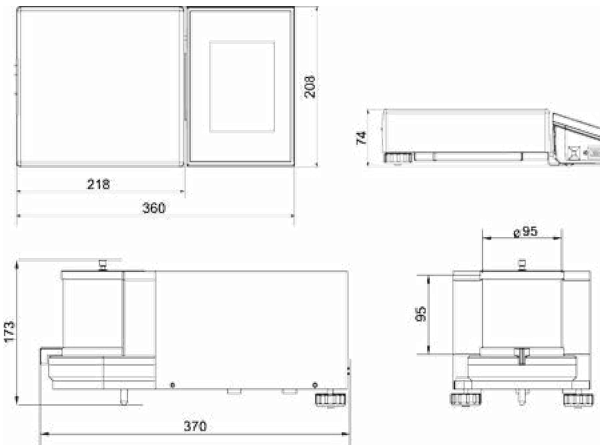


Balances



MGB-2U, Ultra Micro Balance



MGB-U Series of micro balances have been designed to meet the high requirements of mass measurements with the highest precision.

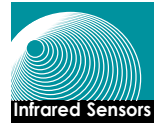
Measurement reliability & accuracy is ensured by internal calibration.

Micro balances consist of two major parts (an electronic system and a precise mechanical measurement system in a separate enclosure). This solution eliminates the temperature influence and separates from shocks and vibrations caused by users operating software.

All the elements of the balance are made of glass and steel which eliminates the influence of electrostatics on the weighing process.

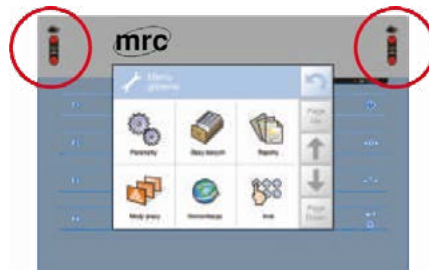
Optional accessories:

- Anti-vibration table
- Printer
- Set for the determination of air
- Foot tare and print buttons
- Professional weighing table
- Ultrasonic air ionizer with humidifier
- Standard mass
- Computer software



Electronic level indicator

- ALARM function
- Graphic level indicator
- Programmable acceptable tilts

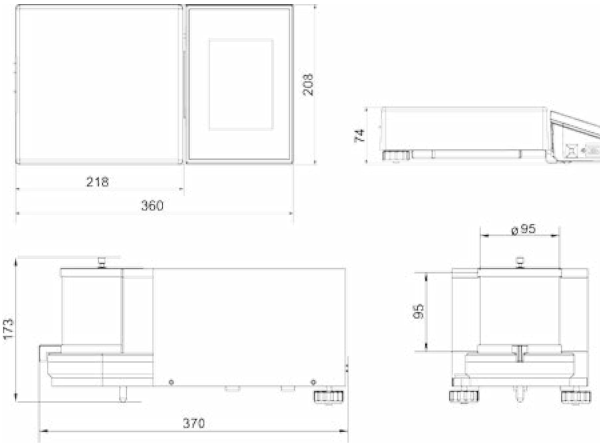


Infrared proximity sensors

- PRINT function
- TARE function
- Opening weighing chambers
- Sensors' sensitivity adjustment

Model	MGB-2U
Max capacity	2g
Readability	0.1 µg
Repeatability	0.25 µg
Linearity	±0.5 µg
Pan size	ø 16 mm
Weighing chamber dimensions	ø 90 x 90 mm
Stabilization time	10-20 s
Calibration	automatic (internal)
Working temperature	+18 ° - +30 °C
Interface	RS 232, 2 x USB, Ethernet
Power supply	230V / 11V AC
Display	5.7" touch screen

MGB-Series, Micro Balances



Electronic level indicator

- ALARM function
- Graphic level indicator
- Programmable acceptable tilts

MGB Series of microbalances have been designed to meet the high requirements of mass measurements with the highest precision. Measurement reliability and accuracy is ensured by internal calibration.

Microbalances consist of two major parts (an electronic system and a precise mechanical measurement system in a separate enclosure). This solution eliminates the temperature influence and separates from shocks and vibrations caused by users operating software.

All the elements of the balance are made of glass and steel which eliminates the influence of electrostatics on the weighing process.

Optional accessories:

- Anti-vibration table
- Printer
- Set for the determination of air
- Foot tare and print buttons
- Additional attachment for Pipettes calibration
- Professional weighing table
- Ultrasonic air ionizer with humidifier
- Standard mass
- Computer software



Infrared proximity sensors

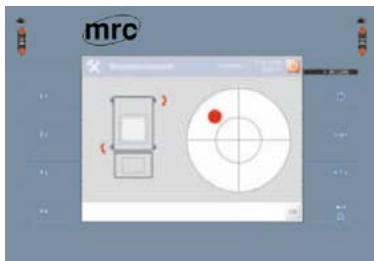
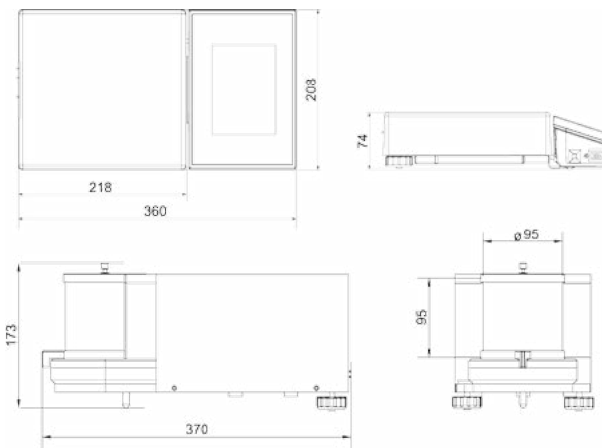
- PRINT function
- TARE function
- Opening weighing chambers
- Sensors' sensitivity adjustment



Model	MGB-2	MGB-3	MGB-5	MGB-11	MGB-21
Max capacity	2g	0.8/3g	5g	11g	21g
Readability	1 µg	1/10 µg	1 µg	1 µg	1 µg
Tare range	-2g	-3g	-5g	-11g	-21g
Repeatability*	1 µg	1 µg	1.6 µg	2.0 µg (to 5g) 2.5 µg (5g-11g)	2.0 µg (to 5g) 2.5 µg (5g-11g) 3.0 µg (11g-21g)
Linearity	±3 µg	±3 µg	±5 µg	±6 µg	±7 µg
Eccentric load deviation	3 µg	3 µg	5 µg	6 µg	7 µg
Sensitivity offset	1.5 x 10 ⁻⁶ x Rt			3 x 10 ⁻⁶ x Rt	4 x 10 ⁻⁶ x Rt
Sensitivity temperature drift	1 x 10 ⁻⁶ / °C x Rt				
Sensitivity stability	1 x 10 ⁻⁶ / Rok x Rt				
Minimum weight (USP)	3mg	3mg	6.3mg	6.3mg	6.3mg
Minimum weight (U = 1%, k = 2)	0.2mg	0.2mg	0.4mg	0.4mg	0.4mg
Pan size	Ø16mm	Ø16mm+ Ø60mm (weighing pan for filters)	Ø26mm		
Weighing chamber dimensions	Ø90 x 90mm				
Stabilization time	5 s				
Adjustment/Calibration	automatic (internal)				
Working temperature	+18 ° - +30 °C				
Change rate of working temp.	±0.3 °C/h (±1 °C/8h)				
Atmospheric humidity	45% - 65%				
Change rate of atmospheric humidity	±1%/h (±4%/8h)				
Interface	2xUSB, 2xRS 232, Ethernet, 2in/2out (digital)				
Power supply	230V / 11V AC				
Display	5.7" touch screen				

*Repeatability as a standard deviation from 10 weighing cycles

MGB-21P, Micro Balance for Pipette Calibration



Electronic level indicator

- ALARM function
- Graphic level indicator
- Programmable acceptable tilts

MGB Series of microbalances have been designed to meet the high requirements of mass measurements with the highest precision.

Measurement reliability & accuracy is ensured by internal calibration.

Microbalances consist of two major parts (an electronic system and a precise mechanical measurement system in a separate enclosure). This solution eliminates the temperature influence and separates from shocks and vibrations caused by users operating software.

All the elements of the balance are made of glass and steel which eliminates the influence of electrostatics on the weighing process.

Optional accessories:

- Anti-vibration table
- Printer
- Set for the determination of air
- Foot tare and print buttons
- Professional weighing table
- Ultrasonic air ionizer with humidifier
- Standard mass
- Computer software



Infrared proximity sensors

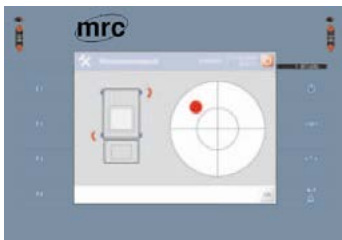
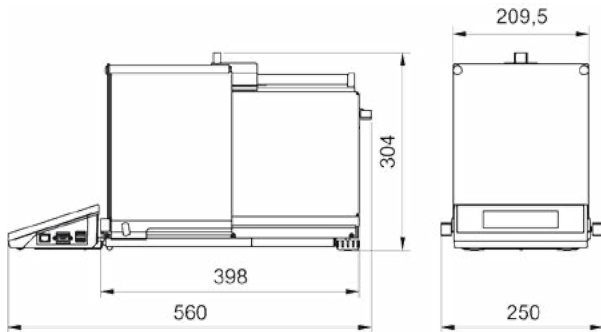
- PRINT function
- TARE function
- Opening weighing chambers
- Sensors' sensitivity adjustment



Model	MGB-21P
Max capacity	21g
Readability	1 µg
Repeatability	2.1 µg (to 2g) / 2.5 µg (2g/5g) / 3.1 µg (5g/11g) / 3.8 µg (11g/21g)
Linearity	±7 µg
Eccentric load deviation	7 µg
Sensitivity offset	4 x 10 ⁻⁶ x Rt
Sensitivity temperature drift	1 x 10 ⁻⁶ / °C x Rt
Sensitivity time drift	1 x 10 ⁻⁶ / Rok x Rt
Minimum weight (USP)	6.3mg
Minimum weight (U = 1%, k = 2)	0.4mg
Pan size	Ø26mm
Weighing chamber dimensions	Ø90 x 90mm
Stabilization time	5 s
Calibration	automatic (internal)
Working temperature	+18° - +30°C
Interface	2xUSB, 2xRS 232, Ethernet, 2in/2out (digital)
Power supply	110 / 230 V AC / 50 / 60 Hz / 13.5 / 16 V DC / 1.1 A / 11W
Display	5.7" touch screen

*Repeatability as a standard deviation from 10 weighing cycles

ASX-Y Series, Analytical Balances



Electronic level indicator

- ALARM function
- Graphic level indicator
- Programmable acceptable tilts



Infrared proximity sensors

- PRINT function
- TARE function
- Opening weighing chambers
- Sensors' sensitivity adjustment

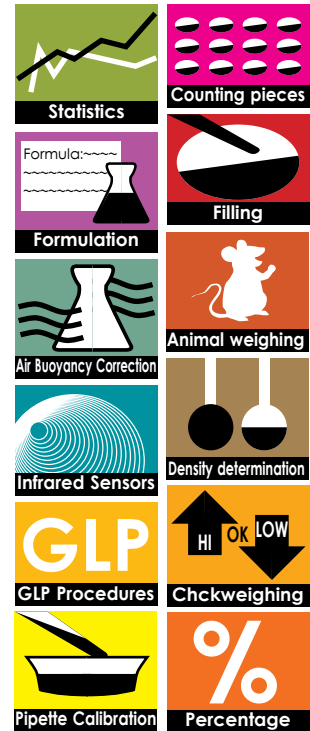
Analytical balances of ASX/Y type has been designed on the basis of new electronic modules & up-to-date technology.

Measurement reliability & accuracy is assured by internal calibration triggered by time flow or temperature conditions.

Balances are equipped with spacious weighing chamber with automatically opened side glass doors. Balances are operated by using a touch panel covering a 5.7" color graphic display. Scales have implemented new easily operated software. Dismountable glass-door for easy cleaning.

Optional accessories:

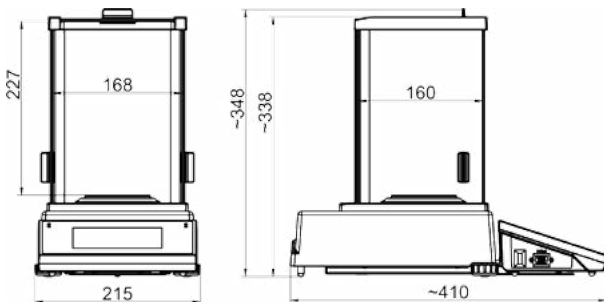
- Anti-vibration table (mild steel or stainless steel)
- Printer
- Density kit for solids & liquids
- PC KEYBOARD
- Foot button for tare or print functions
- Additional LCD display
- External rechargeable battery with charger
- Computer software



Model	ASX-50Y/A	ASX-110Y/A	ASX-80-220Y/A	ASX-220Y/A	ASX-310Y/A
Max capacity	50g	100g	80/220g	220g	310g
Minimal load	1 mg	1 mg	1 mg	10 mg	10 mg
Readability	0.01 mg	0.01 mg	0.01/0.1 mg	0.1 mg	0.1 mg
Tare range	-50g	-100g	-220g	-220g	-310g
Working temperature	+10° - +50°C				
Repeatability	0.025mg (to 20g) 0.03mg (20g/50g)	0.02mg (to 20g) 0.025mg (20g/60g) 0.04mg (60g/110g)	0.025mg (to 60g) 0.04mg (60g/80g) 0.08mg (80g/220g)	0.08mg	0.08mg (to 220g) 0.2mg (220g/310g)
Linearity	±0.06mg	±0.07mg	±0.06/0.2mg	±0.2mg	±0.3mg
Eccentric load deviation	0.06mg	0.07mg	0.2mg	0.2mg	0.3mg
Sensitivity offset	$2 \times 10^{-6} \times R_t$				
Sensitivity temp. drift	$1 \times 10^{-6} / ^\circ\text{C} \times R_t$				
Sensitivity time drift	$1 \times 10^{-6} / \text{Year} \times R_t$				
Minimum weight (USP)	75mg			240mg	
Min. weight(U=1%, k=2)	5mg			16mg	
Stabilization time	5 s	5 s	5 s / 3 s	3 s	3 s
Interface	2xUSB, RS 232, Ethernet, 2in/2out (digital)				
Power supply	110 / 230V AC / 50 / 60Hz / 13.5 - 16V DC / 1.1A				
Adjustment/Calibration	internal (automatic)				
Display	5.7" touch screen				
Pan size	Ø85mm	Ø85mm	Ø85mm	Ø100mm	Ø100mm
Weighing chamber DIM.	170x200x220mm				
Net weight/Gross weight	9.4/12.5kg	9.4/12.5kg	9.4/12.5kg	9.5/12.6kg	9.5/12.6kg

A=Automatically open side glass door

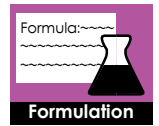
ASB-Y Series, Analytical Balances



Analytical balances Series ASB-Y are designed with application of new electronic modules and up-to-date technological solutions. Measurement reliability & accuracy is assured by system of internal adjustment / calibration triggered by time flow or temperature conditions. Balances are operated through a modern electronic module touch panel covering a 5.7" color graphic display. Scales feature new version of implemented software ensuring easy and intuitive operation.

Optional accessories:

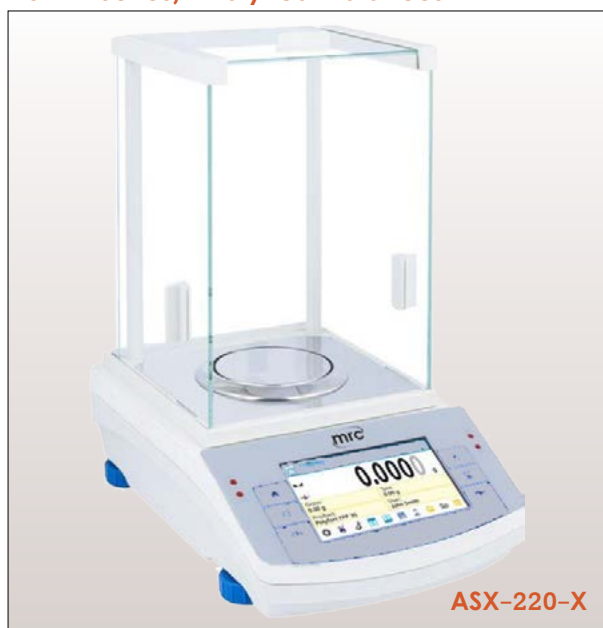
- Anti-vibration table
- Printers
- Holders for glass vessels
- Tare and "Print" foot button
- Computer software
- Antistatic ionizer
- Ambient conditions module
- Density determination kit
- LCD additional display
- PC keyboard
- Additional adapter for Pipettes calibration
- Power adapter with battery and charger
- Rack for under hook weighing
- Standard mass
- Antistatic cable
- Bar code scanner
- Cable RS 232



Model	ASB-220-Y	ASB-310-Y	ASB-510-Y
Max capacity	220g	310g	510g
Minimal load	10mg	10mg	10mg
Readability	0.1mg	0.1mg	0.1mg
Tare range	-220g	-310g	-510g
Working temperature	+10° - +45°C		
Repeatability*	0.1mg	0.1mg (220g) 0.2mg (220g-310g)	0.1mg (220g) 0.2mg (310g) 0.3mg (510g)
Linearity	±0.2mg	±0.3mg	±0.4mg
Stabilization time	3.5 s		
Sensitivity drift	2 ppm/°C in temperature +15° - +35°C		
Interface	2×USB, RS 232, Ethernet		
Power supply	110 / 230V AC / 50 / 60Hz / 13.5 / 16V DC / 1.1A		
Adjustment/Calibration	internal (automatic)		
Display	5.7" touch screen		
Pan size	Ø85mm		

*Repeatability as a standard deviation from 10 weighing cycles

ASX-X Series, Analytical Balances



ALIBI memory

The ASX-X series balances feature ALIBI memory that is a warranty for safety and automatic recording of your measurements. Options such as data preview, copying and archiving are available to users as well. The ALIBI memory allows to record up to 500,000 weighment records.

Personalization taken to the next level

The ASX-X is the only balance available on the market that provides a user with the option to design display using wide selection of widgets. Customised display of ASX-X series offers direct access to the results of your work and other important information directly from the home screen.

Weighing Data Management

USB interface facilitates quick transfer and copying of any results of your work (measurements, reports, databases) to other balances. Network management of the weighing data increases effectivity, productivity and safety of the important data to the maximum.

The ASX-X series represents a new advanced level for analytical balances. The ASX-X series balances feature the latest generation capacitive display providing the maximum comfort of use, available right at your fingertips. Ease of operation, clear menu and practical arrangement of the display guarantee the best ergonomics for your everyday tasks. A wide array of available interfaces facilitate selection of the most optimal means for communication. The ASX-X series balances offer unlimited possibilities for cooperation with external devices, providing printing, copying, archiving and data transfer. Built-in IR sensors allow numerous operations (e.g. taring, transmitting the result to a printer or selecting successive steps of a particular process, etc.) to be performed handsfree, by simply moving a hand across the sensor. The housing is made of plastic, and the pan is made of stainless steel.

Databases in ASX-X Series Balances:

In new ASX-X series balances the information system is based on 8 databases which allow several users to work with database storing several products. The registered weighing results can be subject to further analysis.

The data is registered in 8 databases:

- Users (up to 100 users),
- Products (up to 5 000 products),
- Weighments (up to 10 000 weighments),
- Packaging (up to 100 packaging types),
- Formulas (up to 100 formulas),
- Clients (up to 100 clients),
- Pipettes (up to 500 pipettes),
- ALIBI Memory (up to 500,000 weighments).

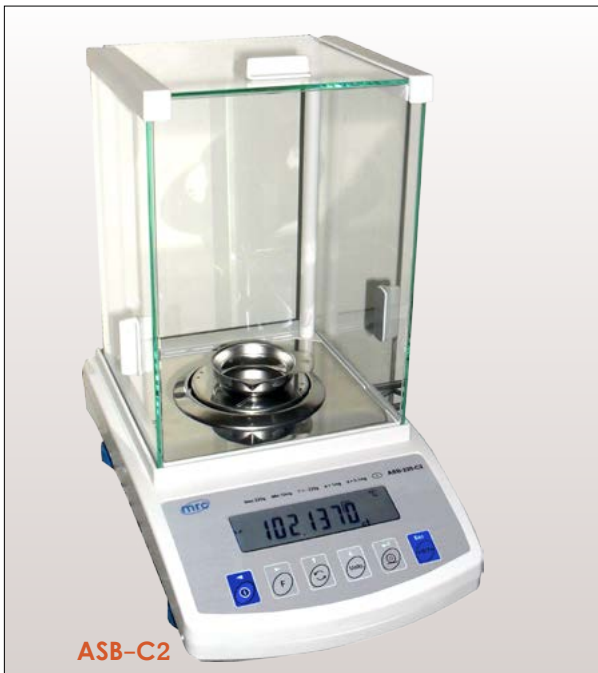
The ASX-X series features option of making reports of 3 different categories:

- Reports on formulas (up to 200 reports),
- Reports on density determination (up to 500 reports),
- Reports on pipettes calibration (up to 500 reports).



Model	ASX-220-X
Max capacity	220g
Minimal load	10mg
Readability	0.1mg
Tare range	-220g
Repeatability	0.1mg
Linearity	±0.3mg
Minimum weight (USP)	200mg
Minimum weight (U=1%,k=2)	20mg
Stabilization time	3.5 s
Pan size	Ø100mm
Sensitivity drift	1 ppm/°C @ temperature +10°C -+40°C
Working temperature	+10° - +40°C
Power supply	12 - 16 V DC
Adjustment/Calibration	internal (automatic)
Display	5" colour capacitive touchscreen
Interface	2 × RS 232, USB-A, USB-B, WiFi - option
Packaging size	495 X 400 X 515mm
Net/Gross weight	5.4/7.5kg
USB/Touchless operation	2 ports/2 IR Sensors
Ethernet/Database capacity/Power consumption	1 slot/8/250 mA

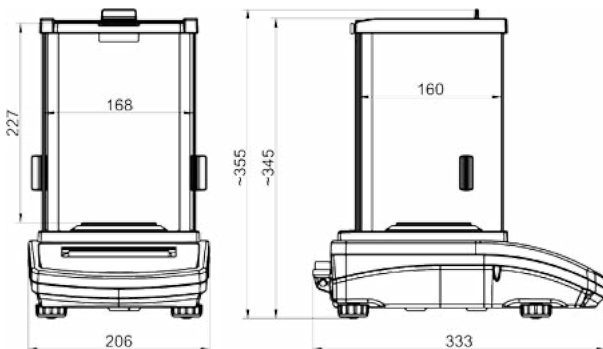
ASB Series, Analytical Balances



Balances Series ASB represent standard level of analytical balances. They are equipped with backlit LCD display. Accuracy and precise measurement of the balances are determined by internal calibration, dependant on time and temperature changes. Analytical balances ASB Series are offered with following capacities: 110, 160, 220, 310 g with readability of 0,1 m g and 60/220 with readability 0,1/0,01 mg and 100 g with readability 0,01 mg. GLP procedure of these balances is a report from calibration process of the balance, and this information has unchangeable shape (no modification possible). User has access to big measuring chamber with sliding doors and sliding top glass. Each balance is equipped with RS 232 output and possibility of connection of additional display as standard.



Balances have possibility of weighing loads under the weighing pan, i.e. under-hook weighing. In such case the mass of load is measured under the pan. It is an alternative for loads with non-standard dimensions, shapes and loads which create magnetic field. Under-hook weighing is also applied for density determination of materials.



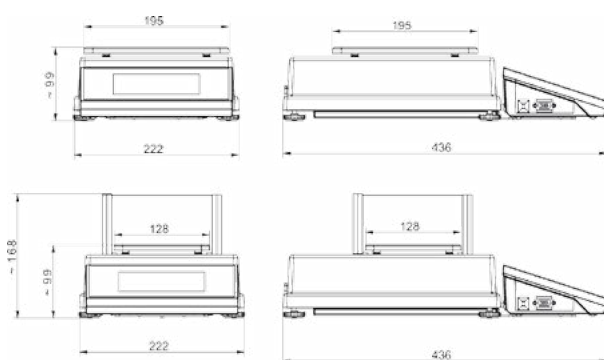
Optional accessories:

- Anti-vibration table (mild steel or stainless steel)
- Printers
- Density kit for solids and liquids
- Rack for under hook weighing
- Additional LCD display
- External rechargeable battery with charger
- Computer software

Model	ASB-60-220-C2	ASB-110-C2	ASB-160-C2	ASB-220-C2	ASB-310-C2
Max capacity	60/220g	110g	160g	220g	310g
Minimal load	1mg	10mg	10mg	10mg	10mg
Readability	0.01mg/0.1mg	0.1mg	0.1mg	0.1mg	0.1mg
Tare range	-220g	-110g	-160g	-220g	-310g
Working temperature	+10°C -+45°C				
Repeatability*	0.03/0.1mg	0.1mg	0.1mg	0.1mg	0.1mg
Linearity	±0.07/0.3mg	±0.2mg	±0.2mg	±0.2mg	±0.3mg
Sensitivity drift	2 ppm/°C @ temperature +15°C -+35°C				
Stabilization time	6 s / 3.5 s	3.5 s	3.5 s	3.5 s	3.5 s
Sensitivity drift	2ppm/°C in temperature +15° - +35°C				
Working temperature	+10° - +45°C				
Pan size	Ø70mm	Ø85mm			
Power supply	110 / 230V AC / 50 / 60Hz / 13.5 / 16V DC / 1.1A / 3W				
Adjustment/Calibration	internal (automatic)				
Display	LCD (backlit)				
Net/Gross weight	5.6/8.3kg	5.5/8.2kg	5.6/8.3kg	5.6/8.3kg	5.6/8.3kg
Packaging size	495x385x515mm				

*Repeatability as a standard deviation from 10 weighing cycles

BPS-Y Series, Precision Balances



Precise balances of BPS/Y are the response for the growing market demands concerning simple operation and maximum automation of the weighing process.

Measurement reliability and accuracy is assured by internal calibration triggered by time flow or temperature conditions.

Balances equipped in a new electronic module & are operated using a touch panel covering a 5.7" color graphic display.

Y scales have implemented new easily operated software.

Optional accessories:

- Anti-vibration table
- Printers
- Density determination kit for solids & liquids
- PC keyboard
- Foot button for tare or print functions
- Rack for under hook weighing
- LCD additional display
- External rechargeable battery pack
- Suitcase for balance
- Computer software



Model	BPS-200-2000-Y	BPS-250-Y	BPS-450-Y	BPS-600-Y	BPS-750-Y	BPS-1000-Y
Max capacity	200/2000 g	250 g	450 g	600 g	750 g	1000 g
Minimal load	20 mg	20 mg	20 mg	20 mg	20 mg	20 mg
Readability	1/10 mg	1 mg	1 mg	1 mg	1 mg	1 mg
Tare range	-2000 g	-250 g	-450 g	-600 g	-750 g	-1000 g
Working temp.	+15 - +30 °C					
Repeatability	1/10 mg	1 mg	1 mg	1.5 mg	1.5 mg	1.5 mg
Linearity	±2/10 mg	±2 mg	±2 mg	±2 mg	±3 mg	±3 mg
Sensitivity drift	2 ppm/°C in temperature +18 - +30°C					
Stabilization time	2 s / 1.5 s	2 s	2 s	2 s	2 s	2 s
Power supply	230V / 11V AC or 120V / 11V AC					
Pan size	128x128 mm					
Net/Gross weight	5/7.1 kg	4.1/6 kg	4.4/6.3 kg	4.4/6.3 kg	4.4/6.3 kg	4.4/6.3 kg
Packaging size	570x325x225 mm					

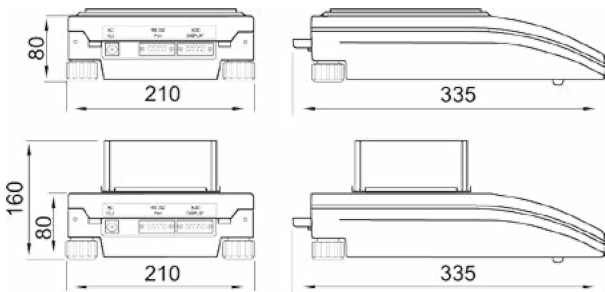
Model	BPS-1500-Y	BPS-2500-Y	BPS-4500-Y	BPS-6000-Y	BPS-8000-Y*
Max capacity	1500 g	2500 g	4500 g	6000 g	8000 g
Minimal load	500 mg	500 mg	500 mg	500 mg	500 mg
Readability	10 mg	10 mg	10 mg	10 mg	10 mg
Tare range	-1500 g	-2500 g	-4500 g	-6000 g	-8000 g
Working temp.	+15 - +30 °C				
Repeatability	10 mg	10 mg	10 mg	15 mg	20 mg
Linearity	±20 mg	±20 mg	±20 mg	±30 mg	±15 mg
Sensitivity drift	2 ppm/°C in temperature +18 - +30°C				
Stabilization time	1.5 s	1.5 s	1.5 s	1.5 s	1.5 s
Power supply	230V / 11V AC or 120V / 11V AC				
Pan size	195x195 mm				
Net/Gross weight	5/7.1 kg	5/7.1 kg	5/7.1 kg	5/7.1 kg	3.4/5.3 kg
Packaging size	570x325x225 mm				

* external calibration

BPS-C1 Series, Precision Balances



with system of external calibration. Balances are equipped with optional weighing of loads outside the weighing pan, so called under hook weighing. it is an alternative for weighing loads with non standard dimensions or made of magnetic substances. Under hook weighing is additionally applied in case of density determination procedure.



Balances Series BPS are equipped with 12 key front panel and LCD backlit display. Pan dimension is this Series is 195x195 or 128x128 mm with a glass shield over the weighing pan which protects the load against possible breeze. Each balance has RS 232 and additional display outputs as standard.

GLP procedure is available in a form of a report from balance calibration. Shape of the printout is modifiable. User name, project name, print of date and time, and print frame are user defined on printout.

Balances marked as C/1 are equipped with system of external calibration. Balances are equipped with optional weighing of loads outside the weighing pan, so called under hook weighing. it is an alternative for weighing loads with non standard dimensions or made of magnetic substances. Under hook weighing is additionally applied in case of density determination procedure.



Optional accessories:

- Anti-vibration table
- Printers
- Density determination kit for solids & liquids
- Rack for under hook weighing
- LCD additional display
- External rechargeable battery pack
- Suitcase for balance
- Computer software

Model	BPS-200-2000-C1	BPS-210-C1*	BPS-360-C1	BPS-510-C1	BPS-750-C1	BPS-1000-C1
Max capacity	200/2000g	210g	360g	510g	750g	1000g
Minimal load	20mg	20mg	20mg	20mg	20mg	20mg
Readability	1/10mg	1mg	1mg	1mg	1mg	1mg
Tare range	-2000g	-210g	-360g	-510g	-750g	-1000g
Linearity	±2/10mg	±2mg	±2mg	±2mg	±3mg	±3mg
Repeatability	1/10mg	1mg	1mg	1mg	1.5mg	1.5mg
Pan size	128x128mm					
Stabilization time	2 s / 1.5 s	2 s	2 s	2 s	2 s	2 s
Sensitivity drift	2 ppm/°C in temperature +18° - +30°C					
Working temp.	+15° - +30°C					
Power supply	230V / 11V AC or 120V / 11V AC					
Net\Gross weight	3.3/5.2kg	3.2/5.1kg	3.2/5.1kg	3.2/5.1kg	3.2/5.1kg	3.2/5.1kg
Packaging size	570x325x225mm					

Model	BPS-1200-C1*	BPS-2100-C1*	BPS-3500-C1	BPS-4500-C1	BPS-6000-C1	BPS-8000-C1
Max capacity	1200g	2100g	3500g	4500g	6000g	8000g
Minimal load	500mg	500mg	500mg	500mg	500mg	500mg
Readability	10mg	10mg	10mg	10mg	10mg	10mg
Tare range	-1200g	-2100g	-3500g	-4500g	-6000g	-8000g
Linearity	±20mg	±20mg	±20mg	±20mg	±20mg	±20mg
Repeatability	10mg	10mg	10mg	10mg	15mg	15mg
Pan size	195x195mm					
Stabilization time	1.5 s	1.5 s	1.5 s	1.5 s	1.5 s	1.5 s
Sensitivity drift	2 ppm/°C in temperature +18° - +30°C					
Working temp.	+15° - +30°C					
Power supply	230V / 11V AC or 120V / 11V AC					
Net/Gross weight	3.2/5.1kg	3.4/5.3kg	3.4/5.3kg	3.4/5.3kg	3.4/5.3kg	3.4/5.3kg
Packaging size	570x325x225mm					

* verified balances

BPS-C2 Series, Precision Balances



Balances Series BPS are equipped with 12 key front panel and LCD backlit display. Pan dimension in this Series is 195x195 or 128x128 mm with a glass shield over the weighing pan which protects the load against possible breeze. Each balance has RS 232 and additional display outputs as standard.

GLP procedure is available in a form of a report from balance calibration. shape of the printout is modifiable. User name, project name, print of date and time, and print frame are user defined on printout.

Balances marked as C2 are equipped with

system of internal automatic calibration. Balances are equipped with optional weighing of loads outside the weighing pan, so called under hook weighing. it is an alternative for weighing loads with non standard dimensions or made of magnetic substances. Under hook weighing is additionally applied in case of density determination procedure.



Counting pieces



Density determination



Checkweighing



Percentage



Summing function



Optional accessories:

- Anti-vibration table
- Printers
- Density determination kit for solids & liquids
- Rack for under hook weighing
- LCD additional display
- External rechargeable battery pack
- Computer software

Model	BPS-200-2000-C2	BPS-210-C2*	BPS-360-C2	BPS-600-C2	BPS-750-C2	BPS-1000-C2
Max capacity	200/2000g	210g	360g	600g	750g	1000g
Minimal load	20mg	20mg	20mg	20mg	20mg	20mg
Readability	1/10mg	1mg	1mg	1mg	1mg	1mg
Tare range	-2000g	-210g	-360g	-600g	-750g	-1000g
Linearity	±2/10mg	±2mg	±2mg	±2mg	±3mg	±3mg
Repeatability	1/10mg	1mg	1mg	1mg	1.5mg	1.5mg
Pan size	128x128mm					
Stabilization time	2 s / 1.5 s	2 s	2 s	2 s	2 s	2 s
Sensitivity drift	2 ppm/°C in temperature +18° - +30°C					
Working temp.	+15° - +30°C					
Power supply	230V / 11V AC or 120V / 11V AC					
Net\Gross weight	4.3/6.2kg	3.5/5.4kg	3.5/5.4kg	3.7/5.6kg	3.7/5.6kg	4.3/6.2kg
Packaging size	570x325x225mm					

Model	BPS-1200-C2*	BPS-2100-C2*	BPS-3500-C2*	BPS-4500-C2*	BPS-6000-C2*
Max capacity	1200g	2100g	3500g	4500g	6000g
Minimal load	500mg	500mg	500mg	500mg	500mg
Readability	10mg	10mg	10mg	10mg	10mg
Tare range	-1200g	-2100g	-3500g	-4500g	-6000g
Linearity	±20mg	±20mg	±20mg	±20mg	±20mg
Repeatability	10mg	10mg	10mg	10mg	15mg
Pan size	195x195mm				
Stabilization time	1.5 s	1.5 s	1.5 s	1.5 s	1.5 s
Sensitivity drift	2 ppm/°C in temperature +18° - +30°C				
Working temp.	+15° - +30°C				
Power supply	230V / 11V AC or 120V / 11V AC				
Net\Gross weight	4/5.9kg	4.6/6.5kg	4.6/6.5kg	4.6/6.5kg	4.6/6.5kg
Packaging size	570x325x225mm				

* verified balances

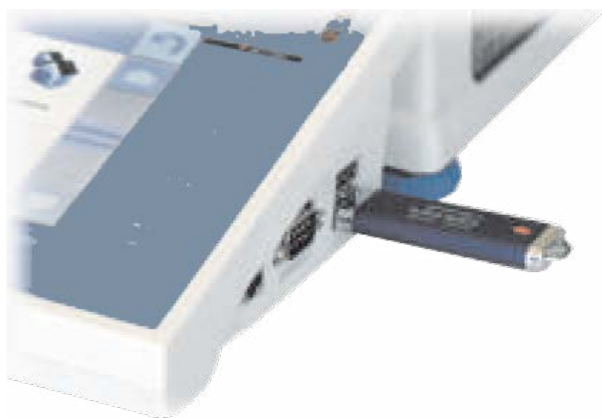
BWY Series, Precision Balances



BWY

Separable Indicator

The possibility of detach the indicator from the weighing chamber significantly limits shocks and vibrations that are moved on the weighing chamber, increases the ergonomics of operation



Data exchange through USB storage devices

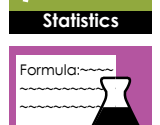
- Updating balance software
- Exporting weighing data
- Exporting/importing databases
- Exporting/importing balance settings
- Exchanging data between balances

Precise balances of BWY are the response for the growing market demands concerning simple operation and maximum automation of the weighing process.

Balances equipped in a new electronic modules & are operated using a touch panel covering a 5.7" color graphic display. Y scales have implemented new easily operated software.

Dual range version for BWY scale:

- 290x360 mm: 6-12-C1R, 12-30-C1R, 6-12-C1K, 12-30-C1K;
- 400x500 mm: 30-60-C2R, 60-120-C2R, 30-60-C2K, 60-120-C2K.



Infrared proximity sensors

- PRINT function
- TARE function
- Opening weighing chambers
- Sensors' sensitivity adjustment

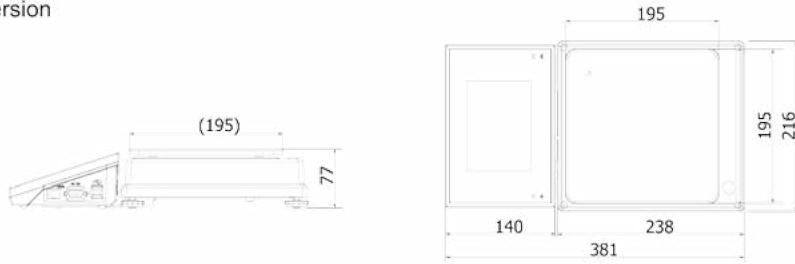
Optional accessories:

- Printers
- PC keyboard
- Rack for under hook weighing
- LCD Display
- Calibration weight
- Standard mass
- Density determination kit
- Power adapter with battery and charger
- Suitcase for balance
- Computer software
- RS 232 Cables

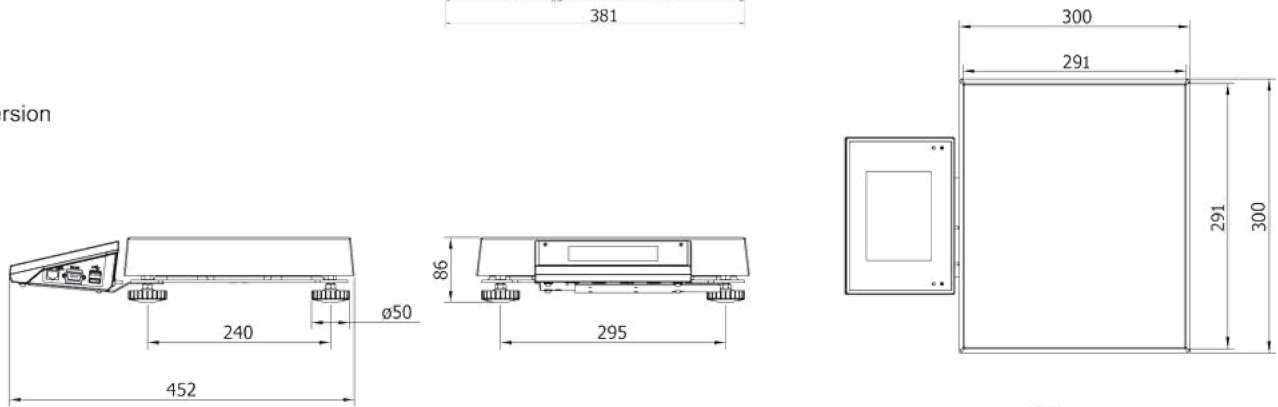
Communication interfaces



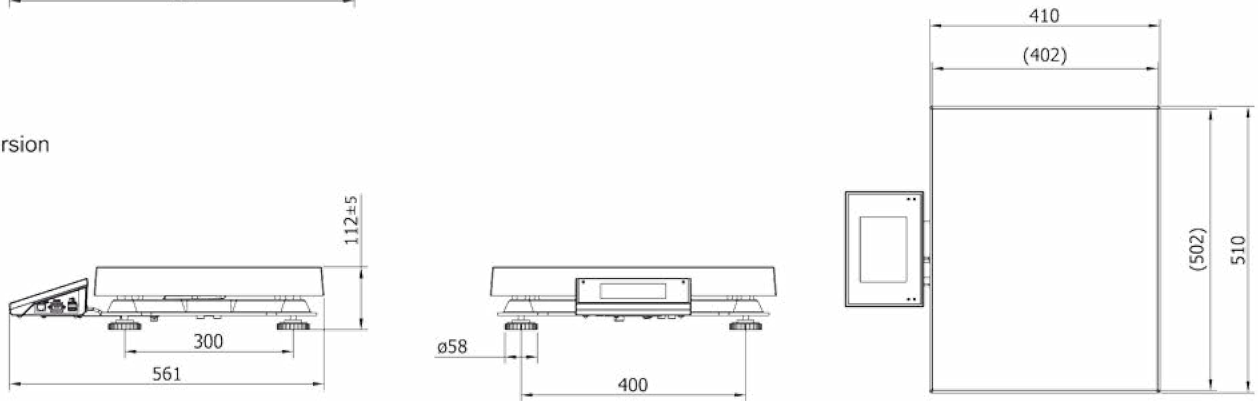
D2 version



C1 version



C2 version



Model	BWY-1-D2	BWY-2-D2	BWY-6-D2	BWY-10-D2	BWY-20-D2
Max capacity	1kg	2kg	6kg	10kg	20kg
Readability	0.01g	0.01g	0.1g	0.1g	0.1g
Tare range	-1kg	-2kg	-6kg	-10kg	-20kg
Repeatability	0.03g	0.03g	0.1g	0.2g	0.2g
Linearity	±0.03g	±0.03g	±0.1g	±0.2g	±0.2g
Power supply	230V / 11V AC or 120V / 11V AC				
IP rating	IP 54				
Pan size	195x195 mm				
Interface	2xUSB, RS 232, Ethernet, 4in / 4out digital				
Display	5.7" touch screen				

Model	BWY-6-C1R BWY-6-C1K	BWY-12-C1R BWY-12-C1K	BWY-30-C1R BWY-30-C1K	BWY-60-C1R BWY-60-C1K	BWY-120-C1R BWY-120-C1K
Max capacity	6kg	12kg	30kg	60kg	120kg
Readability	0.1g	0.2g	0.5g	1g	2g
Tare range	-6kg	-12kg	-30kg	-60kg	-120kg
Repeatability	0.2g	0.4g	1g	3g	6g
Linearity	±0.2g	±0.4g	±1g	±3g	±6g
Power supply	230V / 11V AC or 120V / 11V AC				
IP rating	IP 54				
Pan size	300x300 mm	300x300 mm	300x300 mm	400x500 mm	400x500 mm
Interface	2xUSB, RS 232, Ethernet, 4in / 4out				
Display	5,7" touch screen				

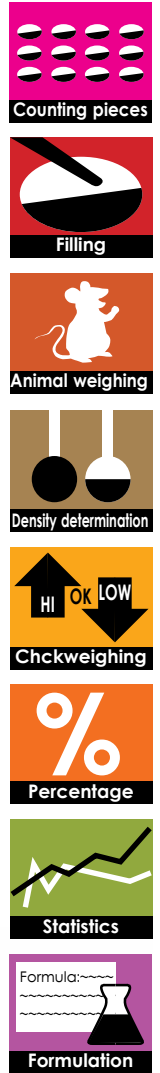
BPP-Y Series, Precision Balances



Precise balances of BPP-Y are the response for the growing market demands concerning simple operation & maximum automation of the weighing process.

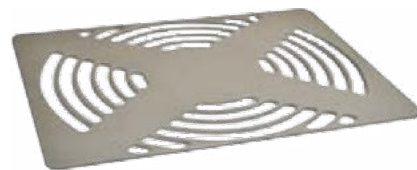
Measurement reliability & accuracy is assured by internal calibration triggered by time flow or temperature conditions.

Balances equipped in a new electronic modules and are operated using a touch panel covering a 5,7" color graphic display. Scales have implemented new easily operated software.

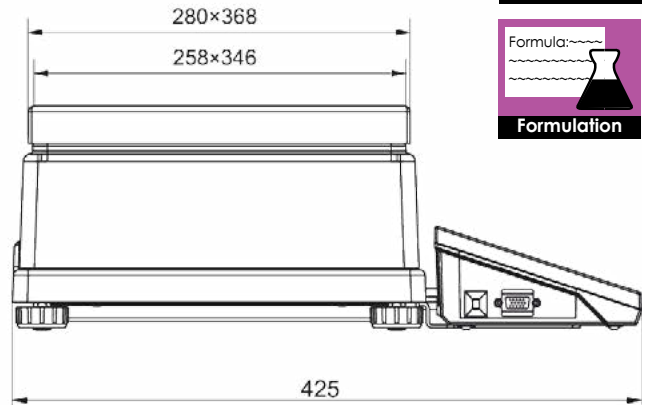
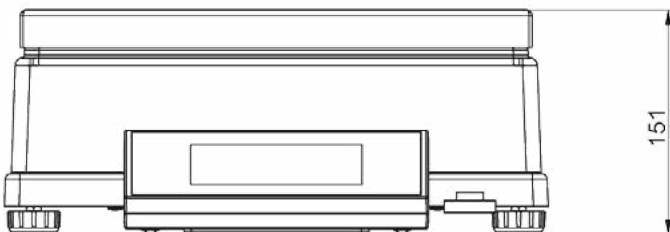


Optional accessories:

- Printers
- PC Keyboard
- Foot Button for Tare or Print Functions
- Additional LCD Display
- External rechargeable battery pack
- Calibration weight
- Computer software



Component pan: flat surface for big loads and openwork pan for reducing indication errors.



Model	BPP-10-Y/Y2	BPP-25-Y/Y2	BPP-35-Y/Y2	BPP-50-Y/Y2
Max capacity	10kg	25kg	35kg	50kg
Readability	0.01g	0.1g	0.1g	0.1g
Tare range	-10kg	-25kg	-35kg	-50kg
Repeatability	0.1g			0.15g
Linearity	±0.02g	±0.1g		±0.5g
Adjustment/Calibration	internal (for Y2 Series) or external (for Y Series)			
Pan size	346 x 258 mm			
Working temperature	+15° - +40°C			
Stabilization time	1.5 s	3 s		
Interface	2×USB, RS 232, Ethernet			
Power supply	110 / 230V AC / 50 / 60Hz / 13.5 / 16V DC / 1.1A			
Calibration weight	10kg			
Display	5.7" touch screen			

BPP-C Series, Precision Balances



BPP-C

Optional accessories:

- Printer
- LCD additional display
- External rechargeable battery pack
- Calibration weight
- Computer software

Precision balances Series BPP-C are offered in two solutions, weighing platform dimensions either 346x258 mm. Depending on the type, balances are equipped with backlit LCD display.

Each Series of BPP-C balances is offered with following capacities: 25, 30 & 6/35 kg. Independently on version, BPP-C balance is based on electromagnetic measuring system, external calibration (internal for scales C2) and RS 232 output.

Balance casing is made of aluminum, weighing pan is in stainless steel technology. Balances Series BPP have under hook weighing as standard solution.



Counting pieces



Density determination

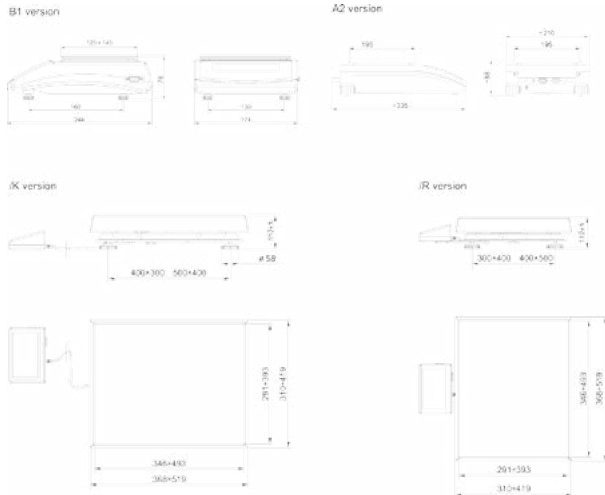


Percentage

Model	BPP-25-C/C2	BPP-35-C/C2	BPP-6-35-C2	BPP-50-C
Max capacity	25kg	35kg	6/35kg	50kg
Readability	0.1g	0.1g	1/5g	0.1g
Tare range	-25kg	-35kg	-35kg	-50kg
Repeatability	0.1g	0.1g	1/5g	0.15g
Linearity	±0.1g	±0.3g	±1/5g	±0.5g
Pan size	346 x 258mm			
Working temperature	+15° - +40°C			
Operation time	3 s			
Interface	RS 232			
Power supply	230V / 11V AC or 120V / 11V AC			
External adjustment/ calibration weight	10kg			
Display	LCD (backlit)			
Net/Gross weight:	BPP-C BPP-C2	14.4/16.4kg 14.8/16.8kg		

* verified balances

BWLC Series, Precision Balances



Balances Series BWLC are designed for fast and precise mass determination in laboratory and industrial conditions. They can also be used in areas with no access to mains (230V), as their standard equipment they include internal rechargeable battery and RS 232 output. All kinds of this balance (pan size: 128x128, 125x145, 195x195, 290x360 & 400x500 mm) are equipped with stainless steel weighing platform and backlit LCD display providing good reading of weighing result.

Balances BWLC-A2 have possibility of weighing loads outside weighing platform (so called under hook weighing). where a load is hanged under the instrument. This is an alternative for weighing loads with non-standard dimensions and shapes. This means of weighing is also useful for determination of density of solids and liquids with application of standard functions of the balance.

Optional accessories:

- Printer
- Rack for under hook weighing
- Suitcase for balance
- Computer software



Model	BWLC-0.6-B1-V2*	BWLC-1-A2	BWLC-2-A2	BWLC-3-6-A2*	BWLC-6-A2*	BWLC-6-12-A2*	BWLC-10-A2	BWLC-20-A2
Max capacity	0.6kg	1kg	2kg	3/6kg	6kg	6/12kg	10kg	20kg
Readability	0.01g	0.01g	0.01g	0.05/0.1g	0.1g	0.1/0.2g	0.1g	0.1g
Tare range	-0.6kg	-1kg	-2kg	-6kg	-6kg	-12kg	-10kg	-20kg
Linearity	±0.02g	±0.03g	±0.03g	±0.05/0.1g	±0.2g	±0.1/0.2g	±0.2g	±0.2g
Repeatability	0.01g	0.03g	0.03g	0.05/0.1g	0.2g	0.1/0.2g	0.2g	0.2g
Pan size	128x128mm	195x195mm						
Stabilization time	3 s							
Working temp.	+15° - +30°C							
Power supply	230V / 11V AC or 120V / 11V AC, (Rechargeable battery)							
IP rating	IP 43							
Display	LCD (backlit)							

Model	BWLC-6-C1R* BWLC-6-C1K*	BWLC-6-12-C1R* BWLC-6-12-C1K*	BWLC-12-C1R BWLC-12-C1K	BWLC-12-30-C1R BWLC-12-30-C1K	BWLC-30-C1R BWLC-30-C1K	BWLC-60-C2R* BWLC-60-C2K*	BWLC-60-120-C2R* BWLC-60-120-C2K*	
Max capacity	6kg	6/12kg	12kg	12/30kg	30kg	60kg	60/120kg	
Readability	0.1g	0.1/0.2g	0.2g	0,2/0,5g	0.5g	1g	1/2g	
Tare range	-6kg	-12kg	-12kg	-30kg	-30kg	-60kg	-120kg	
Linearity	±0.3g	±0.1/0.2g	±0.6g	±0.2/0.5g	±1.5g	±3g	±1/2g	
Repeatability	0.3g	0.1/0.2g	0.6g	0.2/0.5g	1.5g	3g	1/2g	
Pan size	300x300mm				400x500mm			
Stabilization time	3 s							
Working temp.	+15° - +30°C							
Power supply	230V / 11V AC or 120V / 11V AC, and accumulator							
IP rating	IP 43							
Display	LCD (backlit)							

* verified balances

BWLC-C2 Series, Precision Balances



BWLC-C2

A1 version

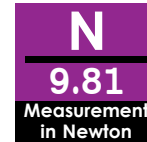


A2 version



Balances Series BWLC-C2 are designed for fast and precise mass determination in laboratory and industrial conditions. They can also be used in areas with no access to mains (230V), as their standard equipment they include internal rechargeable battery and RS 232 output. All kinds of this balance (pan size: 128x128, and 195x195 mm) are equipped with stainless steel weighing platform & backlit LCD display providing good reading of weighing result.

Balances have possibility of weighing loads outside weighing platform (so called under hook weighing) where a load is hanged under the instrument. This is an alternative for weighing loads with non-standard dimensions and shapes. This means of weighing is also useful for determination of density of solids and liquids with application of standard functions of the balance.



Optional accessories:

- Printers
- PC keyboard
- Foot button for tare or print functions
- Rack for under hook weighing
- LCD additional display
- External rechargeable battery pack
- Suitcase for balance
- Computer software

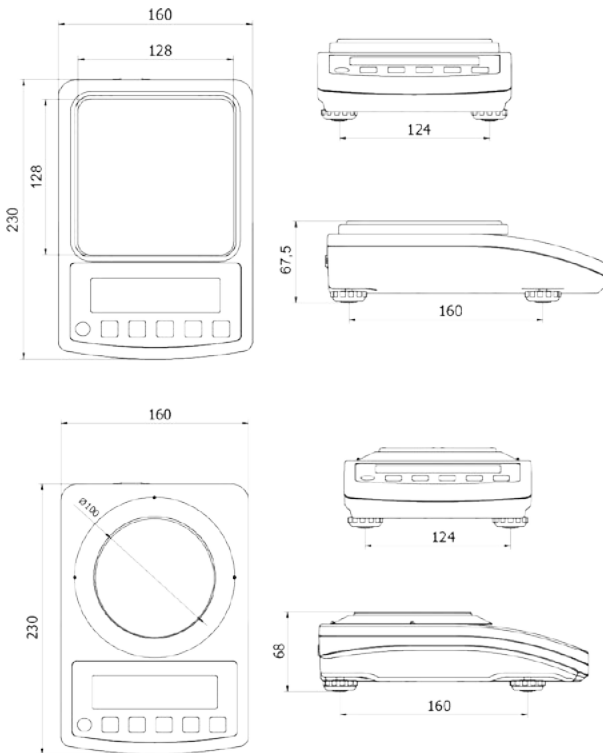
Model	BWLC-0.6-A1-C2*	BWLC-1-A2-C2	BWLC-1.2-A2-C2	BWLC-6-A2-C2*
Max capacity	0.6kg	1kg	1.2kg	6kg
Readability	0.01g	0.01g	0.02g	0.1g
Tare range	-0.6kg	-1kg	-3kg	-6kg
Repeatability	0.02g	0.03g	0.02g	0.2g
Linearity	±0.2g	±0.03g	±0.02g	±0.2g
Pan size	128 x 128mm		195 x 195mm	
Interface	RS 232			
Working temp.	+15° - +30°C			
Stabilization time	3 s			
Power supply	230V / 11V AC or 120V / 11V AC, (accumulator)			
Calibration	internal (automatic)			
IP rating	IP 43			
Display	LCD (backlit)			
Net/Gross weight	1.2 / 2kg		3 / 4kg	
Packaging size	320x210x150mm		320x210x150mm	

* verified balances

BWLC-TB Series, Precision Balances



BWLC-TB



BWLC-TB balances are designed for fast and precise determination of mass in laboratory conditions.









They can be used in locations where no power (230V) is accessible as they are equipped with internal rechargeable battery.

Balances are equipped with stainless steel weighing pan, RS 232 output and backlit LCD display.

Optional accessories:

- Printers
- Table for scale
- Computer software
- RS 232/RS 485 Converter
- External power output



- 
Counting pieces
- 
Animal weighing
- 
Checkweighing
- 
Percentage
- 
Summing function
- 
Caps lock of max indication
- 
Measurement in Newton
- 
Internal Battery

Model	BWLC-200-TB	BWLC-2000-TB
Max capacity	200g	2000g
Readability	0.001g	0.01g
Tare range	-200g	-2000g
Repeatability	0.002g	0.01g
Linearity	±0.004g	±0.03g
Pan size	Ø100 mm	128 x 128 mm
Working temperature	+15° - +30°C	
Power supply	230V / 11V AC or 120V / 11V AC, & 6 AA NiMH accumulator	
IP rating	IP 43	
Display	LCD (backlit)	
Net / Gross weight	1.3/2kg	
Packaging size	330x220x140mm	

BWPT-F Series, Table Scales



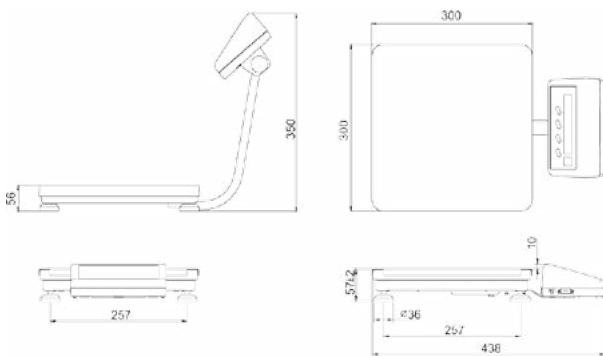
Table scales Series BWPT-F are designed for fast and precise mass determination. Tarring in the whole measuring range allows to determine Nett Mass of the weighed loads.

Scales feature low-profiled esthetic construction with Type-31 measuring indicator equipped with backlit, LCD display. Their standard equipment includes one RS 232 interface, internal rechargeable NiMH accumulators, and a power adapter. Scales Series/F can be made with a measuring indicator on a pillar, cable or fixed to the construction.

Table scales Series BWPT-F can cooperate with PC software, which contains the essential information on weighing indicated on the display. It also allows editing & modifying all the user parameters from the level of PC.

Optionally, the scales have possibility of weighing loads outside the weighing platform (so called under hook weighing). It is an alternative, for the loads with non-standard dimensions, shapes or emitting electromagnetic field.

Extra equipment comprises additional display. It is used for controlling mass of the weighed load by third party.



Optional accessories:

- Rack for head
- LCD additional display
- Large size additional display
- Printer
- Table for scale
- External power output
- Computer software
- RS 232/RS 485 converter
- RS 232 cables

Model	BWPT-F3C BWPT-F3C-K BWPT-F3C-R	BWPT-F3-6C BWPT-F3-6C-K BWPT-F3-6C-R	BWPT-F6C BWPT-F6C-K BWPT-F6C-R	BWPT-F6-15C BWPT-F6-15C-K BWPT-F6-15C-R	BWPT-F15C BWPT-F15C-K BWPT-F15C-R	BWPT-F15-30C BWPT-F15-30C-K BWPT-F15-30C-R	BWPT-F30C BWPT-F30C-K BWPT-F30C-R
Max. capacity	3kg	3/6kg	6kg	6/15kg	15kg	15/30kg	30kg
Readability	1g	1/2g	2g	2/5g	5g	5/10g	10g
Tare range	-3kg	-6kg	-6kg	-15kg	-15kg	-30kg	-30kg
Pan size	300x300mm						
Working temp.	-10° - +40°C						
Output signal	RS 232						
Power supply	230V / 11V AC or 120V / 11V AC and 6 x AA NiMH accumulator						
Display	LCD (backlit)						
Mass	5.5kg						

BWTC Series, Platform Scales with Plastic Head



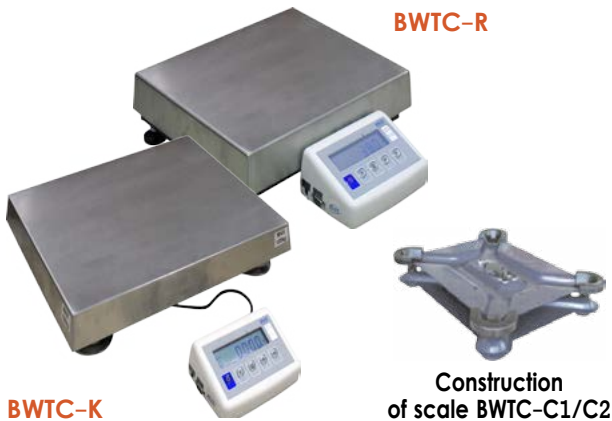
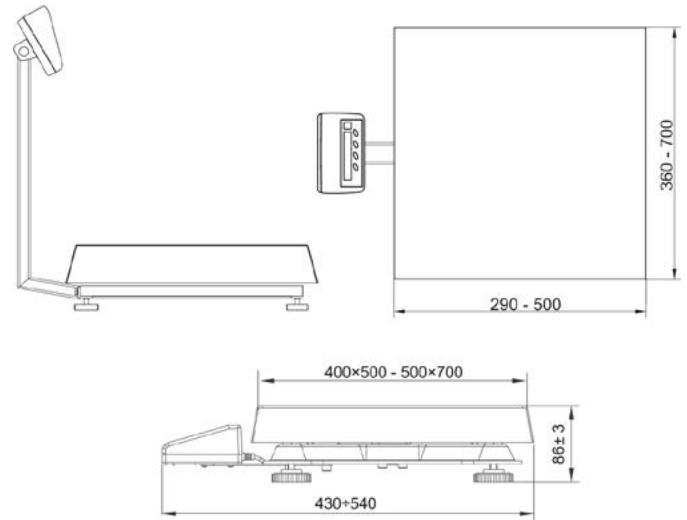
Ramp scales are designed for direct trading and in those applications, where fast & precise determination of net mass is necessary.

They are equipped with measuring indicator Series Type-31 with backlit LCD display installation:

- a pillar with possibility of adjusting the angle (BWTC version);
- a cable (version BWTC-K);
- at the platform (version BWTC-R).

Scale is manufactured in mild steel, stainless steel weighing pan.

Scales are equipped with two power supply options: mains or batteries (6 x AA).



Optional accessories:

- Rack for head
- LCD additional display
- Printer
- Table for scale
- External rechargeable battery pack
- Computer software
- RS 232/RS 485 converter
- External power output

Model	BWTC-3-C1R	BWTC-6-C1 BWTC-6-C1K BWTC-6-C1R	BWTC-15-C1 BWTC-15-C1K BWTC-15-C1R	BWTC-30-C1 BWTC-30-C1K BWTC-30-C1R	BWTC-60-C2 BWTC-60-C2K BWTC-60-C2R	BWTC-150-C2 BWTC-150-C2K BWTC-150-C2R	BWTC-300-C2	BWTC-150-C3	BWTC-300-C3
Max. capacity	3kg	6kg	15kg	30kg	60kg	150kg	300kg	150kg	300kg
Readability	1g	2g	5g	10g	20g	50g	100g	50g	100g
Tare range	-3kg	-6kg	-15kg	-30kg	-60kg	-150kg	-300kg	-150kg	-300kg
Pan size (mm)	300x300	300x300	300x300	300x300	400x500	400x500	400x500	500x700	500x700
Working temp.	-10° - +40°C								
Output signal	RS 232								
IP rating	IP 65 construction, IP 43 indicator								
Power supply	230V / 11V AC or 120V / 11V AC and 6 x AA NiMH accumulator								
Display	LCD (backlit)								
Net/Gross W	6.5/7.8kg			15.5/17.8kg			20.5/26.8kg		

BPS-CT Series, Jewelry Balances



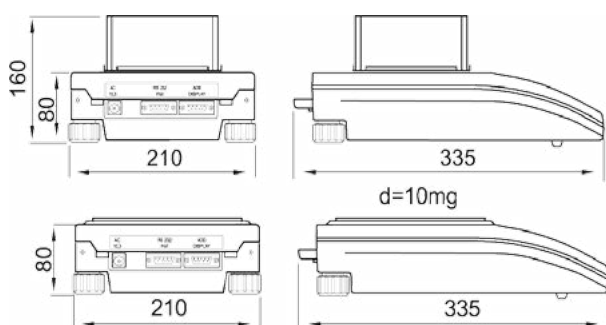
Jewelry balances Series BPS are equipped with backlit LCD display and weighing pan 128x128 mm with glass draught shield and readability 1 mg.

Second group of jewelry balances has weighing pan 195x195 mm and readability 10mg.

GLP procedure of these balances is a report from calibration process of the balance, and this information has unchangeable shape. Each balance is equipped with RS 232 output.



Balances are equipped with possibility of weighing loads outside the main weighing platform (so called under hook weighing). This means of mass measuring is an alternative for loads with non-standard dimensions & shapes and those which create magnetic field. Under hook weighing is also applied for density determination procedures.



Optional accessories:

- Anti-vibration table
- Printer
- Density determination kit for solids and liquids
- Rack for under hook weighing
- LCD additional display
- External rechargeable battery pack
- Suitcase for balance
- Computer software

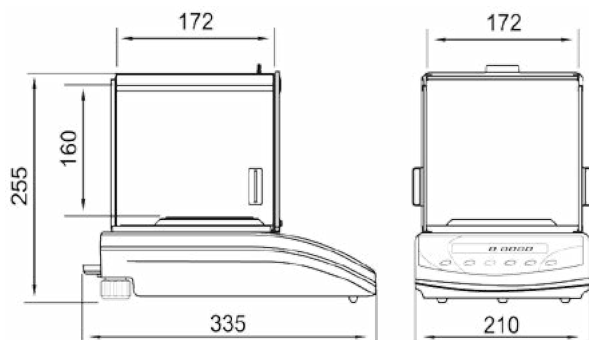
Model	BPS-510-C1-CT* BPS-510-C2-CT	BPS-2100-C1-CT* BPS-2100-C2-CT
Max capacity	510g/2550ct	2100g/10500ct
Minimal load	0.02g/0.1ct	0.5g/2.5ct
Readability	0.001g/0.005ct	0.01g/0.05ct
Tare range	-510g/-2550ct	-2100g/-10500ct
Repeatability	0.001g/0.005ct	0.01g/0.05ct
Linearity	±0.001g/0.005ct	±0.01g/0.05ct
Pan size	128 x 128 mm	195 x 195 mm
Sensitivity drift	2 ppm/°C in temperature +15 - +35°C	
Stabilization time	2 s	1.5 s
Working temperature	+15° - +30°C	
Interface	RS 232	
Power supply	110 / 230V AC / 50 / 60Hz / 13.5 / 16V DC / 1.1A	
Adjustment / Calibration	internal (for C2 version) or external (for C1 version)	
Display	LCD (backlit)	
Net / gross weight	C1	3.2 / 5.1kg
	C2	3.7 / 5.6kg
		4.6 / 6.5kg

* Calibration needs to be carried out on site, due to influence of gravity acceleration

ASB-CT Series, Jewelry-Diamond Balances



ASB-CT



Analytical balances ASB Series are offered with following capacities: 140 g, 220 g and 320 g with readability of 0,2 mg.

They are equipped with anti breeze draught shield with sliding glass doors and backlit LCD display.

These balances have system of internal automatic calibration (C2 version) activated on time & temperature changes. Balances are equipped with possibility of weighing loads outside the main weighing platform (so called under hook weighing). This means of mass measuring is an alternative for loads with non-standard dimensions & shapes and those which create magnetic field. Under hook weighing is also applied for density determination procedures.



Optional accessories:

- Anti-vibration table
- Printer
- Density determination kit for solids and liquids
- Rack for under hook weighing
- LCD additional display
- External rechargeable battery pack
- Suitcase for balance
- Computer software

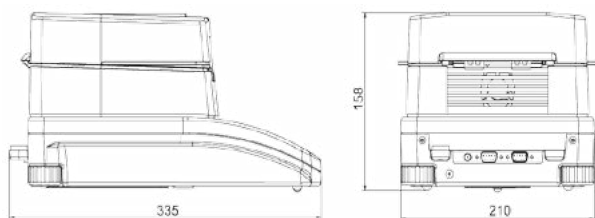
Model	ASB-120-C2CT*	ASB-220-C2CT*	ASB-320-C2CT
Max capacity	120g/600ct	220g/1100ct	320g/1600ct
Minimal load	0.004g/0.02ct	0.004g/0.02ct	0.004g/0.02ct
Readability	0.0002g/0.001ct	0.0002g/0.001ct	0.0002g/0.001ct
Tare range	-120g/-600ct	-220g/-1100ct	-320g/-1600ct
Repeatability	0.0002g/0.001ct	0.0002g/0.001ct	0.0004g/0.002ct
Linearity	±0.0002g/0.001ct	±0.0002g/0.001ct	±0.0004g/0.002ct
Pan size	Ø85mm		
Sensitivity drift	2 ppm/°C in temperature +15 - +35°C		
Working temperature	+15° - +30°C		
Power supply	230V / 11V AC or 120V / 11V AC		
Calibration	internal (C2 version) or external (C1 version)		

* verified balances

MB-Series, Moisture Analyzers



MB-Series



Optional accessories:

- Anti-vibration table
- Printer
- PC keyboard
- Disposable pans
- Control thermometer
- Calibration weight
- Computer software

Moisture analyzers are measuring devices specially designed for determination of moisture content of relatively small samples of various materials.

Moisture analyzer MB enables:

- easy access due to backlit LCD display
- drying profile (standard, mild, step, rapid).
- finish mode (manual, humidity stabilization, automatic, time defined).
- GLP/GMP printouts and reports
- halogen or infrared lamps
- standard and non-standard applications
- optimization of work due to halogen lamps mode

Maximal capacity of moisture analyzer Series MB is 210 g / 1 mg.

Moisture content is measured with accuracy 0,01% (0,001% for samples up to 1.5g).

Maximal drying temp. equals 160°C (an extra cost option is moisture analyzer for drying with temp. 250°C).



Model	MB-50-1-xx/IR/250/M	MB-50-xx/IR/M	MB-110-xx/IR/250/M	MB-210-xx/IR/250/M
Max capacity	50g	50g	110g	210g
Reading unit	0.1mg	1mg	1mg	1mg
Tare range	-50g	-50g	-110g	-210g
Max mass of sampling	50g	50g	110g	210g
Accuracy of moisture reading	0.0001%	0.001%	0.001%	0.001%
Moisture readout repeatability	+/-0,24% (sample < 2g), +/-0,06% (sample 2-10g), +/- 0,04% (sample >10g)			
Max. height of the tested sample	h= 20mm			
Drying chamber dimensions	120x120x20mm			
Pan size	Ø90mm, h= 8mm			
Range of drying temperature	max. 160° C (XX, IR and M version), max. 250° C (250 version)			
Heating module	halogen (XX & 250 version), IR emitter (IR version), a heater in metal housing (M version)			
Drying modes	4 drying modes (standard, quick, stepped, mild)			
Auto switch off options	3 modes (manual, automatic, time defined)			
Additional functions	sample identification			
Power of heating device	400W			
Working temperature	+15° - +40°C			
Power supply	230V AC or 120V AC			
Display	LCD (backlit)			
Net / Gross weight	4.9 / 7kg			
Packaging size	520x390x435mm			

Note: Standard delivery **xx** - halogen, max. 160° C **250** - halogen, max. 250° C **IR** - IR emitter, max. 160° C **M** - Metal, max. 160°C food industry

MBP-Series, Moisture Analyzers



Moisture analyzers are measuring devices specially designed for determination of moisture content of relatively small samples of various materials.

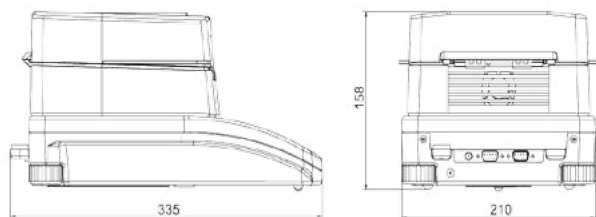
Moisture analyzer MBP is equipped with backlit graphic display, due to which the user interface is clear and easy to use. User menu includes data base with 99 drying procedures, where each entry has its programmed name (for instance material name, its number, ID, etc).

Moisture analyzer MBP enables:

- easy access due to backlit graphic display
- standard and non-standard applications
- available languages Polish, English, German, French, Spanish, Russian, Czech
- communication with usage of PC KEYBOARD
- data base with 99 drying procedures
- drying profile (standard, mild, step, rapid)
- finish mode (manual, automatic, time defined)
- visualization of drying process
- GLP/GMP printouts & reports
- halogen or infrared lamps.



Maximal capacity of moisture analyzer Series MBP is 210g /1mg. Moisture content is measured with accuracy 0,01% (0,001% for samples up to 1,5g). Maximal drying temp. equals 160°C (an extra cost option is moisture analyzer for drying with temp. 250°C).



Optional accessories:

- Anti-vibration table
- Printer
- PC keyboard
- Disposable pans
- Control thermometer
- Calibration weight
- Computer software

Model	MBP-50-1-xx/250/IR	MBP-50-xx/250/IR	MBP-60-xx/250/IR
Max capacity	50g	50g	60g
Reading unit	0.1mg	1mg	1mg
Tare range	-50g	-50g	-60g
Max mass of sampling	50g	50g	60g
Accuracy of moisture reading	0.0001%	0.001%	0.001%
Repeatability of moisture readout	+/-0.1% (sample < 2g), +/-0.02% (sample 2-10g), +/-0.04% (sample > 10g)		
Maximal height of the tested sample	h= 20mm		
Drying chamber dimensions	120x120x20 mm		
Pan size	Ø90mm, h= 8mm		
Range of drying temperature	max. 160° C (xx and IR version), max. 250° C (250 version)		
Heating module	halogen (xx and 250 version), IR emitter (IR version)		
Drying modes	4 drying modes (standard, quick, stepped, mild)		
Auto switch off options	3 modes (manual, automatic, time defined)		
Additional functions	sample identification, drying diagram		
Power of heating device	400W		
Working temperature	+15° - +40°C		
Power supply	110/240V AC, 50 / 60 Hz		
Display	Graphic (backlit)		
Net / Gross weight	5.1/7.2kg		
Packaging size	520x390x435mm		

xx - halogen, max. 160° C 250 - halogen, max. 250° C IR - IR emitter max. 160° C

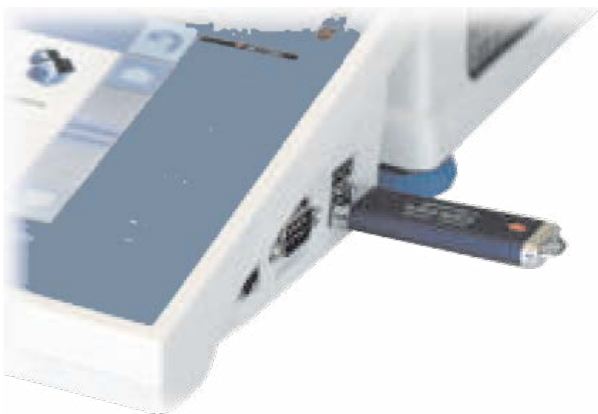
WPY Series, Industrial Scales



WPY

Separable Indicator

The possibility of detach the indicator from the weighing chamber significantly limits shocks and vibrations that are moved on the weighing chamber, increases the ergonomics of operation



Data exchange through USB storage devices

- Updating balance software
- Exporting weighing data
- Exporting/importing databases
- Exporting/importing balance settings
- Exchanging data between balances

Scales Series WPY are designed for fast and precise mass determination with special designation for use in direct trade.

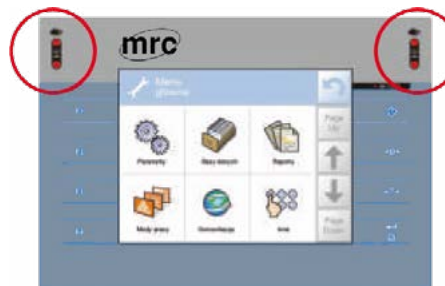
Balances equipped in a new electronic modules and are operated using a touch panel covering a 5.7" color graphic display. Y scales have implemented new easily operated software.

Dual range version for WPY scale:

- 195x195mm: 0.6-1.5-D2, 1.5-3-D2, 3-6-D2, 6-15-D2.
- 290x360 mm: 3-6-C1R, 6-15-C1R, 15-30-C1R, 3-6-C1K, 6-15-C1K, 15-30-C1K.
- 400x500 mm: 30-60-C2R, 60-150-C2R, 30-60-C2K, 60-150-C2K, 150-300-C2K.
- 500x700 mm: 60-150-C3K, 150-300-C3K.

Optional accessories:

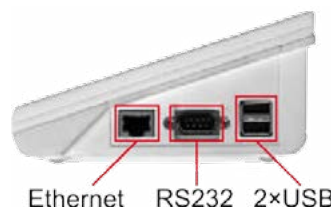
- Printers
- PC keyboard
- Rack for under hook weighing
- LCD Display
- Calibration weight
- Standard mass
- Density determination kit
- Power adapter with battery & charger
- Suitcase for balance
- Computer software
- RS 232 Cables



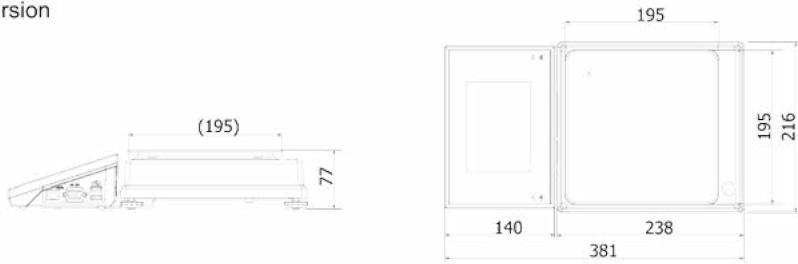
Infrared proximity sensors

- PRINT function
- TARE function
- Opening weighing chambers
- Sensors' sensitivity adjustment

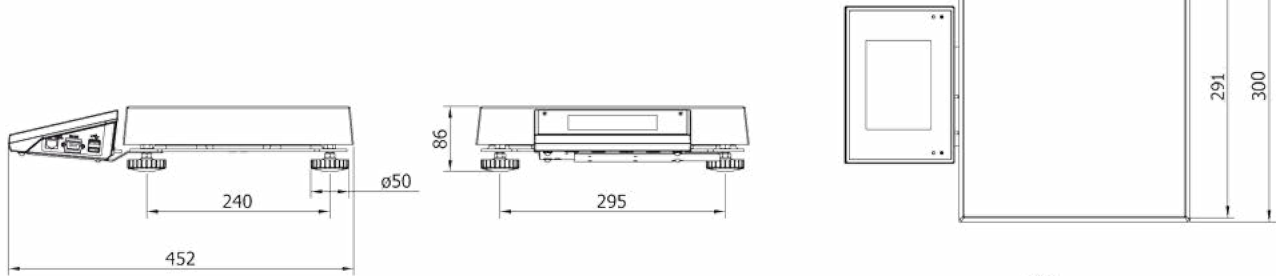
Communication interfaces



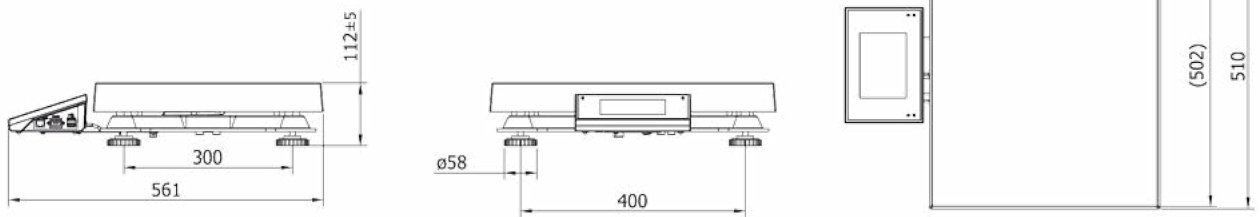
D2 version



C1 version



C2 version

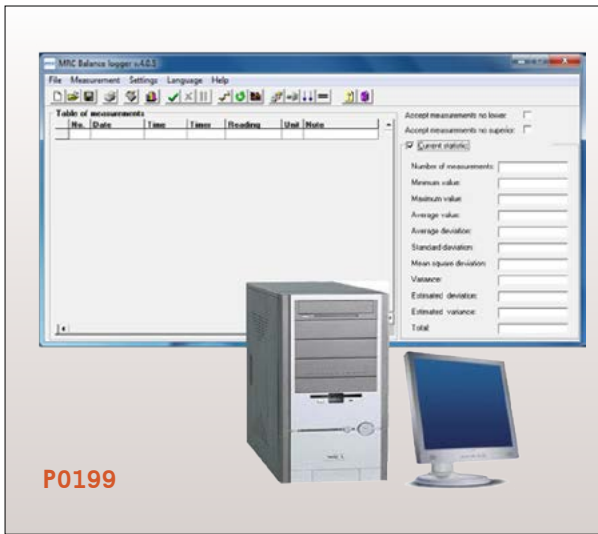


Model	WPY-1.5-D2	WPY-3-D2	WPY-6-D2	WPY-15-D2
Max capacity	1.5kg	3kg	6kg	15kg
Readability	0,5g	1g	2g	5g
Tare range	-1.5kg	-3kg	-6kg	-15kg
Power supply	230V / 11V AC or 120V / 11V AC			
Calibration	external			
Pan size	195x195 mm			
Interface	2xUSB, RS 232, Ethernet, 4in / 4out			
Display	5,7'' touch screen			

Model	WPY-6-C1R WPY-6-C1K	WPY-15-C1R WPY-15-C1K	WPY-30-C1R WPY-30-C1K	WPY-60-C2R WPY-60-C2K	WPY-150-C2R WPY-150-C2K	WPY-300-C2K	WPY-150-C3K	WPY-300-C3K
Max capacity	6kg	15kg	30kg	60kg	150kg	300kg	150kg	300kg
Readability	2g	5g	10g	20g	50g	100g	50g	100g
Tare range	-6kg	-15kg	-30kg	-60kg	-150kg	-300kg	-150kg	-300kg
Power supply	230V / 11V AC or 120V / 11V AC							
Calibration	external							
Pan size (mm)	300x300	300x300	300x300	400x500	400x500	400x500	500x700	500x700
Interface	2xUSB, RS 232, Ethernet, 4in / 4out							
Display	5.7'' touch screen							

BALANCES

P0199, Computer Software



P0199 software is designed for collecting measurement data from MRC weighing instruments & its statistics process.

Designed for scales:

- With standard communication frame.

Functions:

- Readout from instrument, record from measurements and saving data to a file
- Possibility of manual & auto registration of measurements
- Registration & storing of measurement data in a form of file
- Visualization of measurements data in a form of graph
- Static processing of measurement data
- Possibility of creating data from chosen measuring session
- Printout of measuring data, graphs and statistics
- Mainly used in laboratories.

Computer requirements:

- processor 1,2 GHz
- free 500 MB on hard drive
- RAM 256 MB (recommended 512 MB)
- operation system Windows 2000/XP
- Language versions: German/English/French.

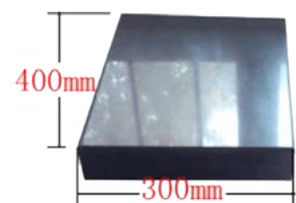
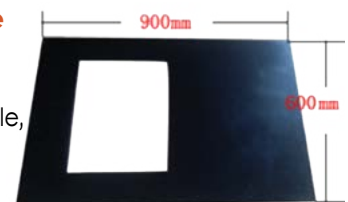
BALANCES

Antivibration Table



SAL-1, Antivibration Table

- Dimensions: 900X600mm, H: 800mm.
- Marble surface in the middle, 300X400mm dimensions.
- Mild steel version for laboratory balances.





PRINTER enables two-way thermal printing by mobile head.

The design of the mark: matrix 8 x 8 points. Print Speed: 0.75 line / sec.

Depending on the version, PRINTER can be equipped with real time clock, statistic functions or internal battery (outdoor operation).

Model	PRINTER-1/RG	PRINTER-1/Z/RG	PRINTER-1/RG Portable	PRINTER-1/Z/RG Portable	PRINTER-SQS
Description	base functions, (main current supply)	clock of real time, (main current supply)	base functions, (battery power and main current supply)	clock of real time, (battery power and main current supply)	date, time and statistic functions, (main current supply)
Print	Dual direction thermal print with moveable 8-point head, character construction: 8 x 8 point matrix, print speed: 0,75 line/s, quantity of signs a line: 40, 80				
Set of characters	One from below mentioned: IBM set 2, Mazovia, DHN, Latin-2 PC, Cirylics, Latin-2 ISO				
Thermal paper	Roll: width 112 mm, max diameter 42 mm, paper length 20 m, marking: TF 50KS-E2C				
Power supply	8,5V - 14V DC or 7V - 10V AC 50Hz, power consumption: 3W - 15W (max.), Power connection: type Jack 2.1, external power adapter: 220V / 9V AC 1,5A 50 Hz or battery (portable version)				
Interface	One from below mentioned: RS232C, RS242 (TTL), RS422A (RS485), power loop 20mA (CL), interface connection: 5 pin type DIN				
Transmission parameters	Speed of transmission: 1200, 2400, 4800, 9600 bod (other for social order.), transmission protocol: machine with DTR, Data format: 8 or 7 bytes, with or without parity control, parity: even or odd				
Durability	MTBF: 5000 hours, MCBF: 500 000 lines				
Working conditions	Working temperature: 5°C to 35°C, relative humidity: 10% - 80% (no condensation)				
Weight , dimensions	165 x 140 x 50 mm, 0,45 kg (without paper roll)				
Printer marking with set of characters	PRINTER IBM set 2, PRINTER 1 WIN 1250, PRINTER 2 DHN, PRINTER 3 Latin - 2 PC, PRINTER 4 Cirylics, PRINTER 5 Latin - 2 ISO				
Components	printer, external power adapter, interface plug or cable (according to order), roll of thermal paper, user manual, warranty and external power adapter (portable version)				

Model	TM-U200A	TM-U200B	TM-U200D
Description	with paper roll reeler and paper cutter	with paper cutter	basic version
Means of print	9-needle		
Fonts	7 x 9 / 9 x 9 points		
Quantity of characters in one line	paper 76.0 mm: 42/40/35/33 cpl 69.5 mm: 40/36/32/30 cpl 57.5 mm: 33/30/27/25 cpl		
Character dimensions (mm)	1.2 / 1.6 / 1.7 / 1.9 / 2.0(width) x 3.1(height)		
Quantity of characters per inch	17.8 / 16 / 14.5 / 13.3		
Interfaces	RS-232 or parallel or USB or Ethernet drive for cassette drawers, power adapter connection		

Model	TM-U200A	TM-U200B	TM-U200D
Input buffer	1 kB or 40 bytes		
Memory for logo	128 kB		
User defined memory	8 kB		
Print speed	6 lines / second (30 characters / line)		
Paper width	76.0 mm ±0.5 69.5 mm ±0.5 57.5 mm ±0.5		
Paper roll diameter	maximally 83 mm		
Coloring tape	ERC-38 purple, black or red-black		
Paper cutter	Cutter type "full cut" or "one-point-left cut" built in models type A and B		
Power consumption	Stand-by: 2.2 W while printing: 31 W		
Power adapter	included (compatible with PS-180)		
Cassette drawers	drive for two cassette drawers		
Durability	MTBF: 180 000 hours MCBF: 18 million lines cutter: 800 000 cuts		
Dimensions	160x286x158mm	160x248x139mm	160x248x139mm
Weight	2.7Kg	2.5Kg	2.3Kg
Colors	white: EPSON cool white or dark grey: EPSON dark grey		
Standard functions	paper reeler (type A) paper cutter (type A and B) easy paper exchange type "Drop-in" built in function Auto Status Back paper end sensor, paper end sensor, power adapter		
Options	wall hanger (for type B) customer display DM-D (connected through interface UB-S09)		
Standard EMI	sign CE, EN55022 class B, EN55024		
Safety standards	EN60950		

Model	CLP-521	CLP-621	CLP-631	CL-S700
Print	thermal	thermal, thermo-transfer	thermal, thermo-transfer	thermal, thermo-transfer
Head	200 dpi	200 dpi	300 dpi	200 dpi
Print speed	100mm/sec	100mm/sec	175mm/sec	250mm/sec
Maximal print width	104mm	104mm	104mm	104mm
Maximal print length	812mm	812mm	812mm	406mm
Minimal print length	12.7mm	12.7mm	12.7mm	12.7mm
Label width	19 - 118mm	19 - 118mm	12.5 - 118mm	25.4 - 118mm
Material thickness	0.0635 - 0.254mm	0.0635 - 0.254mm	0.0635 - 0.254mm	0.0635 - 0.254mm
Material kind	labels, cartoons, continuous media, folder			
Material recognition	overexposure optical sensor and light reflection from material		overexposure optical sensor and light reflection from material, optional moveable optical sensor	
Fonts	8 vector fonts, 1 half-tone screen		1 vector, 8 half-tone screen, True Type sensors in standard	
Bar codes	All standard types including: EAN-8, EAN-13, UPC-A, UPC-E, UCC/EAN 128, 3 with 9, 2 with 5, code 93, 128, Coderbar, Telepen, Zip and dual dimensions: PDF-417, UPS Maxicode, Posnet			
Communication interface	-	-	Parallel (Centronics) Series RS232C	
Control panel	-	-	4 buttons, 4 diodes LED	3 buttons, 2 diodes LED, display LCD
Input buffer	-	-	-	12KB
Memory	-	-	8MB	16MB
Memory extension	-	-	Flash 2MB memory cards	Flash 4MB memory cards
MTBF (average operation time between defects)	-	-	-	printer 1000km, printing head 30km
Dimensions (W×H×L)	-	-	224x288x270mm	255x480x253mm
Mass	-	-	4.5Kg	13.5Kg
Options	-	-	Paper cutter, divider, Ethernet, WLAN	Paper cutter, divider, Flash memory card, network input, real time clock



SAP/SAL

SAP/SAL, Anti vibration Table

Anti vibration table can be used with as a base for analytical, laboratory or control balance. It has been designed for assurance of stable operation conditions while performing very accurate measurements.

- Including table independent bare.
- MDF painted table top.
- Mild steel profiles construction, adjustable height.
- Optional part in stainless and acid-proof construction.
- Table Size: 600Wx770Dx800Hmm, 25kg
- Marble concrete board Size: 270Wx410Dx115mmH, 29kg



Set for determination of water vapor permeability

Permeability of water vapor is a feature which directly determines quality and application of a specific material, for instance cloth, shoes. Improper material if applied, may result in unhealthy or uncomfortable use.



Stand for under hook weighing

Stand for weighing loads in under hook weighing method. Loads are placed on special pan hanged on a hook mounted to the bottom of the scale.

Application:

- Measuring mass of magnetic materials.
- Measuring mass of non-standard dimensions or shapes.
- Determination of density of solids and liquids.
- Size (WxHxD): 330x210x335 mm



SHIELD

SHIELD, Anti draught for Microbalances

Anti-draught chamber is intended for microbalances. It is an optional equipment of microbalances working in unfavorable conditions (air-draughts and breezes). It is mounted on a table, a microbalance is placed inside a chamber. It features sliding side windows allowing for free access into the weighing chamber of a microbalance.

- Internal size (WxHxD): 468x250x250 mm
- External size (WxHxD): 536.5x256x254 mm



SHIELD

The anti draught shield can be used for protecting the weighed objects against external environment, especially wind or breeze in production halls. It is Optional accessories to the balances Series BPS, ASB with pan size 128x128mm.

Protecting the weighed objects against wind has very good influence of measuring results. It eliminates the possibility of vibration of an object caused by external conditions while taking its measurements.

Size (WxHxD): 203x200x264 mm



DENSITY

DENSITY, Cereal Kit

This kit is designed for determination of density of cereals. Measurement of cereal density in loose state is performed with application of precise balance Series BPS-X4500G and density kit for cereals. Density determination result is calculated automatically by balance software (in accordance to tables containing cereal density).

It is possible to determine the density of following cereal: wheat, oats, barley, rye. Its volume is 1 Liter.

The cereal density kit allows for determination of density according to norm: PN-73/R-74007.

P0180, Density Kit

Determining the density of solids and liquids is an inseparable part of work of the laboratories. Traditional method of density determination requires from the operator many measurements and a lot of complex calculation. In result the operator ends with a density determination result which can be saddled with calculation and systematic errors. Additionally time that needs to be devoted to density calculation is long. In case of determining the density of solids and liquids with application of MRC density determination kit, the whole procedure is very much simplified and speeded up. Time till the operator receives the density measurement is very short, as all the calculation is performed by the software of the weighing instrument, & operator's activities is limited to:

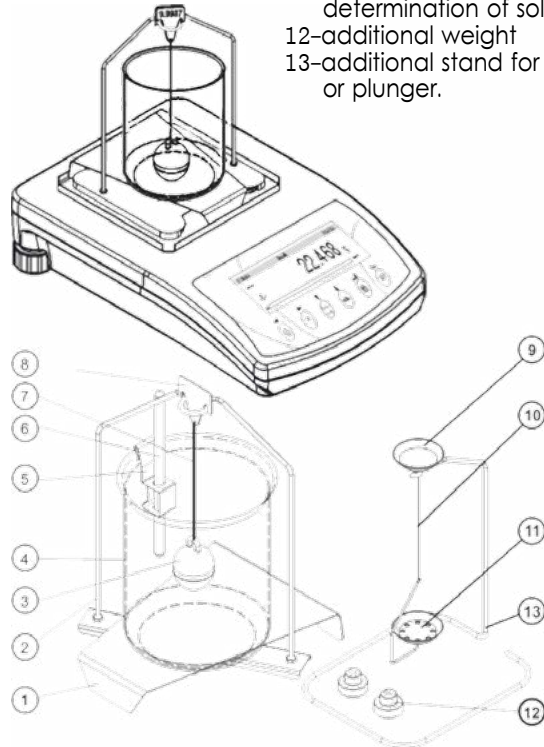
- operation of the keyboard of weighing instrument
- placing the samples on the weighing pans of the kit
- hanging the plunger

Density determination kit is Optional accessories offered to MRC laboratory balances. The software for determination of density has following basic features:

- simplicity of usage (all activities are described on the display of the balance)
- reliability (all calculation is automatically performed by the balance's software)
- fast data processing (result is obtained after determination of sample mass in water or plunger mass in liquid)
- accurate data processing (before every measurement of mass, display indication is automatically zeroed, this proves the density determination result to be reliable and real).

- 1-beaker base
- 2-pans suspension
- 3-plunger
- 4-beaker
- 5-thermometer holder
- 6-thermometr

- 7-plunger string
- 8-hook
- 9-upper pan of the set for density determination of solids
- 10-pan string
- 11-lower pan of the set for density determination of solids
- 12-additional weight
- 13-additional stand for set of pans or plunger.



Selection of the appropriate test weight for your balance

A balance can never be more accurate than the test weight used to adjust it, it depends on its tolerance.

Accuracy of the test weight: Should correspond to the readout d of the balance, rather than something better.

Nominal weight value: This is shown in adjust mode "CAL" in the balance display. Given the choice, the heaviest weight is the most suitable for accurate measurement.

OIML Directive

The key points from the OIML Directive

OIML (Organization International de Metrologies Legal) has established the exact metrological requirements for weights in verified applications in approx. 100 states all over the world. The OIML recommendation R111 (2004 Edition) for weights relates to sizes 1mg-50 kg. Statements are made on the accuracy, materials, geometric shape, marking & storage of the weights.

Error limits for weights of classes E1 to M3

The error limit classes are in fixed hierarchical levels in the proportion of 1:3, where E1 is the most accurate and M3 is the least accurate weight class. When testing weights with other weights, the correct test class is the next highest class.

Error limit classes (= tolerances)

The values given in the table below (tolerances ± ... mg) are the respective permitted fabrication tolerances. They are to be equal to the measuring uncertainty of the weight, if no DKD calibration certificate is available.

Nominal Value	OIML Max. permissible errors for weights=permissible tolerances "Tol ± mg"				
	E1	E2	F1	F2	M1
1mg	±0.003mg	±0.006mg	±0.020mg	±0.06mg	±0.20mg
2mg	±0.003mg	±0.006mg	±0.020mg	±0.06mg	±0.20mg
5mg	±0.003mg	±0.006mg	±0.020mg	±0.06mg	±0.20mg
10mg	±0.003mg	±0.008mg	±0.025mg	±0.08mg	±0.25mg
20mg	±0.003mg	±0.010mg	±0.03mg	±0.10mg	±0.3mg
50mg	±0.004mg	±0.012mg	±0.04mg	±0.12mg	±0.4mg
100mg	±0.005mg	±0.016mg	±0.05mg	±0.16mg	±0.5mg
200mg	±0.006mg	±0.020mg	±0.06mg	±0.20mg	±0.6mg
500mg	±0.008mg	±0.025mg	±0.08mg	±0.25mg	±0.8mg
1g	±0.010mg	±0.03mg	±0.10mg	±0.3mg	±1.0mg
2g	±0.012mg	±0.04mg	±0.12mg	±0.4mg	±1.2mg
5g	±0.016mg	±0.05mg	±0.16mg	±0.5mg	±1.6mg
10g	±0.020mg	±0.06mg	±0.20mg	±0.6mg	±2.0mg
20g	±0.025mg	±0.08mg	±0.25mg	±0.8mg	±2.5mg
50g	±0.03mg	±0.10mg	±0.3mg	±1.0mg	±3.0mg
100g	±0.05mg	±0.16mg	±0.5mg	±1.6mg	±5.0mg
200g	±0.10mg	±0.3mg	±1.0mg	±3.0mg	±10mg
500g	±0.25mg	±0.8mg	±2.5mg	±8.0mg	±25mg
1kg	±0.5mg	±1.6mg	±5.0mg	±16mg	±50mg
2kg	±1.0mg	±3.0mg	±10mg	±30mg	±100mg
5kg	±2.5mg	±8.0mg	±25mg	±80mg	±250mg
10kg	±5.0mg	±16mg	±50mg	±160mg	±500mg
20kg	±10mg	±30mg	±100mg	±300mg	±1000mg
50kg	±25mg	±80mg	±250mg	±800mg	±2500mg
100kg		±160mg	±500mg	±1600mg	±5000mg
200kg		±300mg	±1000mg	±3000mg	±10g

Example of Calibration certificate:

mrc
 Calibration laboratory accredited by
 Polish Centre for Accreditation, a signatory to EA MLA and ILAC MRA
 that include recognition of calibration certificates.
 Accreditation No AP 089

PCA
 Polish Centre for Accreditation
 ><<
 WARSZAWA
 AP 089
ILAC-MRA

CALIBRATION CERTIFICATE

Date of issue: 12-th November 2009 Certificate No: [redacted] Page: 1 / 2

OBJECT OF CALIBRATION
 Non-automatic electronic weighing instrument
 Model: AS 60C/2 Serial No: [redacted]
 Manufacturer: MRC Ltd.
 Characteristics:
 Max capacity Max: 60g Raedibility σ : 0.01mg

APPLICANT
 [redacted]

USER
 [redacted]

PLEASE OF CALIBRATION
 [redacted]

CALIBRATION METHOD
 Calibration Procedure PW-01 Rev. V - 10-th January 2007.

ENVIRONMENTAL CONDITIONS
 Air temperature [°C]: (21.1-21.5) ± 0.5
 Relative air humidity [%]: (48.1-48.5) ± 2.5

DATE OF CALIBRATION
 10-th November 2009

TRACEABILITY
 Calibration results were referred to national mass standard maintained in polish metrology institut - Główny Urząd Miar (GUM) with the application of mass standards numbers: 147.

CALIBRATIONS RESULTS
 The results have been presented on page 2 of this certificate including uncertainty of measurement.

UNCERTAINTY OF MEASUREMENT
 Uncertainty of measurement has been evaluated in compliance with EA-4/02. The expanded uncertainty assigned corresponds to a coverage probability of 95 % and the coverage factor $k = 2$.

This certificate may by presented or copied as a whole document only



Sets of masses

Ordering Information:

Model: Weight-S - [] - []

E1	}	1mg - 500mg
E2		(12pcs)
F1	}	1g - 100g (9pcs)
F2		1g - 200g
M1	}	(11pcs)
		1g - 500g
		(12pcs)
		1g - 2kg (15pcs)
		1kg - 5kg (4pcs)



Ordering Information:

Weight-1- [] - []

E1	1mg
E2	2mg
F1	5mg
F2	10mg
M1	20mg
	50mg
	100mg
	200mg
	500mg



Ordering Information:

Weight-2- [] - []

E1	1mg
E2	2mg
	5mg
	10mg
	20mg
	50mg
	100mg
	200mg
	500mg



Single standard masses

Ordering Information:

Model: Weight - [] - []

E2	}	1g, 200g,
F1		2g, 500g,
F2	}	5g, 1kg,
M1		10g, 2kg,
		20g, 5kg,
		50g, 10kg,
		100g, 20kg.