

Mettler

PE 3000
PE 6000
PE 6



Operating Instructions

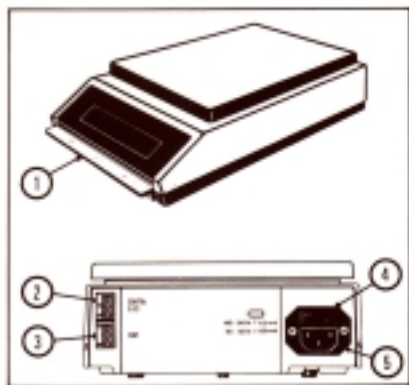


Switching the display on	Calibrating	Selecting the weight unit	Weighing	Plus/minus checking
<p>1</p>	<p>1</p>	<p>1</p>	<p>1</p>	<p>1</p>
<p>Switching the display off</p>	<p>2</p>	<p>2</p>	<p>2</p>	<p>2</p>
<p>1</p>	<p>3</p>	<p>3</p>	<p>3</p>	<p>3</p>
<p>Taring</p>	<p>PE 6000/PE 6: 2000 g</p> <p>PE 3000: 1000 g</p>	<p>4</p>	<p>4</p>	<p>4</p>
<p>1</p>	<p>5</p>	<p>4</p>	<p>5</p>	
<p>2</p>	<p>6</p>	<p>5</p>		

Conversion factors

Ounces	1 oz	≈ 28.349523125 g	1 g ≈ 0.03527396 oz
Pounds	1 lb	≈ 453.59237 g	1 g ≈ 0.002204623 lb
Pennyweights	1 dwt	≈ 1.55517384 g	1 g ≈ 0.64301481 dwt
Troy Ounces	1 ozt	≈ 31.1034768 g	1 g ≈ 0.032150747 ozt
Carats	1 ct	≈ 0.2 g	1 g ≈ 5 ct
Tons	1 t	≈ 907.18474 kg	1 g ≈ 0.00110231 t

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Operating elements and connectors

- (1) Single control bar
 - (2) Connection socket for the data interface
 - (3) Connection socket for the GE305 Application Input Device, GE310 Terminal and GE48, GE53 Auxiliary Displays
 - (4) Fuse holder (with spare fuse)
 - (5) Power-line connection socket
- (2) and (3) are present only if a data interface P/C board has been installed (optional equipment).

PRELIMINARY STEPS

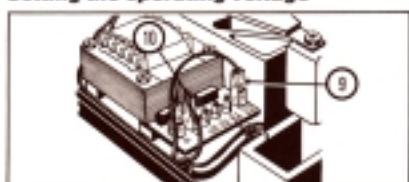
Location

- As stable, vibration-free and horizontal a location as possible.
- There should be no large temperature fluctuations.
- Avoid locations in direct sunlight.

Checking the operating voltage

Check to see if the operating voltage setting (see yellow sticker over power-line connection socket) agrees with the local power-line voltage. If necessary:

Setting the operating voltage

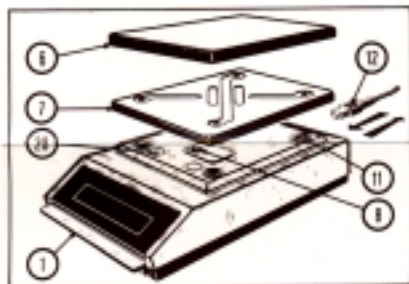


- Make sure that the power-line cable has been disconnected before the housing cover is removed.
 - Remove screw (8); carefully lift off housing cover.
 - Check whether the voltage selector plug (9) is on the pin that corresponds to your local power-line voltage.
 - If necessary, place the voltage selector plug on the pin that corresponds to your local power-line voltage. Plugs (10) may not be moved.
- Note: when changing the operating voltage setting from 95...120 V to 190...240 V (or vice versa), the microfuse must also be changed.

- 95 V, 105 V } Insert a 125 mA slow-blowing fuse
 - 110 V, 120 V }
 - 190 V, 210 V } Insert a 63 mA slow-blowing fuse
 - 220 V, 240 V }
- Place the housing cover back on the balance, tighten screw (8). Press on the two adhesive dots (20) on the in-use cover.

Installing the weighing platform

- If it is still present, remove the protective foil from the weighing platform.
- Place the 4 pegs of the platform support (7) in the 4 rubber grommets (11).
- Place the weighing platform (5) on the platform support.
- Plug in power-line cable (12).



Selecting the weight unit

- In addition to the weight unit g, PE balances can also be set to read in other weight units. These can be freely selected by the user. The following units can be selected: lb, oz, oz, ct, dwt and kg.
- Disconnect the power-line cable (12).
 - Hold down the single control bar (1), and at the same time, plug the power-line cable back in.
 - The word "Unit" will appear in the display. The various weight units will light up - one after the other - in the righthand side of the display.
 - When the desired weight unit appears in the display, release the control bar (1).
 - First, all display segments and symbols will light up, as with the normal switch-on routine; then zero will be displayed.

Note: with certified balances, the weight unit must be selected before certification is carried out.

- The number of decimal places depends on the balance model and the weight unit selected.
- If a particular weight unit does not light up when making the selection, the particular weight unit cannot be selected. This is the case, for example, with carats (ct) in the PE6.

Calibrating the balance

Before calibrating, the balance must be left connected to the power supply for at least 30 minutes (warmup time).

Checking calibration

- Press the single control bar (1); zero appears in the display.
- Place a test weight on the platform; read the result once the small circle (13) to indicate stability has gone out.

If the balance displays the weight of the test weight correctly to the last decimal place, the balance is calibrated. If it does not display this weight correctly, it must be calibrated:

Correcting the calibration

- Press and hold the single control bar (1) until "-----" appears in the display, then release the control bar. Then, "-CAL-" will appear in the display.
- Place test weight on platform, i.e., 1000 g when the balance is a PE3000, 2000 g when the balance is a PE6000/PE6.

The balance will now calibrate itself automatically. After the calibration procedure has been completed, the following appears in the display: 1000.0 g with the PE3000 / 2000.0 g with the PE6000 / 2000 g with the PE6.

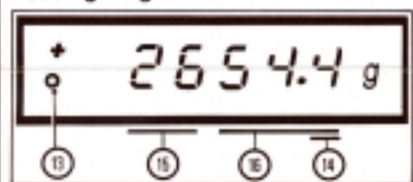
Note: If no weight is placed on the platform while balance is displaying "-CAL-" (or if the weight is not 1000 g or 2000 g), the balance will first display the words "no CAL", then zero.

- This means that calibration has not been carried out.
- Note:
- Regular calibration assures the accuracy of the balance.
 - Calibration is always carried out in the same manner, regardless of the weight unit that has been selected. The displayed value can be converted by using the table provided.
 - The balance should be recalibrated every time its location is changed.
 - Certified models can be checked, but not recalibrated.

WEIGHING

Recommendation: When possible, always leave the power-line cable plugged in.

Reading weight



PE3000/PE6000: If an object is placed on the platform, the last decimal place (14) blanks out briefly. The weight may be read only after this last digit (14) reappears and the stability detector symbol (13) goes out.

PE6: The weight may be read only after the stability detector symbol (13) goes out.

Weighing-in

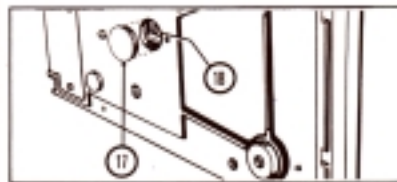
- When filling in substances quickly to approach the target weight, pay attention to only the first two digits (15) on the left.
- When weighing in finely to reach the target weight, pay careful attention to the digits to the right (16).
- PE3000/PE6000: While weight is increasing quickly, the last decimal place (14) blanks out temporarily; when weighing-in is slowed down, this digit reappears.

ADDITIONAL CAPABILITIES

Below-the-balance weighing

The balance is equipped so that weighings can be carried out below the balance. When this is done, the

object is attached directly to the weighing cell; this requires an opening in the weighing table. Special hangers for this purpose are not available from Mettler.



- Remove weighing platform and platform support. Tip the balance onto its side (do not place it upside down).
- Remove cover (17).
- Attach hanger for the object to be weighed onto the small hook (18).
- Place balance back onto its feet, place platform support and platform back on balance.
- With the hanger attached, press the tare bar, then place object on hanger or attach it to hanger.

MAINTENANCE

Replacing the microfuse

Disconnect the power-line cable. Remove the fuse holder (4) using a screwdriver. Remove the defective fuse and insert a new one (spare fuse from the fuse holder). Fuse ratings: 125 mA slow-blowing with voltage settings of 95...120 V; 63 mA slow-blowing with voltage settings of 190...240 V. Place fuse holder back on. Plug power-line cable back in.

Changing the in-use cover

Before installing a new in-use cover, the two protective foil strips must be removed from the adhesive dots. Then, hook the new in-use cover onto the back of the balance and press it down towards the front. Press on the two adhesive dots (20) so that they stick to the housing cover. (Spare in-use covers are sold in sets of 5.)

Cleaning

When needed, clean the balance housing and weighing platform. However, do not use any strong solvents on the housing because they can damage the finish.

Note: Do not turn the balance onto its top because this can damage the weighing cell.

ACCESSORIES

Optional equipment

Calibration weight 1000 g (PE3000)	47905
Calibration weight 2000 g (PE6000/PE6)	48312
016 Data Output Option (CL/RS232C)	48330
017 Data Interface Option (CI)	59817
Level indicator kit	47659
Microfuses (set of 3) 125 mA slow-blowing	26172
63 mA slow-blowing	46328

Application Packages:
LabPac / ProPac / StatPac / CountPac / GemPac II / DataPac

Standard equipment

Screwdriver	50279
In-use cover	48335
Weighing platform	47085
Platform support	47084
Power-line cable	Depends on country

TECHNICAL DATA	PE3000	PE6000	PE6
Weighing range	0...3100 g	0...6100 g	0...6100 g
Readability	0.1 g	0.1 g	1 g
Taring range (subtractive)	0...3100 g	0...6100 g	0...6100 g
Admissible ambient conditions (during operation)			
- Temperature		0...+40°C	
- Altitude		-500...+6000 m	
- Relative humidity (non-condensing)		15...85%	
- Vibration		0,3 m/sec ²	
Reproducibility (standard deviation)	0,05 g	0,05 g	0,3 g
Linearity	± 0,1 g	± 0,1 g	± 1 g
Stabilization time (typically)	1,5 sec	1,5 sec	1,5 sec
Display sequence	0,2 sec	0,2 sec	0,2 sec
Sensitivity drift (10...30°C)	± 8 · 10 ⁻⁶ /°C	± 8 · 10 ⁻⁶ /°C	± 8 · 10 ⁻⁶ /°C
Result deviation	± 0,1 g	± 0,1 g	± 1 g
(with balance inclined by 1:1000)			
Power supply	- Voltage, adjustable - Tolerance - Frequency - Power consumption	100 V/115 V/200 V/230 V +10%/-15% 50...60 Hz approx. 6 VA	
Weighing platform (stainless steel)		182 x 228 mm	
Housing dimensions (W x D x H)		196 x 310 x 67 mm	
Weight		4,1 kg	

WHAT'S WRONG IF...

- ... the entire display does not light up?
- ... only the lower segments light up in the display?
- ... only the upper segments of the display light up?
- ... "OFF" is displayed?
- ... the weighing result is not stable?
- ... the weighing result is obviously incorrect?
- ... "no Cal" appears in the display when calibrating the balance?
- ... the balance displays nonsense symbols or is blocked?
- ... the balance displays -ERROR-?

Then...

- The display has not been switched on. Briefly press the single control bar.
- The power-line cable has not been plugged in.
- There is no power reaching the instrument.
- The microfuse is defective.
- If the fuse blows repeatedly, check the operating voltage setting and the fuse rating. If both are correct, contact Mettler-Service.
- The weighing platform has not been installed.
- The balance was switched on with a weight on the platform. Remedy: remove weight and press tare.
- Weight on pan is too heavy (weighing range is exceeded).
- Power was out: Check the two power cable connectors for tight fit. Again switch on balance by pressing control bar.
- Control bar was not pressed down all the way when power was switched on.
- Drafts are present.
- The in-use cover is not installed properly.
- The weighing table is not stable.
- The operating voltage setting is not correct.
- The balance has been placed on an uneven surface.
- The balance needs to be recalibrated.
- Tare was not pressed before the weighing.
- An incorrect calibration weight has been used
- The electronics are malfunctioning. Disconnect the power-line cable, plug it back in, then press the single control bar.
- there is a defect in the balance electronics; contact Mettler Service.