due to its mechanical design, the HX5.EX can be used in environment filled with explosive gases and dust. it can be operated in zones: 1/21 and 2/22.

Mechanical Design

The housing is made of AISI 304 stainless steel of IP 66/68 protection class. the indicator is equipped with a membrane keypad and 5” colour graphic display covered with polycarbonate that protects it against shocks. Hermetic, intrinsically safe interfaces connectors are located on the back side of the housing. Stable mount bracket enables mounting the indicator either on any flat horizontal surface or on the wall where its inclination angle can be easily adjusted. HX5.EX indicator is powered by intrinsically safe power supply that can be operated in both hazardous and safe areas.

Communication Interfaces

The indicator is equipped with the following communication interfaces enabling cooperation with devices located in hazardous area:
- RS 232 × 2 (barcode scanner, data transmission),
- RS 485 (data transmission),
- IN / OUT × 4 (external keys, dosing devices control, checkweighing thresholds signalling).

The interfaces range can be expanded using communication module, connected to a terminal via intrinsically safe interface RS485, placed outside hazardous area.

Communication Module

Standard design:
- Ethernet,
- RS232×2,
- USB,
- 4 IN/4 OUT - digital (external keys, dosing devices control, checkweighing thresholds signalling).

Optional design:
- Profibus Dp (transmission of data with PLC controllers: mass, tare),
- 4-20mA/0-10V analog output (mass value indication),
- up to 12 digital IN/OUT (external keys, dosing devices control, checkweighing thresholds signalling).

Multifunctional Software

Indicator software allows carrying out processes such as weighing, parts counting, dosing and percent weighing. Information system is based on numerous databases: operators, products, weighings, packaging, customers. Alibi Memory guarantees stored data safety. the interfaces enable cooperation between the indicator and the accessories intended for operation in hazardous and safe areas. Accessories: barcode scanners, printers, external displays, control buttons, light signalling towers and other controlling/signalling devices. the indicator can cooperate with systems for automatic process control and superior it systems.

Multifunctional software
Clear menu and intuitive operation
Handy diode bar graph

PUE HX7 Terminal

ERGONOMICS IN INDUSTRY

www.radwag.com

PUE HX7

Quality and precision in unfavourable working conditions
Adaptation to the requirements of a production process

The bar graph, consisting of 9 red and green diode fields, is located at the top of the operation panel, it visualises a current net weight value.

The housing is made of AISI 304 stainless steel of high protection class: IP66/68.

The back side of the housing features hermetic connectors of communication interfaces.

Clear menu and intuitive information arrangement on the display guarantee uncomplicated and comfortable operation.

Wide Area of Use

The PUE HX7 terminal is an industry device used as an integral component of multifunctional single and multiple load-cell scales. the terminal is based on the latest solutions and an advanced computing platform. Its housing is made of AISI 304 stainless steel of high protection class: IP66/68.

Communication with Weighing Platforms

Basic version of the terminal supports 1 analog weighing platform. With an additional weighing module installed, the terminal can support two weighing platforms.

Diode Bar Graph

9-diode bar graph, located at the housing top regardless of the interface, signalises current net weight of a product in relation to the scale range. the terminal features 3 working modes: linear, weighing thresholds signalling and checkweighing. the bar graph significantly increases the comfort of terminal operation during piecework in food industry where fast and unambiguous presentation of product mass deviation related to the declared min and max values is crucial.

Intuitive Interface and Multifunctional Software

When creating the software, a great emphasis was put on its functionality and ergonomics. Intuitive interface plus large 7” screen stand for maximum comfort of operation. the terminal’s software allows carrying out processes such as weighing, parts counting, dosing, labelling and percent weighing. the information system of the terminal is based on the following databases: users, products, weighings, packaging, formulations and customers. Use of Alibi Memory guarantees stored data safety.

Battery as an Optional Power Source

Thanks to the optional battery, the PUE HX7 terminal can operate even when there is either no or unstable power supply. This improves the security of acquired data and improves comfort of operation.

Hermetic Connectors of Communication Interfaces

PUE HX7 terminal is equipped with hermetic connectors of the following interfaces: RS 232, USB, Ethernet, digital inputs/outputs, etc.

10.1” touchscreen
Screen customization
Remote control of terminal’s settings

PUE HY10 Terminal

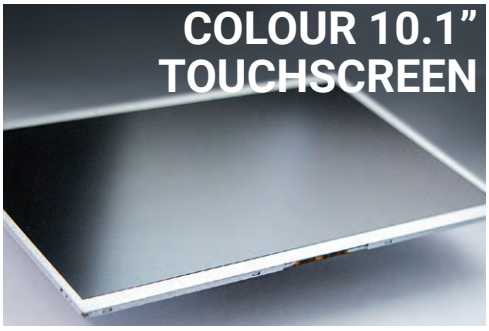
ADVANCED WEIGHING SOLUTION FOR INDUSTRY

www.radwag.com

PUE HY10

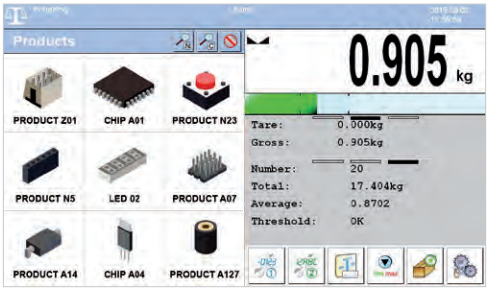
Quality and precision in challenging working conditions
Customization to production process requirements

Hermetic stainless steel housing guaranteeing faultless operation in humid and dusty environment.



10.1” colour capacitive display of 1024x600 pixels resolution providing good ergonomics

Complex customization option, i.e. self-designed screen layout and menu.



HY 10 terminal features pictograms database providing you with icons that can be assigned to weighed products.

Screen Customization

PUE HY10 screen is customizable to make it suit your individual preferences and specific requirements of any production process.

Production Processes Editor

’Traceability Processes’ function enables you to precisely program weighing process course. As an operator you are guided step by step therefore there is no need for you to worry that any operation might be omitted.

Remote Setup

The remote setup is a cutting-edge solution. Now you can set PUE HY10 terminal from anywhere in the world. All you need to connect to the terminal is Internet and ’Parameters Editor’ application.

Applications in Line with Industry Requirements

PUE HY10 software makes the terminal possible to be used for vast range of industrial applications, e.g. labelling, dosing, parts counting, formulations, prepackaged goods control (PGC), statistic quality control.

Reliability and Hygiene in Challenging Conditions

Stainless steel mechanical design and IP68/69 in-use facilitate terminal operation under challenging industrial conditions. These two characteristics make the terminal meet high hygiene standards for food and pharmaceutical industries.

Managing Multi-Platform Systems

PUE HY10 terminal can support operation of 6 weighing platforms (including 2 load cell ones). it offers connecting laboratory balances and weighing modules.

Databases and Ease of Archiving

Large PUE HY10 terminal database facilitates archiving the results of your work and reports. the data can be exchanged between terminals. Data import and export options are at your disposal.

Terminal and computer in one
Large modern touchscreen
Wide range of industrial applications

PUE 5 Terminal

VERSATILE INDUSTRIAL APPLICATIONS

www.radwag.com

PUE 5

Reliability in Industrial Conditions
Complete Support of Weighing Processes

Comfort of Operation

PUE 5 terminal features a large, modern, high-resolution screen – 15.6 inches or 19 inches (depending on the chosen model). Easy to read menu and clear-cut information arrangement ensure comfort of operation.

Industrial Computer Functionality

PUE 5 combines functionality of an advanced weighing terminal and typical features of a Windows based industrial computer. With Quad Core 2GHz processor, 4GB RAM and fast SSD the terminal processes your data quickly even when complex applications are operated.

Reliability and Resistance to Adverse Working Conditions

PUE 5 terminal is equipped with a hermetic stainless steel housing of protection class IP 65. Such solution allows the user to operate the terminal in harsh industrial conditions: high humidity and dustiness. it also guarantees both resistance to mechanical damage and good readability. Absolute precision of touch detection enables the user to wear gloves while operating the terminal.

Industrial Applications of PUE 5.

PUE 5 software allows using the terminal for labelling, parts counting, formulations, weighing records and transactions. All these applications work with E2R software thus providing a complete support of the weighing processes.

Easy Process of Creating Your Own Applications

PUE 5 operates on the basis of Windows 7 what makes working with various applications prepared by the customer a lot easier. the device is equipped with a set of programming components enabling cooperation of created applications with weighing modules.

Multiplatform Systems Management

PUE 5 terminal can support up to 4-load-cell weighing platforms. to your benefit it features option of connecting laboratory balances and weighing modules.

Technical Specification

Product Code	Model	Protection class	Communication interface	display	Weighing platforms quantity
WX-008-0191	**PUE H315**	IP 66 / IP 67 / IP 69	1×RS232, 1×USB	LCD (backlit)	1

Product Code	Model	Protection class	Communication interface	display	Weighing platforms quantity
WX-008-0150	**PUE C315**	IP 43	1×RS232	LCD (backlit)	1

Product Code	Model	Protection class	Communication interface	display	Weighing platforms quantity
WX-008-0141	**PUE C32**	IP 43	2×RS232, USB-A, USB-B, Ethernet, 4 in / 4 OUT (digital), Wi-Fi	5" graphic colour	1

Product Code	Model	Protection class	Communication interface	display	Weighing platforms quantity
WX-008-0025	**PUE 7.1**	IP 43	2×RS232, 2×USB-A, Ethernet, 4 in / 4 OUT (digital), Wi-Fi	5,7" resistive colour touchscreen	2

Product Code	Model	Protection class	Communication interface	display	Weighing platforms quantity
WX-008-0026	**PUE 7.1P**	IP 43	2×RS232, 2×USB-A, Ethernet, 4 in / 4 OUT (digital)	5,7" resistive colour touchscreen	2

Product Code	Model	Protection class	Communication interface	display	Weighing platforms quantity
WX-008-0145	**PUE HX5.EX-1**	IP 66 / IP 68	2×RS232, RS485	5" graphic colour	1
WX-008-0147	**PUE HX5.EX-2**	IP 66 / IP 68	2×RS232, RS485, 4 in / 4 OUT (digital)	5" graphic colour	1
WX-008-0148	**PUE HX5.EX-3**	IP 66 / IP 68	2×RS232, RS485, 4 IN	5" graphic colour	1
WX-008-0149	**PUE HX5.EX-4**	IP 66 / IP 68	2×RS232, RS485, 4 OUT	5" graphic colour	1

Product Code	Model	Protection class	Communication interface	display	Weighing platforms quantity
WX-008-0158	**PUE HX7**	IP 66 / IP 68	RS232, USB, Ethernet, 4 in / 4 OUT (digital)	7" graphic colour	2

Product Code	Model	Protection class	Communication interface	display	Weighing platforms quantity
WX-008-0027	**PUE HY10**	IP 68 (1h max)/69	2×RS232, 2×USB, Ethernet, 4 in / 4 OUT (digital)	10,1" graphic colour touchscreen	4

Product Code	Model	Protection class	Communication interface	display	Weighing platforms quantity
WX-008-0036	**PUE 5.15C Terminal**	IP 68	2×RS232, RS485, 4×USB, 2×Ethernet, Profibus	15,6" graphic colour touchscreen	4
WX-008-0035	**PUE 5.15IR Terminal**	IP 68	2×RS232, RS485, 4×USB, 2×Ethernet, Profibus	15,6" graphic colour touchscreen	4
WX-008-0033	**PUE 5.15R Terminal**	IP 68	2×RS232, RS485, 4×USB, 2×Ethernet, Profibus	15,6" graphic colour touchscreen	4

Product Code	Model	Protection class	Communication interface	display	Weighing platforms quantity
WX-008-0038	**PUE 5.19C Terminal**	IP 68	2×RS232, RS485, 4×USB, 2×Ethernet, Profibus	19" graphic colour touchscreen	4
WX-008-0037	**PUE 5.19IR Terminal**	IP 68	2×RS232, RS485, 4×USB, 2×Ethernet, Profibus	19" graphic colour touchscreen	4
WX-008-0034	**PUE 5.19R Terminal**	IP 68	2×RS232, RS485, 4×USB, 2×Ethernet, Profibus	19" graphic colour touchscreen	4

Read more:

PRODUCT CATALOGUE

ADVANCED WEIGHING TECHNOLOGIES

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RADWAG®

Reliable body weight measurement
Safe, convenient and precise measurement
Ease of operation, clearly presented indications

Compliance with legislation
Class III of Legal Metrology

Compliance with medical regulations
Certificate for conformity with
93/42/EEC directive, Annex 5

www.radwag.com

Medical Scales

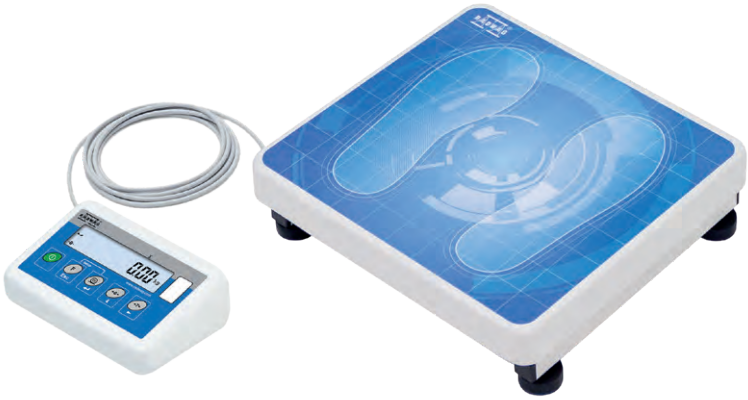
TECHNICAL SOLUTIONS FOR MEDICAL FACILITIES

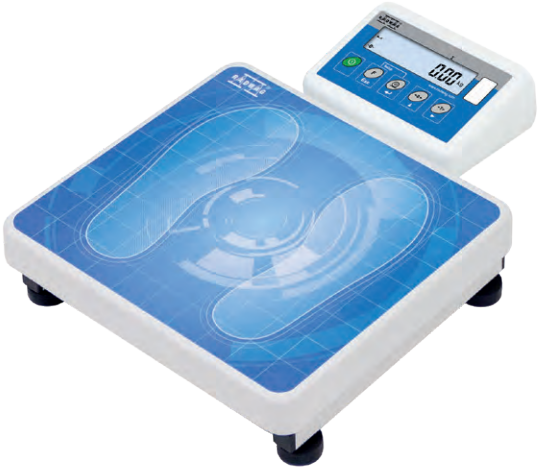
According to MDR regulations, these scales are not medical devices.

Personal Scales

Height Meter
Personal scales guarantee precise and reliable height measurement of 1-meter tall and taller patients.

Alibi Memory
Internal Alibi Memory ensures safety, and offers automatic record of measurement copies. it also allows to preview, copy and archive data.





Bed and Chair Scales

PROFESSIONAL MEDICAL SCALES
FOR PATIENTS WITH REDUCED MOBILITY

Convenient Construction
The bed scale features transport cart, which functions also as an indicator base.

Casters with Lock
The scale has been equipped with caster wheels enabling fast and convenient transport of patients. Wheel lock ensures scale stability during the measurement, it protects the patient by preventing unintentional movement.

Collapsible Armrests
Collapsible armrests make it easier for the patient to sit down the chair scale prior to the measurement, and stand up after measurement completion.

Single Platforms
Four separate weighing modules can be effortlessly placed under the wheels of patient bed. They allow weighing of any bed, wheel spacing is of no importance. the modules fit up to 99% of the beds used in medical facilities.

Baby Scales

RELIABLE MEDICAL BABY SCALES
MEETING THE HIGHEST SAFETY STANDARDS

Professional Weighing Pan

Use of specially shaped weighing pan made of SYNTHOS PS HI 945E polystyrene guarantees stable and safe measurement of infants' mass.

Communication with PUE C315

Medical scales are operated via a fail-safe indicator, the PUE C315, housed in a casing made of ABS plastic. Due to a backlit LCD display the measurement result is clearly visible. Easy operation enables fast and reliable measurements to be carried out even by an inexperienced user.

Technical Specification

Baby Scales

Product Code	Model	Max. capacity	Readability	OIML Class
WM-001-1006	C315.6/15.D-1	6 / 15 kg	2 / 5 g	III
WM-001-1007	C315.10/20.D-1	10 / 20 kg	5 / 10 g	III

Personal Scales

Product Code	Model	Max. capacity	Readability	OIML Class
WM-004-1018	C315.60/150.OR-1	60 / 150 kg	20 / 50 g	III
WM-004-1021	C315.100/200.OR-1	100 / 200 kg	50 / 100 g	III

Product Code	Model	Max. capacity	Readability	OIML Class
WM-004-1019	C315.60/150.OK-1	60 / 150 kg	20 / 50 g	III
WM-004-1022	C315.100/200.OK-1	100 / 200 kg	50 / 100 g	III

Product Code	Model	Max. capacity	Readability	OIML Class
WM-004-1020	C315.60/150.OW-1	60 / 150 kg	20 / 50 g	III
WM-004-1023	C315.100/200.OW-1	100 / 200 kg	50 / 100 g	III

Chair Scales

Product Code	Model	Max. capacity	Readability	OIML Class
WM-003-0005	C315.K.250.C-1	250 kg	100 g	III

Bed Scales

Product Code	Model	Max. capacity	Readability	OIML Class
WM-002-0013	C315.8B.300.C-1	300 kg	100 g	III

Ramps Bed Scale

Product Code	Model	Max. capacity	Readability	OIML Class
WM-002-0012	C315.4B.500.C-1	500 kg	200 g	III

Accessories

ADVANCED WEIGHING TECHNOLOGIES

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Density Determination Kit

Antistatic Ionizer

Self-Centering Pan for APP KO Comparator

Suspended Self-Centring Weighing Pan for WAY Manual Mass Comparator

Laboratory ware holders

Voluminous Sample Container

and more...

Do you want to see all our accessories?
Visit our website www.radwag.com, or use this QR Code.

Software

ADVANCED WEIGHING TECHNOLOGIES

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E2R System

Collect data from moisture analyzers that are accessible via the company network. You can have up to 16 devices under constant control. Analyze results, make graphs and reports, archive data.

Read more:

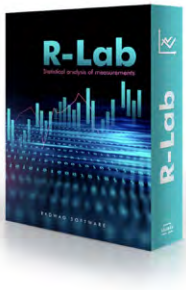
R-Cloud

Cloud

The R-Cloud is a RADWAG service that enables access to results stored in a cloud. Access to the stored data is possible from any place with Internet connection regardless of the location. Open https://rcloud.radwag.com/ website and carry out registration procedure.

Read more:

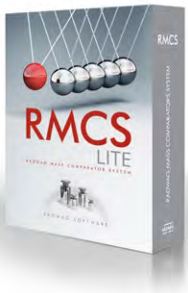
R-Lab



The modern R-Lab software enables collecting, presenting and carrying out statistical analysis of measurements sent from RADWAG scales to a computer. the software operates with max 20 scales simultaneously.

Read more:

RMCS Lite



RMCS Lite software is designed to operate RADWAG-manufactured mass comparators via a computer working in one and the same local network. the software allows for carrying out mass measurement in accordance with PN-EN 12341:2014 standard.

Read more:

and more...

Do you want to see all our software?
Visit our website www.radwag.com, or use this QR Code.

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