



MASS COMPARATORS

2013

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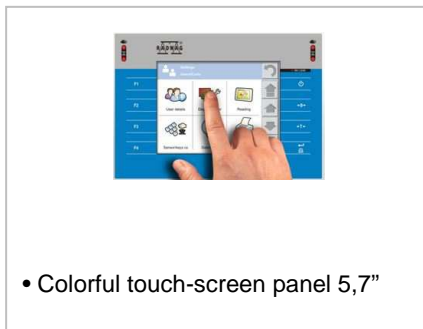
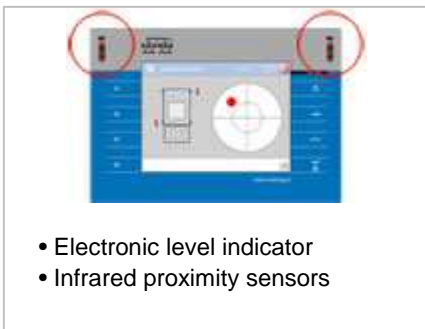
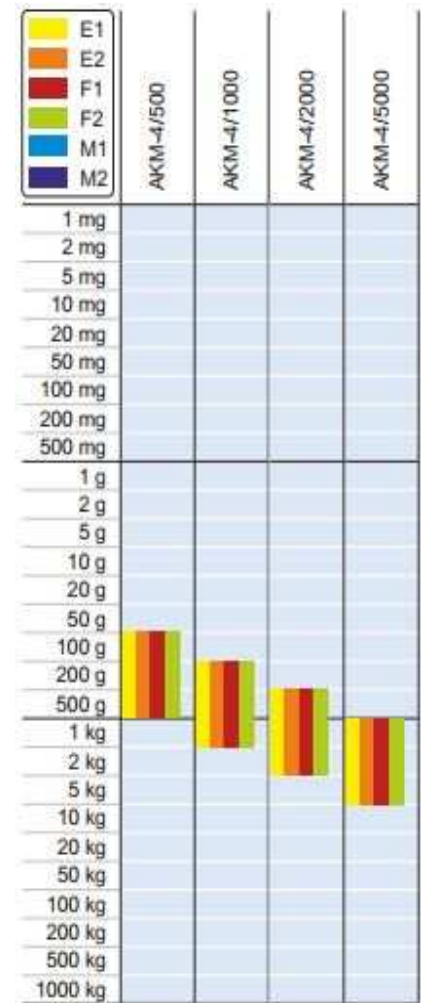
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Mass comparator module



Infrared sensors



Highlights:

- Elimination of error caused by human factor in the process of loading weights (repeatable conditions of load placing on instrument's platform);
- Automatized process of mass comparison – weights are loaded fully automatically;
- Fully repeatable measurements of all loaded mass;
- Simultaneous measurement of 3 weights;
- Elimination of ambient conditions (temperature changes and humidity) influence on the process of mass comparison (mass comparator located in a chamber with constant ambient conditions).

Model		Max	d	Repeatability	Calibration range
AKM-4/500		500 g	0,005 mg	0,005 mg	100 g ÷ 500 g (E1÷M1)
AKM-4/1000		1kg	0,01 mg	0,01 mg	200 g ÷ 1 kg (E1÷M1)
AKM-4/2000		2 kg	0,05 mg	0,05 mg	500 g ÷ 2 kg (E1÷M1)
AKM-4/5000		5 kg	0,1 mg	0,1 mg	1 kg ÷ 5 kg (E1÷M1)



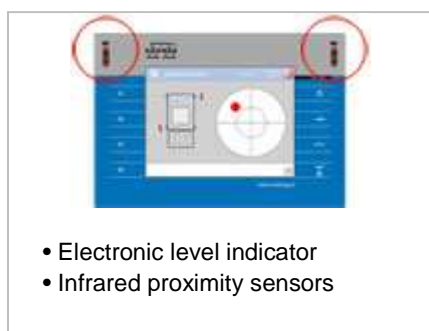
Mass comparator module



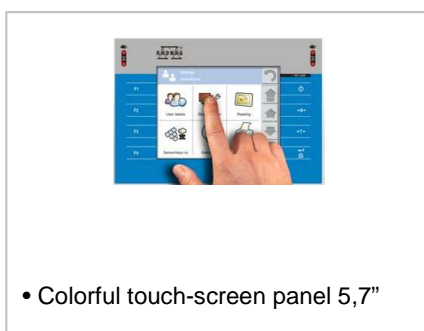
Infrared sensors



	AKM-2/10	AKM-2/20	AKM-2/50
1 mg			
2 mg			
5 mg			
10 mg			
20 mg			
50 mg			
100 mg			
200 mg			
500 mg			
1 g			
2 g			
5 g			
10 g			
20 g			
50 g			
100 g			
200 g			
500 g			
1 kg			
2 kg			
5 kg	E1, E2, F1, F2, M1		
10 kg	E1, E2, F1, F2, M1		
20 kg		E1, E2, F1, F2, M1	
50 kg			E1, E2, F1, F2, M1
100 kg			
200 kg			
500 kg			
1000 kg			



- Electronic level indicator
- Infrared proximity sensors



- Colorful touch-screen panel 5,7"



- Data exchange through USB storage devices



- Communication interfaces: Ethernet, USB (2 ports), RS232

Highlights:

- Comparison of weights up to 50 kg;
- Fully repeatable weight loading on mass comparator's platform;
- Elimination of error caused by human factor in the process of loading weights (repeatable conditions of load placing on instrument's platform).

Model		Max	d	Repeatability	Calibration range	
AKM-2/10		10 kg	0,1 mg	0,2 mg	E1-M1: 5 kg - 10 kg	
AKM-2/20		20 kg	0,1 mg	0,3 mg	E1-M1: 10 kg - 20 kg	
AKM-2/50		50 kg	1 mg	2 mg	E1-M1: 20 kg - 50 kg	



Mass comparator module



Infrared sensors



- Electronic level indicator
- Infrared proximity sensors

- Colorful touch-screen panel 5,7"



Additional anti-draft chamber - option

- Data exchange through USB storage devices

- Communication interfaces: Ethernet, USB (2 ports), RS232

The comparators are used both for ensuring retraceability of mass measurements, and verification of weights in accordance with legal metrology. RADWAG Mass Comparators have gained recognition among Accredited Calibration Laboratories, in many countries.

Mass comparators series UYA.3Y.KO comprise two components. One of them holds the electronic module, and the other precise mechanical measuring system. Such solution guarantees elimination of temperature influence (warming of electronic elements) on the comparator's indications. Comparators series UYA.3Y.KO are equipped with esthetical, cylindrical shaped weighing chamber with glass draught shield and automatic opening door system. All elements of the weighing chamber are manufactured from glass or metal which minimize influence of electrostatic charges on weighing result.

Model	•	Max	d	Pan size	Calibration range	
UYA 5.3Y.KO	•	5,1 g	0,1 µg	ø 14 mm	1mg- 5g (E1÷F2)	



Mass comparator module



Infrared sensors



- Electronic level indicator
- Infrared proximity sensors



- Colorful touch-screen panel 5,7"



Additional anti-draft chamber - option



- Data exchange through USB storage devices



- Communication interfaces: Ethernet, USB (2 ports), RS232

The comparators are used both for ensuring retraceability of mass measurements, and verification of weights in accordance with legal metrology. RADWAG Mass Comparators have gained recognition among Accredited Calibration Laboratories, in many countries.

Mass comparators series MYA.3Y.KO comprise two components. One of them holds the electronic module, and the other precise mechanical measuring system. Such solution guarantees elimination of temperature influence (warming of electronic elements) on the comparator's indications. Comparators series MYA.3Y.KO are equipped with esthetical cylindrical shaped weighing chamber with glass draught shield and automatic opening door system. All elements of the weighing chamber are manufactured from glass or metal which minimize the influence of electrostatic charges on weighing result.

Model		Max	d	Pan size	Calibration range	
MYA 100.3Y.KO	•	100 g	1 µg	ø 14 mm	1g-100g (E1÷M3)	

internal calibration



Mass comparator module



Infrared sensors



Additional anti-draft chamber - option



• Color touch screen panel 5,7"



• Communication interfaces:
Ethernet, USB (2 ports), RS232



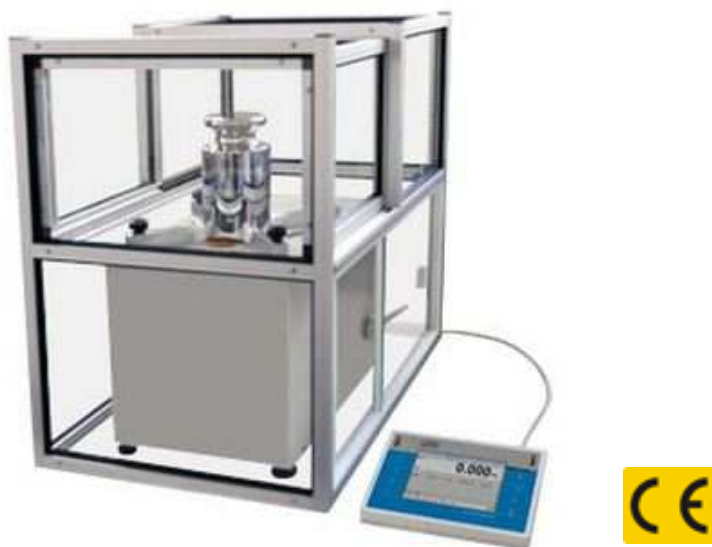
• Data exchange through USB storage devices



• Electronic level indicator: alarm function / programmable acceptable tilts

Mass comparators series WAY.3Y.KO comprise two components. One of them holds the electronic module, and the other precise mechanical measuring system. Such solution guarantees elimination of temperature influence (warming of electronic elements) on the comparator's indications. Comparators are equipped with esthetical weighing chamber with glass draught shield. All elements of the weighing chamber are manufactured from glass or metal which minimize the influence of electrostatic charges on weighing result. Comparator is equipped with user friendly menu.

Model	📦	Max	d	Repeatability	Calibration range	
WAY 500 .3Y.KO		500 g	0,01 mg	0,02 mg	100 g ÷ 500g (E1÷M1)	
WAY 1 .3Y.KO		1 kg	0,01 mg	0,05 mg	200 g ÷ 1kg (E1÷M1)	
WAY 2 .3Y.KO		2kg	0,1 mg	0,1 mg	500 g ÷ 2kg (E1÷M1)	
WAY 5 .3Y.KO		5kg	0,1 mg	0,2 mg	1kg ÷ 5kg (E1÷M1)	



Mass comparator module



Infrared sensors



• Colorful touch-screen panel 5,7"



• Communication interfaces:
Ethernet, USB (2 ports), RS232



• Data exchange through USB storage devices



• Electronic level indicator: alarm function / programmable acceptable limits

The comparators are used both for ensuring traceability of mass measurements, and verification of weights in accordance with legal metrology. RADWAG Mass Comparators have gained recognition among Accredited Calibration Laboratories, in many countries. Mass comparators series APP.3Y.KO comprise two components. One of them holds the electronic module, and the other precise mechanical measuring system. High measuring accuracy is guaranteed by semi-automatic adjustment system with external standard mass. The weighing pan made of aluminium is covered with cork layer and centring holders for the weights. Comparator is equipped with additional anti-draft chamber – in standard.

Model		Max	d	Repeatability	Calibration range
APP 10 .3Y.KO		10 kg	0,1 mg	0,5 mg	5kg-10kg (E1÷M3)
APP 20 .3Y.KO		20 kg	1 mg	2 mg	10kg-20kg (E1÷M3)

internal calibration



XAY 200.3Y.KB



PSY 1.3Y.KB



Mass comparator module



Infrared sensors



- Colorful touch-screen panel 5,7"



- Communication interfaces Ethernet, USB (2 ports), RS232



- Data exchange through USB storage devices



- Electronic level indicator: alarm function / programmable acceptable filter

Model		Max	d	Repeatability	Calibration range
XAY 200 .3Y.KB	•	200 g	0,01 mg	0,05 mg	1mg – 200g (F2÷M1)
PSY 1 .3Y.KB	•	1 k g	1 mg	1 mg	500 g – 1 kg (F2÷M1)

internal calibration



Mass comparator module



Infrared sensors



- Electronic level indicator: alarm function / programmable acceptable tilts



- Communication interfaces: Ethernet, USB (2 ports), RS232




- Data exchange through USB storage devices



- Colorful touch-screen panel 5,7"

The comparators are used both for ensuring traceability of mass measurements, and verification of weights in accordance with legal metrology. RADWAG Mass Comparators have gained recognition among Accredited Calibration Laboratories, in many countries.

Mass comparators series APP.3Y.KB comprise two components. One of them holds the electronic module, and the other precise mechanical measuring system. High measuring accuracy is guaranteed by semi-automatic adjustment system with external standard mass. The weighing pan made of aluminium is covered with cork layer and centring holders for the weights. Comparator is equipped with user friendly menu.

Model		Max	d	Repeatability	Calibration range
APP 25 .3Y.KB		25 kg	10 mg	10 mg	2kg-25kg (F2) 1kg – 25kg (M1÷M3)
APP 50 .3Y.KB		50 kg	100 mg	100 mg	20kg-50kg (F2) 5kg – 50kg (M1÷ M3)

 internal calibration



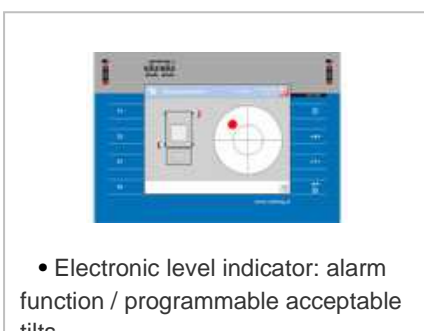
Mass comparator module



Infrared sensors



• Data exchange through USB storage devices



• Electronic level indicator: alarm function / programmable acceptable limits



• Communication interfaces: Ethernet, USB (2 ports), RS232

Mass comparators series WPY/KB comprise two components. One of them holds the electronic module, and the other precise multi-sensor measuring system.

The weighing pan made of steel is equipped with centring rings enabling precise placement of the weights. Comparator is equipped with user friendly menu.

Prices does not include automatic loader.

Model		Max	d	Pan size	Calibration range	
WPY 200/KB		200 kg	1 g / 2 g	1270x1100 mm	100kg - 200 kg (M1÷M3)	
WPY 500/KB		500 kg	2 g / 5 g	1270x1100 mm	200kg - 500kg kg (M1÷M3)	
WPY 1000/KB		1000 kg	5 g / 10 g	1270x1100 mm	500kg - 1000 kg (M1÷M3)	

internal calibration

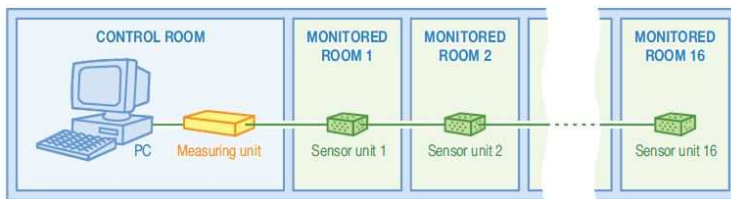
Additional equipment for laboratory balances

AMBIENT CONDITION MODULE – MODEL THB



The system supports, up to 16 modular sensors, which allows for monitoring of ambient conditions in multiple points, within one or many rooms.

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Model

AMBIENT CONDITION MODULE – Model THB: PC software & 1 sensor in standard

AMBIENT CONDITION MODULE – MODEL THB 2



THB2 module is a measuring instrument cooperating with the newest line of RADWAG automatic and manual mass comparators, and RADWAG laboratory balances series 3Y.

The ambient conditions indications are recalled by pressing a corresponding icon on balance's touch panel. The instrument user can preview ambient conditions using a touch panel of RADWAG weighing instrument.

Based on sent measuring data, the software of balances series 3Y additionally determines air density, which value is also previewed on instrument's touch panel. The ambient conditions module is plugged to the mass comparator or 3Y series balance through RS 232 slot. It is easily detachable for calibration and adjustment purposes in user defined time intervals. THB2 module is accessible for purchasing with the calibration certificate.

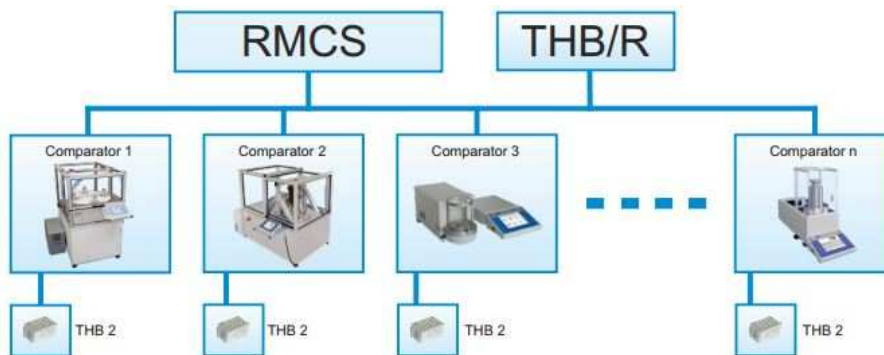
Compatible with: all mass comparators series.

Model

AMBIENT CONDITION MODULE – Model THB2: direct connection; 1 sensor

Additional equipment for laboratory balances

RMCS - PC software for mass metrology



System modules:

Ambient conditions module:

- Installed and in direct cooperation with a mass comparator;
- Recording ambient conditions (temperature, humidity / atmospheric pressure) and calculating air density;
- Continuous monitoring of ambient conditions in direct vicinity of a mass comparator and its weighing chamber;
- Graphic presentation of ambient conditions on mass comparator's display.

Weighing module:

- Automatic and manual mass comparators used with RMCS software;
- Access and management of databases on: standards, test objects, from the level of RMCS software;
- Execution of calibration tasks ordered in the RMCS software;
- Self test procedure determining mass comparator's repeatability parameter;
- Transfer of measurement results to the software memory.

Calculating and data storage module:

- Sending tasks to mass comparators;
- Downloading data on mass and ambient conditions from mass comparators;
- Operation of databases of clients / tasks / standards;
- Monitoring of future calibration dates;
- Database of accomplished calibrations, printouts and saved documentation.

RMCS functionality:

- Complete management of a metrological laboratory calibrating mass standards and weights;
- Calibration using ABBA and ABA methods;
- Application of MS SQL database for network supervision of multiple computer stands;
- Complete management of calibration orders;
- Extended database of mass standards and test objects;
- Extended database of clients, operators and users;
- Database of manual and automatic mass comparators;
- Database of calibration orders;
- Managing pending tasks based on issued calibration orders;
- Planning tasks and orders execution;
- Weight checking procedure without an order – quick check option;
- Manual or automatic calibration of test objects;
- Cooperation with RADWAG automatic mass comparators;
- Bilateral data synchronization with RADWAG mass comparators;
- Reporting from calibration process;
- Issuing calibration certificates according to pre-defined template;
- Exporting report results to various file formats: PDF, MS Word, Excel;
- Record of events;
- Register of orders and calibration certificates;
- Saving copies of all calibration protocols, orders, calibration certificates and records of ambient conditions;
- Secured access to the software.

Model

RMCS - PC software for mass metrology

Additional equipment for laboratory balances

Draft shields



Model			
For UYA.KO; MYA.KO			
For WAY.KO			
For APP.KO	In standard		In standard

Anti-vibrationtable



Size of the table (L×W×H): 770×700×800 mm
 Size of the stone plate(L×W×H): 500×270×115 mm

Model			
SAL/M (mild steel construction)			
SAL/N (stainless steel construction)			

Suitcase for mass comparator APP.3Y.KB



Model			
For APP.3Y.KB			