Operating Instructions

METTLER
Analytical balance
AE260 DeltaRange

Leveling the balance
100.0000 g
Internal

Calibrating the balance

Integration time
Steps 1/2/3

Stability detector
Steps 1/2/off

Taring: weighing

- Course range: 0...205 g
  - Readability: 0.001 g
- DeltaRange: 60 g
  - Readability: 0.0001 g
Switching the display on

Switching the display off

Short-form operating instructions

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METTLER AE 260 DeltaRange

Operating elements and connections

1 Brief Operating Instructions
2 Single control bar
3 Level indicator
4 Calibration lever
5 Weighing pan/
windshield ring
6 Leveling screw
10 Voltage selector
11 Microfuse
12 Power line connection
socket
13 Socket for hangkey/
foot pedal

Preliminary steps

Checking the operating voltage

- The operating voltage setting must agree with your local power-line voltage; please check this setting and, if needed, change it.

Admissible power-line voltage in the switch positions:
- 115 V: 92 V...132 V
- 220 V: 184 V...265 V

Location
- A stable location; as free from vibration as possible.
- Make sure there are no large temperature fluctuations.
- Avoid direct sunlight and drafts.
- Connect the power cable at the work station.

Installing the weighing pan and the windshield ring: leveling the balance

Further capabilities

20 Cover
21 Screw
22 Hook

Please note:

The display indicates four decimal places in the DeltaRange (60 g). If the DeltaRange is exceeded, the last decimal place blanks out. By pressing the bar again to tare, it is possible to again use the DeltaRange (described in the Paragraph entitled, “Weighting-in”).

Weighting-in (ASd 1 or 2)
- Open the sliding glass door.
- Fill in substance up to the desired target weight (to read the weight accurately, the door must be closed).

If different components are to be weighed, one after the other, into the same container, it is possible to tare after each weighing and start the next weighing from zero (up to 60 g in the DeltaRange). This can be done until the tare container and all the components together reach the end of the weighing range.

DeltaDisplay:

The DeltaDisplay switches on automatically when weighing in substances quickly; the last two digits in the DeltaRange or the last digit in the coarse range are blanked out and the display change sequence speeds up. This allows the increase in weight to be followed better. When weighing in slowly towards the target weight, the two digits (DeltaRange) or the last digit in the coarse range switch back on.

Stability detector:

When stability is achieved (determined by the step sequence of the stability dot), the weighing pan and all components are reweighed with the same weight. Stability is indicated by the stability dot.

GD hanger (for weighing below the balance)
- Open all sliding glass doors.
- Remove the weighing pan.
- Place the balance on its back.
- Loosen the screw on the bottom of the balance.
- Swing the cover to one side.
- Refit the screw.

A hook is visible in the opening; the object or substance can be weighed by attaching a hanger from this hook.
- Place the balance back on its feet, place the weighing pan back on and level the balance.
- With the hanger attached to the hook, press tare.

Note: The weighing pan does not have to be placed back on if the hanger is at least as heavy as the pan. The hanger is not available from METTLER!

Care and maintenance

Cleaning

A cloth with some soapy water is sufficient to clean the weighing pan and housing. Do not use any strong solvents. To remove residues from the weighing chamber, use the small artist's brush that is included in the balance standard equipment (do not blow air through the chamber).

Replacing the microfuse

- Disconnect the power cable.
- Turn out the fuse holder (in the power-line connection socket) with a screwdriver.

GD hanger (for weighing below the balance)
Place weighing pan on balance; the conical peg centers the pan in the opening in the base of the weighing chamber.

The two leveling screws should be adjusted so that the bubble is in the middle of the circle.

Whenever the location of the balance is changed, the balance should be relevelled.

**Operation**

**Short-form operating instructions**

Short-form operating instructions can be found on a card that swings out from underneath the balance housing.

**Switching the display on/off**

Briefly press the single control bar; all display segments light up for several seconds:

![Image]

- Afterwards, the display automatically sets itself to zero.
- Lightly lift the control bar; the display is switched off.

**Calibration**

Make absolutely sure:

- Press and hold the single control bar until CAL appears in the display, then release control bar. The balance changes to CAL 0 (blinks).
- Move calibration lever all the way to the rear; the display changes to CAL 1 (blinks).
- Move calibration lever all the way back towards the front of the balance; the display changes to CAL 2 (blinks), followed by zero.

**Measuring cycle/measuring accuracy**

By selecting a particular integration cycle, as well as a particular stability detector setting, the balance can be configured according to your weighing location and needs.

**Integration time**

Step 1: Used for very stable, vibration-free weighing table (short measuring cycle).

Step 2: Normal setting.

Step 3: Used for unfavorable ambient conditions (long measuring cycle).

- Press the control bar and hold it until Int appears in the display, then release control bar.
- Immediately press the control bar briefly; the display will change to the next step.
- Stop at the step you wish to use and wait for the display to return to the weighing mode (zero).

**Stability detector**

Step 1: Great sensitivity (long pause before data are released).

Step 2: Less sensitivity (short pause before data are released).

**Measuring Range**

- 0.0 to 205 g;
- The DeltaRange (fine range) turns your "milligram balance" into an "analytical balance". This means that the readability is increased to 0.1 mg in a range of 80 g (by pressing tare each time it can be moved through the entire weighing range). Every fine range is exceeded, the last decimal goes out; you are then weighing in the coarse range.

**Specifications**

<table>
<thead>
<tr>
<th>Readability</th>
<th>Weighing range</th>
<th>Tare range (subtractive)</th>
<th>Reproducibility (standard deviation)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.1 mg</td>
<td>0.0...60 g</td>
<td>0.0...60 g</td>
<td>±0.2 mg</td>
</tr>
<tr>
<td>0.1 mg</td>
<td>0.0...205 g</td>
<td>0.0...205 g</td>
<td>±1 mg</td>
</tr>
</tbody>
</table>

**Stability detector**

- Sensitivity selectable in three steps

**Dimensions**

- Weighing pan (stainless steel)
- Open space above weighing pan: 205 x 410 x 290 mm
- Net weight: 10.3 kg

**Power supply**

- Voltage, adjustable
- Frequency: 50...60 Hz
- Power consumption: 10 VA

**Admissible ambient conditions during operation**

- Temperature: 10...40°C
- Humidity: 25...85%

**What's wrong if...**

- The entire display does not light up?
- The OFF display appears?
- Only the upper horizontal segments light up in the display?
- Only the lower horizontal segments light up in the display?
- The weighing result is unstable?
- The weighing result is obviously incorrect?
- Only a portion of the display lights up?
- The middle horizontal segments in the display are blinking (for more than 30 sec)?
- CAL Err appears in the display?
- No CAL appears in the display?
- A zero display does not appear after pressing tare?

**Accessories**

**Optional equipment**

<table>
<thead>
<tr>
<th>Order No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>38594</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>Item Description</th>
<th>Order No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Windshield ring</td>
<td>87576</td>
</tr>
<tr>
<td>- Tweezers, 210 mm long (with plastic tips)</td>
<td>70209</td>
</tr>
<tr>
<td>- Density (specific gravity) determination kit</td>
<td>33340</td>
</tr>
<tr>
<td>- Foot pedal</td>
<td>46276</td>
</tr>
<tr>
<td>- Handbrake</td>
<td>42500</td>
</tr>
<tr>
<td>- Microfuses, 100 mA slow-blowing (set of 3)</td>
<td>55144</td>
</tr>
<tr>
<td>- Data interfaces</td>
<td></td>
</tr>
<tr>
<td>101 Option - CL/RS232C unidirectional</td>
<td>38750</td>
</tr>
<tr>
<td>012 Option - CL/RS232C bidirectional</td>
<td>38751</td>
</tr>
<tr>
<td>013 Option - IEEE488</td>
<td>38752</td>
</tr>
<tr>
<td>040 Data Output (unidirectional mode)</td>
<td>38795</td>
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</table>

**Standard equipment**

<table>
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<tr>
<td>- Power-line cable</td>
<td>101</td>
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<tr>
<td>- Weighing pan, 80 mm dia.</td>
<td>38850</td>
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<tr>
<td>- Centering disk (for windshield ring)</td>
<td>38609</td>
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<tr>
<td>- Hair-bristle brush</td>
<td>70114</td>
</tr>
<tr>
<td>- Windshield ring</td>
<td>38689</td>
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Specifications

AE260 DeltaRang

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<th>Range</th>
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<tr>
<td>Readability</td>
<td>0.1 mg</td>
<td>1 mg</td>
</tr>
<tr>
<td>Tare range</td>
<td>0.0...60 g</td>
<td>0.0...205 g</td>
</tr>
<tr>
<td>Reproducibility</td>
<td>±0.2 mg</td>
<td>±1 mg</td>
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Stability detector

- Sensitivity selectable in three steps

Dimensions

- Weighing pan (stainless steel)
- Open space above weighing pan: 205 x 410 x 290 mm
- Net weight: 10.3 kg

Power supply

- Voltage, adjustable
- Frequency: 50...60 Hz
- Power consumption: 10 VA

Admissible ambient conditions during operation

- Temperature: 10...40°C
- Humidity: 25...85%

What's wrong if...

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