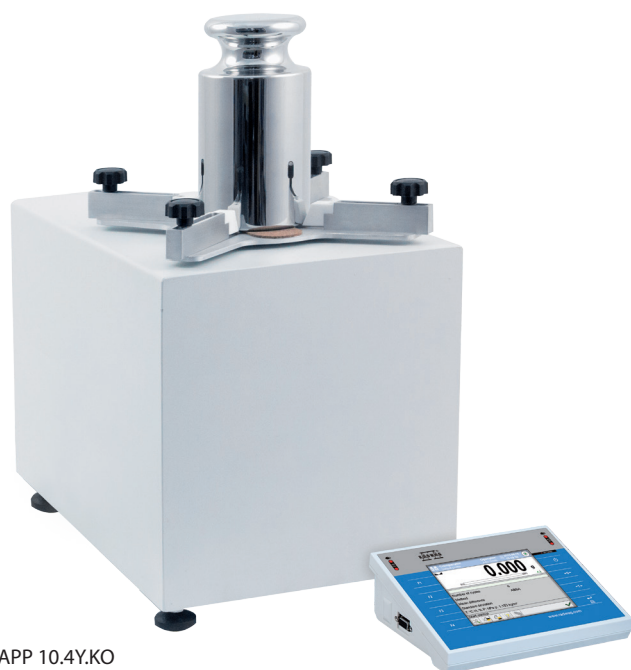
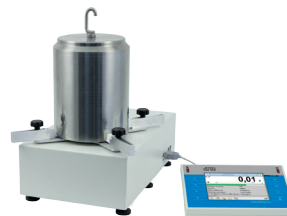


# APP 4Y.KO Mass Comparator

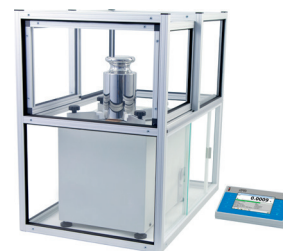
Class-leading manual mass comparator



APP 10.4Y.KO



APP 64.4Y.KO



APP 30.4Y.KO in an anti-draft chamber



Weighing pan with mechanical system for weights positioning



Self-centring weighing pan

## Functions



Mass comparator



Ambient conditions measurement



Proximity sensors



Replaceable units



Multilingual menu

## Features

### Effective and Excellent Measurement

The APP 4Y.KO series stands for a class-leading manual mass comparator. These weighing instruments allow to compare 100 g - 50 kg weights of class E1 and lower.

### Excellent Measurement Repeatability

The APP 4Y.KO is comprised of two parts. One featuring an electromagnetic module, the other a precise mechanical measuring system. Weighing accuracy is assured thanks to a semi-automatic system of adjustment carried out using an external adjustment weight.







### Design and Functionality

Weighing pan with a mechanical system for weights positioning facilitates precise loading of mass standards and eliminates eccentricity. This solution additionally allows for dissemination of reference mass to few weights.

### Dedicated Software

Specially-designed RMCS computer software enables comprehensive realisation of calibration procedures in laboratory. The system manages the whole calibration process, starting from the moment the order is placed, through procedure performance, to the moment of issuing the calibration certificate.

## Technical Specifications







	APP 10.4Y.KO	APP 30.4Y.KO
OIML calibration range E1 	5 kg ÷ 10 kg	20 kg
OIML calibration range E2 	1 kg ÷ 10 kg	5 kg ÷ 20 kg
OIML calibration range F1 	500 g ÷ 10 kg	2 kg ÷ 20 kg
OIML calibration range F2 	100 g ÷ 10 kg	1 kg ÷ 20 kg
OIML calibration range M1 	100 g ÷ 10 kg	1 kg ÷ 20 kg
OIML calibration range M2 	100 g ÷ 10 kg	1 kg ÷ 20 kg
Maximum capacity [Max]	10.2 kg	30.5 kg
Readability [d]	0.1 mg	1 mg
Repeatability for nominal load*	0.5 mg (10 kg)	3 mg (30 kg)
Repeatability for small load*	0.4 mg (100 g)	2 mg (1 kg)
Stabilization time	30 s	20 s
Adjustment	external	external
Electric compensation range	-100 g ÷ 200 g	100 g ÷ 30.5 kg
Internal supplementary weights	semi-automatic	—
External supplementary weights	300 g, 200 g	—
Eccentricity (for test weight)	2 d / 1 mm	2 d / 1 mm
Display	5.7" colour resistive touch screen	5.7" colour resistive touch screen
Keypad	8 keys	8 keys
Ingress protection - indicator	IP 43	IP 43
Touch-free operation	2 programmable sensors	2 programmable sensors
USB-A	2	2
Ethernet	10 / 100 Mbit	10 / 100 Mbit
RS 232	2	2
Wireless Connection	802.11 b/g/n	802.11 b/g/n
IN/OUT	4 × IN, 4 × OUT	4 × IN, 4 × OUT
Power supply	110 ÷ 230 V AC / 50 ÷ 60 Hz	110 ÷ 230 V AC / 50 ÷ 60 Hz
Operating temperature	+15 ÷ +30 °C	+15 ÷ +30 °C
Operating temperature change rate	±0.5 °C / 12 h (± 0.3 °C / 4 h)	±0.5 °C / 12 h
Relative humidity variations	±3% / 4 h	(30 ÷ 70)%
Relative humidity***	40 ÷ 60%	±5% / 4 h
Transport and storage temperature	-20 ÷ +50 °C	-20 ÷ +50 °C
Weighing pan dimensions	ø 200 mm (ø 300 mm)	ø 220 mm (ø 300 mm)
Self-centring weighing pan dimensions**	ø 300 mm	ø 300 mm
Anti-draft chamber dimensions	660 × 680 × 450 mm	700 × 545 × 440 mm
Mass comparator dimensions	455 × 385 × 315 mm	454 × 200 × 275 mm
Dimensions of mass comparator with self-centring weighing pan**	455 × 385 × 315 mm	455 × 385 × 315 mm
Indicator dimensions	206 × 140 × 70 mm	206 × 140 × 70 mm
Mass comparator net weight	45 kg	23 kg
Mass comparator gross weight	59 kg	37 kg
Net weight of mass comparator with self-centring weighing pan**	47 kg	25 kg
Anti-draft chamber net weight	18 kg	16 kg
Gross weight of mass comparator with self-centring weighing pan**	49 kg	39 kg
Anti-draft chamber gross weight	30 kg	28 kg
Anti-draft chamber packaging dimensions	970 × 930 × 750 mm	960 × 830 × 730 mm
Mass comparator packaging dimensions	1160 × 650 × 690 mm	1160 × 650 × 690 mm
Packaging dimensions of mass comparator with self-centring weighing pan**	1160 × 650 × 690 mm	1160 × 650 × 690 mm

\* repeatability is expressed as a standard deviation determined for 6 ABBA cycles

\*\* optional design

\*\*\* non-condensing conditions

**APP 64.4Y.KO**

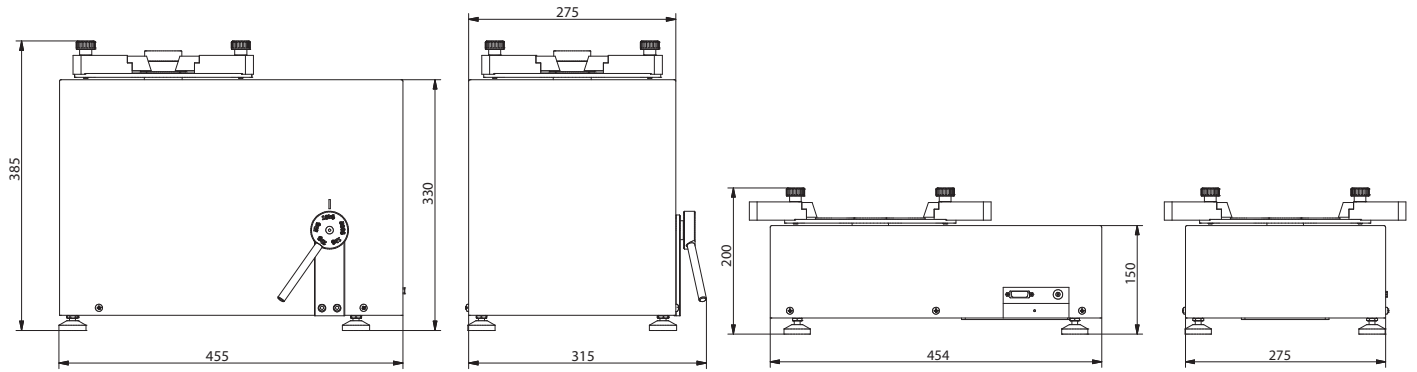
OIML calibration range E1		—
OIML calibration range E2		50 kg
OIML calibration range F1		20 kg ÷ 50 kg
OIML calibration range F2		5 kg ÷ 50 kg
OIML calibration range M1		2 kg ÷ 50 kg
OIML calibration range M2		1 kg ÷ 50 kg
Maximum capacity [Max]		64 kg
Readability [d]		10 mg
Repeatability for nominal load*		18 mg (50 kg)
Repeatability for small load*		18 mg (1 kg)
Stabilization time		20 s
Adjustment		external
Electric compensation range		0 g ÷ 64 kg
Internal supplementary weights		—
External supplementary weights		—
Eccentricity (for test weight)		2 d / 1 mm
Display		5.7" colour resistive touch screen
Keypad		8 keys
Ingress protection - indicator		IP 43
Touch-free operation		2 programmable sensors
USB-A		2
Ethernet		10 / 100 Mbit
RS 232		2
Wireless Connection		802.11 b/g/n
IN/OUT		4 × IN, 4 × OUT
Power supply		110 ÷ 230 V AC / 50 ÷ 60 Hz
Operating temperature		+15 ÷ +30 °C
Operating temperature change rate		±3.5 °C / 12 h
Relative humidity variations		±10% / 4 h
Relative humidity***		40 ÷ 60%
Transport and storage temperature		-20 ÷ +50 °C
Weighing pan dimensions		ø 300 mm (ø 400 mm)
Self-centring weighing pan dimensions**		ø 300 mm
Anti-draft chamber dimensions		700 × 545 × 440 mm
Mass comparator dimensions		520 × 205 × 400 mm
Dimensions of mass comparator with self-centring weighing pan**		455 × 385 × 315 mm
Indicator dimensions		206 × 140 × 70 mm
Mass comparator net weight		25 kg
Mass comparator gross weight		39 kg
Net weight of mass comparator with self-centring weighing pan**		25 kg
Anti-draft chamber net weight		16 kg
Gross weight of mass comparator with self-centring weighing pan**		39 kg
Anti-draft chamber gross weight		28 kg
Anti-draft chamber packaging dimensions		960 × 830 × 730 mm
Mass comparator packaging dimensions		1160 × 650 × 690 mm
Packaging dimensions of mass comparator with self-centring weighing pan**		1160 × 650 × 690 mm

\* repeatability is expressed as a standard deviation determined for 6 ABBA cycles

\*\* optional design

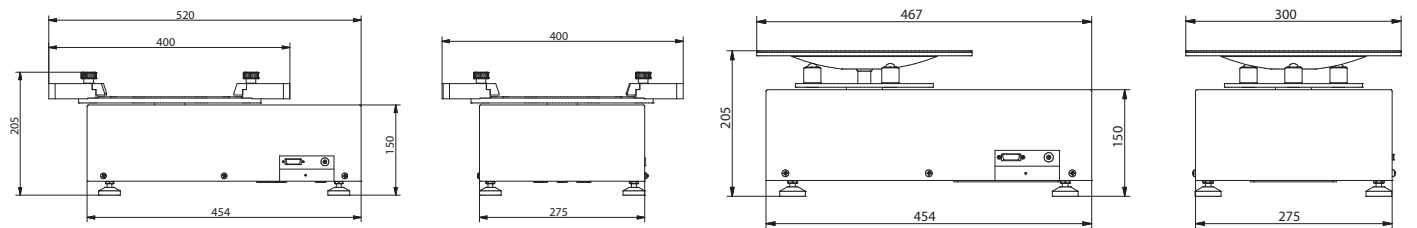
\*\*\* non-condensing conditions

## Dimensions



APP-10.4Y.KO

APP-30.4Y.KO



APP-64.4Y.KO

APP-30.4Y.SSC self-centring weighing pan

## Accessories

### Weighing Tables

- granite anti-vibration table
- anti-vibration table for APP series mass comparators

### Professional weighing

- self-centring pan

### Ambient Conditions

- THB-S or THB-P sensor

### Peripheral Devices

- Epson dot matrix printer
- barcode scanner
- WD-5/3Y LCD display (backlit)

### Cables, Converters

- RS-232 – P0108 computer cable
- RS-232 – P0167 computer cable
- RS-232 – P0151 Epson printer cable

### Electrical Accessories

- power supply with ZR-02 battery

### Anti-Draft Chambers

- anti-draft chamber for APP.3Y.KO mass comparator

## Dedicated Software

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### **RMCS System**

- performance of calibration procedures in a laboratory from the moment the order is placed, to the moment of issuing a calibration certificate
- compatible with THB sensors enabling recording ambient conditions
- export of report results to various files
- archiving calibration protocols, orders, certificates and ambient conditions

### **RADWAG Remote Desktop**

- remote control of the mass comparator using computer, telephone or tablet
- sending text messages
- version for Windows 10 and Android systems

### **R-LAB**

- collecting measurements
- carrying out statistical analysis of measurements
- customized graphs and reports

### **Parameters Editor**

- remote change of parameters
- remote on-line preview of the display
- displaying current mass indication
- software update
- file loading, editing and saving parameters to a file
- import and export of parameters
- interfaces: RS232, Ethernet and Wireless Connection
- quick and easy edition of balance parameters using computer