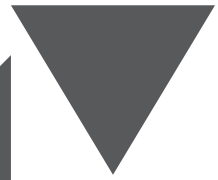
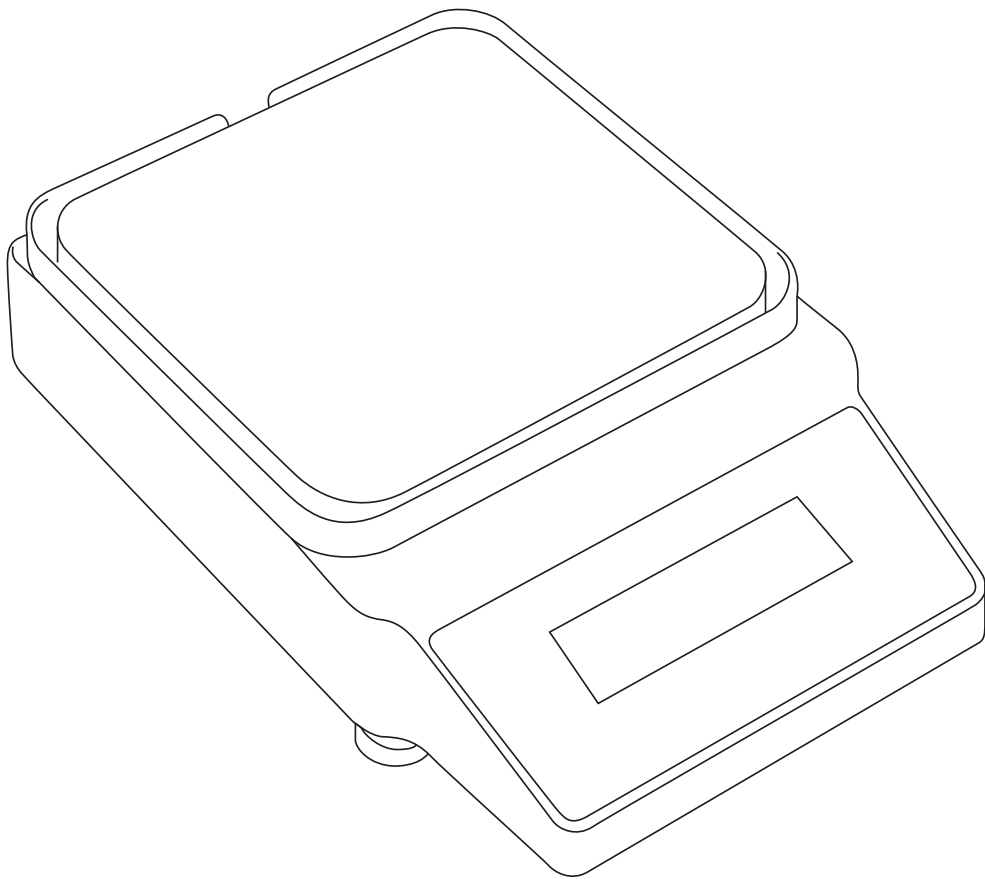




GRAM



Serie
EK



USER'S MANUAL



This manual should be available for all users of these equipments. To get the best results and a higher duration of this equipment, it is advisable to read carefully this manual and follow the processes of use.

Thank you for choosing this equipment. We sincerely wish that you enjoy your MK series electronic balance. We highly recommend looking after this equipment according to what is stated in this manual.

We develop our products according to the CE marking regulations as well as emphasizing the ergonomics and security for its user.

The correct using of the equipment and its good quality will permit you to enjoy this equipment for years.

The improper use of the equipment can cause accidents and electric discharges, circuit breakers, fires, damages, etc. Please read the point of maintenance, where we expose the security notes.

TO GET THE BEST RESULTS AND A HIGHER DURATION OF THE EQUIPMENT, IT IS ADVISABLE TO READ THOROUGHLY THIS MANUAL BEFORE OPERATING WITH THE EQUIPMENT.

Please bear in mind the following:

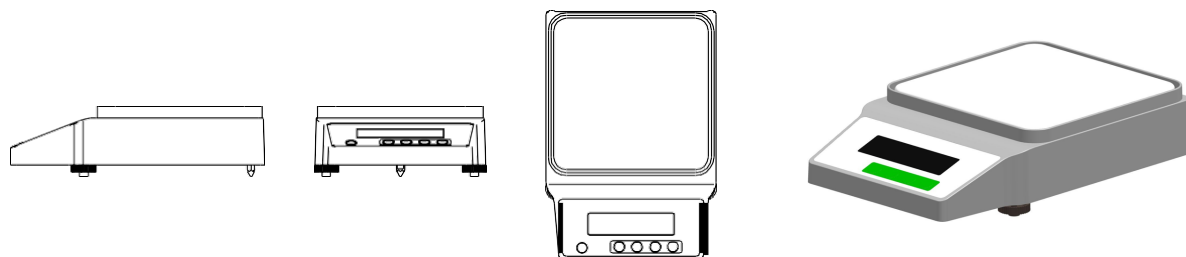
1. This manual is inseparable from the balance, is it should be available for all the users of the equipment.
2. You should carefully handle the balance avoiding sudden movements, knocks, free fall of heavy/sharp objects on it. Avoid spilling liquids inside the equipment.
3. Never dismantle the different pieces of the balance to repair it yourself, since it could produce a defective use of the whole equipment and a loss of the product warranty, as well as injuries on people than handle the balance.
4. To prevent fire or electric discharges avoid dry or dusty environments. In case it may happen unplug the equipment immediately.
5. If you have any doubt about setting up, installation or functioning do not hesitate in contacting your wholesaler.
6. This equipment is protected under the Warranties and consumer goods regulation (10/2003)
7. Overhaul is not covered by the equipment warranty.
8. Operations made by non-qualified staff will automatically produce a loss of the warranty.
9. Accessories (including their loss), are not covered by the product's warranty. The warranty neither covers piece's deterioration due to the course of time.
10. Please make sure you keep the invoice, either for having the right to claim or asking for warranty coverage. In case you have to send the equipment to our Technical Assistance Department you should enclose the original invoice or a copy as guarantee.
11. Manufacturer reserves the right to modify or improve the manual or equipment.

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1. SPECIFICATION

The appearance and the structure












EK series precision balance work on high precision strain gauge load cell which implements high speed stabilization and high reliability.

Model No.	EK-800	EK-2000	EK-5000	EK-6000	EK-10K
Max. Capacity (g)	800	2000	5000	6000	10000
Tare Range (g)	0-800	0-2000	0-5000	0-6000	0-5000
Readability(g)	0,01	0,01	0,01	0,1	0,1
Pan Size (mm)	170*170mm				
Dimensions (LxWxH)	280×188×80mm				
Power supply	AC 110-120V/220-240V				

Voltage: AC220V±10% 50Hz±5%	Class: III	Power:3W	Working Temp. 5°~35° Working Humi: 50%RH-85%RH
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2. OPERATION OF THE BALANCE

Symbol Instruction			
g	Weighing mode by “g” unit		The balance is on Zero mode
lb	Weighing mode by “lb” unit		The balance is on tare mode
oz	Weighing mode by “oz” unit		When the bubble is on the middle, the balance is on horizontality.
ct	Weighing mode by “ct” unit		The balance is on the negative value.
	Load capacity progress bar, indicating the progress of the current load in the range. All lights indicate full load.		It is stable when the light is on. It is unstable when the light flickers.

Keys Instruction		
	TARE/CAL	*Short Press to tare. *Long Press for 3s to enter calibration mode.
	UNIT/UP	* To convert the different units. * It is an upward key when it is under the setting up mode.
	COU/DOWN	* To enter counting mode and confirm the samples quantity. * It is an downward key when it is under the setting up mode
	MENU/PRT	* To connect with the output device or printers. * Press it to print the data easily.(for RS232 models only.)

3. OPERATION OF THE BALANCE

Choosing the Installation Site

The measuring performance of the balance is greatly influenced by the environment where it is installed.

Observe the following points to ensure safe and accurate weighing.

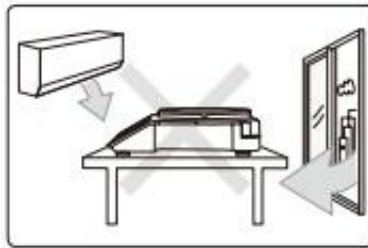
Precautions on Use



Prohibitions

Avoid locations where the balance will be exposed to any of the following.

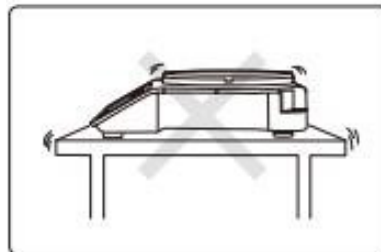
▫ Air flow from an air conditioner, ventilator, door or window



▫ Extreme temperature changes



▫ Vibration from surroundings or nearby equipment



☒Direct sunlight



☒Dust, electromagnetic waves or a magnetic field



Instructions

Install the balance on a strong and stable flat table or floor.

Placing the balance in an unstable site could lead to injury or trouble with the balance. When selecting the installation site, take into account the combined weight of the balance and the item to be weighed.

Unpacking and Inspection

Check that all of the items indicated below are included in the package, and that nothing has been damaged.

[1] Main Body

[2] Pan

[3] Introduction Manual

[4] Cable

[5] Weight for option.

Turning the Power On

- 1 Insert the plug of the Power Cord of the balance. (And please pay attention of the voltage 110V or 220V).
- 2 Connect the Power Cord to the poweroutlet.
- 3 Press "ON".

The display will automatically go through the changes indicated below.



- * If it can not enter above display, please contact with your distributor or your transportation agent so that they can make the claims in the correct time limit.
- * If the above display is unstable or the weighing value is unstable, pls refer to the [FAILURES AND SOLUTIONS].

Warming Up

Before performing calibration on the balance or measuring its accuracy, you must ensure that it is in a stable state.

When stabilizing the balance, it is important that its temperature is stable.

Putting the balance in weighing mode and leave it with the power on at least 15 minutes in advance of calibration.

This is called "warming up".

Performing Calibration

Always perform calibration for a balance after moving it. M1 or higher class weights are required for external calibration balances.

Before performing calibration, warm up the balance in advance.

Also, carry out the adjustment at a location where there are few people moving around and there is no air flow or vibration.

Short press "TARE/CAL" key to make the balance shows [0.00], then long press "TARE/CAL" for more than 3s until the display shows [CAL], release the key and it will

shows the calibrate value, like [1000.00], then put the corresponding weight on the pan softly. (This balance is intelligent calibration, it supports any integer point calibration. If there is no corresponding value weight, it can be replaced by any integer value weight within the range of no less than 1 / 10 of the maximum range. The balance will automatically identify and calibrate the current value weight). Wait for approx 3s until the display shows [1000.00g]. Please remove the weight and it will be back to [0.00g]. The calibration finished.

* **Linearity Calibration Method**

Short press “**TARE/CAL**” key to make the balance [0.00g], then long press “**TARE/CAL**” for more than 3s to until the display shows [CAL], release the “**TARE/CAL**” key, then long press “**COU**” key until it shows [CAL 1]. Press “**UNIT**” or “**COU**” key to adjust and select the linearity segments of the balance to be calibrated (for example, for a balance with a range of 2kg, when [CAL 4] is selected, it means that it is divided into four segments for calibration, with a difference of 500g in each segment, which is [2000g → 1500g → 1000g → 500g] in turn. Then press “**TARE/CAL**” key to enter the linearity calibration, the balance will display an integer value. If the display [2000.00] flashes, put 2kg standard weight softly on the plate, wait for approx 3 seconds when the balance displays "2000.00g", remove the weight from the plate, it will display another integer value, put the weight on the plate according to the prompt value, and operate in turn until the balance automatically returns to zero after removing the weight.

Convert Units

Balance as a measuring instrument, in order to meet the weighing requirements and standards of various regions and industries, the balance has a multi-units for option. The default unit is "g". Short press “**UNIT**” key to choose the different unit.

Zero

When the weight of the weighed object is not more than 2% of the total range, press “**TARE/CAL**” key and the balance will return to zero. At this time, the [zero] indicator on the display will light up, and the balance can still be weighed in full range.

Tare

When the weight of the weighed object is greater than 2% of the total range, press “**TARE/CAL**”, and the balance will return to zero. At this time, the [tare] indicator on the display will light up, and the balance can not be weighed in full range. You should check the balance on the loading progress bar and weigh in the remaining range.

Counting

Counting mode is piece counting.

Short press "**TARE/CAL**" to zero the balance as [0.00] (if extra device is needed to be placed, zero the balance after placing the extra device), and prepare the samples quantity as 10pcs, or 20pcs, or 50pcs, or 100pcs.

Take the sample quantity 10pcs as an example: put 10pcs sample on the plate, short press "**COU**", the balance will display: ([10] → [20] → [50] → [100] → [10] as cycle), then press "**COU**" to confirm the sample quantity, the balance will display [SMP], wait about 3s, the balance will display "10", and enter the piece counting mode.

4. Failures and Solutions

Failures		Solutions
No display	<ul style="list-style-type: none"> ● no power supply ● damaged AC/DC adaptor ● fuse broken 	plug in power cord <ul style="list-style-type: none"> ● change fuse ● replace adaptor ● Broken again after changing, be repaired in the maintenance dept.
Unstable weighing value	<ul style="list-style-type: none"> ● bad work environment ● something unnecessary touched the pan or the bottom of the pan. ● unstable power supply, beyond allowable value ● unstable weighed object (as it absorbed moisture or moisture evaporated) ● there are strong magnetic and radiation equipment around the balance. 	<ul style="list-style-type: none"> ● improve the work environment, keep away from vibration and airflow disturbance ● Take out the foreign matter. Turn the pan avoiding the touch. ● Connect an external AC power regulator
It shows “- - oL- -”	<ul style="list-style-type: none"> ● It overloads. ● Loadcell problem 	<ul style="list-style-type: none"> ● Take off the objects. ● Contact with the distributor
Weighing value	<ul style="list-style-type: none"> ● compare with the calibrate weight value 	<ul style="list-style-type: none"> ● Make the calibration.
No Answer	<ul style="list-style-type: none"> ● Loadcell problem 	<ul style="list-style-type: none"> ● Contact with the distributor
	<ul style="list-style-type: none"> ● PCB problem 	
Power symbol flicker*	<ul style="list-style-type: none"> ● Low battery voltage 	<ul style="list-style-type: none"> ● Recharge it, if still now work, pls contact with the distributor.



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