
	<b>Service info</b> Calibration scales	
	<b>Re:</b> Vario+ und Compact+	
	<b>Date</b> 2nd of July 2013	
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## Retrofitting the calibration scales

### 1 Introduction

These installation instructions put you in the position to install the calibration scales safely as intended.

- > Please read these installation instructions carefully before installing the calibration scales.
- > Keep these installation instructions ready and available at all times.
- > Comply with all safety instructions in these installation instructions at all times.
- > Please also observe the original operating manual for the automatic feeder.




### 2 For your safety

#### 2.1 Target group

##### 2.1.1 Necessary qualifications of the service technician

Only trained service technicians are authorized to install the calibration scales and put them into service.




Service technicians are electricians with appropriate qualifications, i.e. they are able to assess the work assigned to them and detect potential risks on the basis of their technical training as well as their knowledge of the relevant standards. This also includes knowledge of relevant accident prevention

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regulations, generally accepted safety regulations, EC guidelines and country-specific standards and provisions.

## 2.2 Indication of hazards

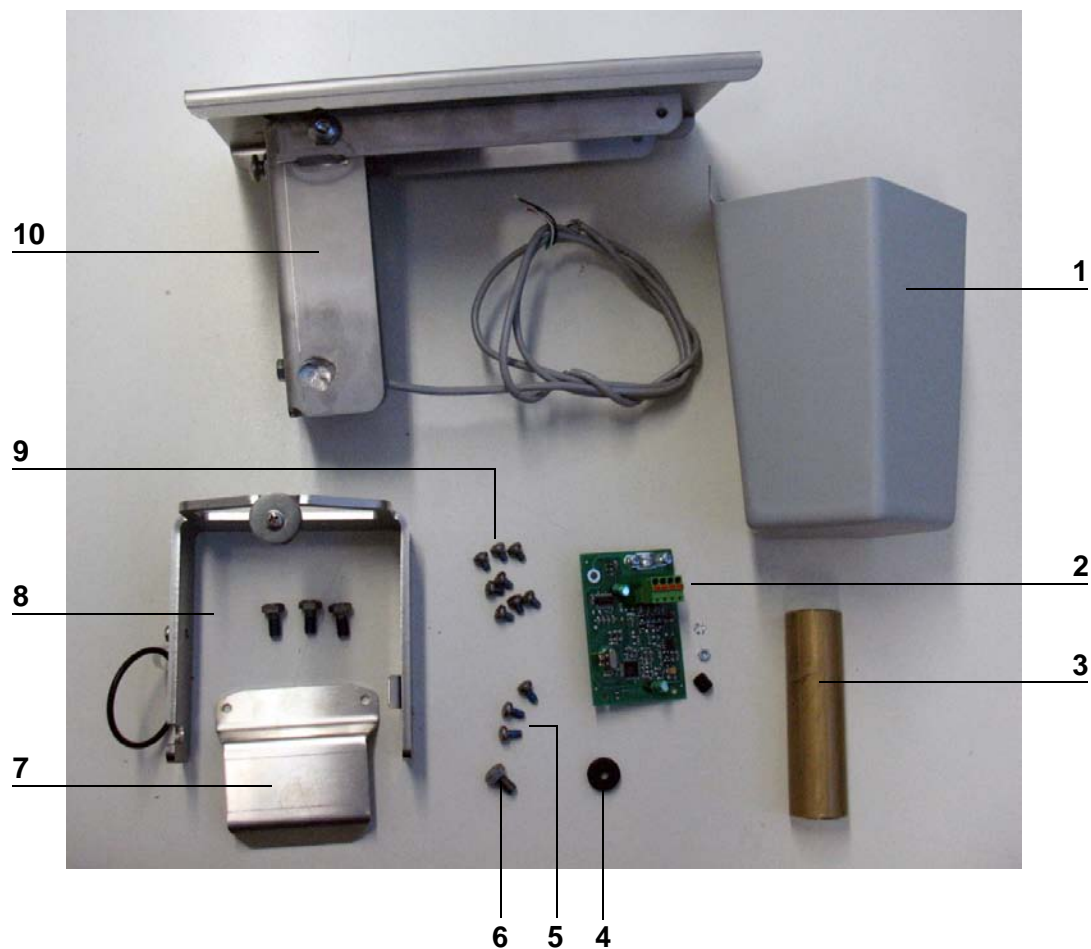
Hazards are indicated by a key word and a corresponding symbol, depending on the severity and probability:

	<b>Danger!</b> For an imminent danger, resulting in serious injuries or death.
	<b>Warning!</b> For a potentially dangerous situation which may cause serious injuries or even death.
	<b>Caution!</b> For a potentially dangerous situation which may cause minor injuries or material damage.
<b>Attention</b>	For a potentially harmful situation in which the product or an item can become damaged within its environment.
<b>Note</b>	For application notes and other useful information.


However, it is just as important to comply with any other notes and information which are not highlighted, so as to avoid failures which in turn may cause direct or indirect injuries or material damage.

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### 3 Scope of delivery



1 Calibration container	6 Fastening screw for grounding cable
2 Circuit board with accessories	7 Cover plate
3 500g calibration weight	8 Mixer bracket with fastening screws
4 Grommet	9 Oval-head screws for calibration scales (8x)
5 Oval-head screws for protective cover (3x)	10 Calibration scales

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## 4 Installation



### Warning!

Electric shock!

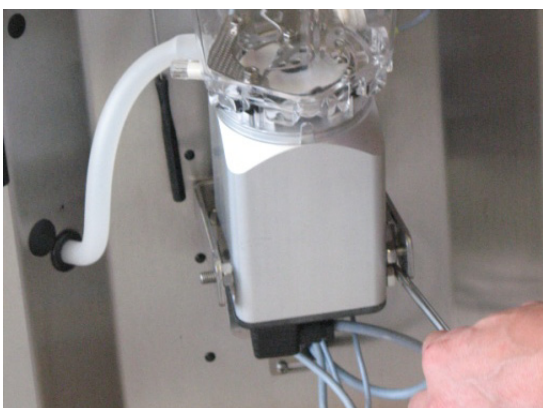
- Disconnect the automatic feeder's mains plug before starting with the installation of the calibration scales.

### Note

Shapes and colors of single components in this manual may be different from those that you have.


### 4.1 Removing the mixer

1. Switch off the automatic feeder and disconnect the mains plug.
2. If necessary, take the fly screen door off its hinges.
3. Remove the mixer from the holder and disconnect the plug for the power supply.

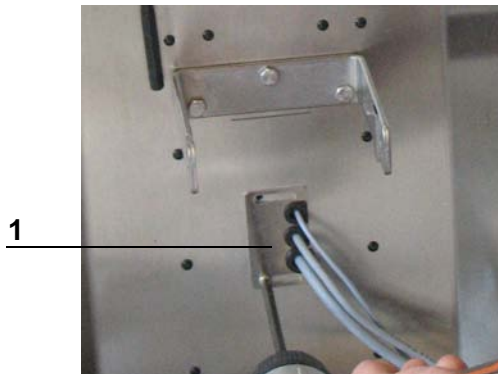


### Note

Use a screwdriver to press the mixer bracket slightly to the side, until the screw is no longer inserted in the hole.


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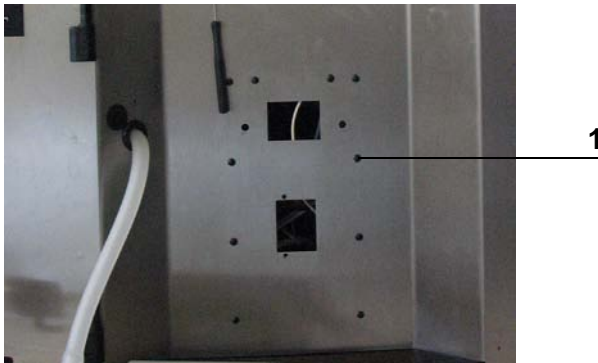
4. Undo the cable tie at the rear of the mixer in order to remove the temperature sensor.
5. Remove the cover on the machine housing, below the mixer.



1. Cover

6. Disconnect the plug for the electrode.
7. Push the cables for the power supply, temperature sensor, and the electrode into the machine housing.
8. Remove the mixer bracket.
9. Remove all dummy plugs from the machine housing.

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1. Dummy plugs (12x)

## 4.2 Installing and connecting up the calibration scales

The calibration scales are inserted into the machine housing from the inside of the machine.

1. To access the inside of the machine

- > **When powder is being used:** Through the right door of the machine housing.
- > **When the combi version is being used:** Through the left door of the machine housing. When doing this, disconnect the power plugs from the valve unit and remove the complete valve unit as well as the intermediate panel from the machine housing (see figure).

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1. Intermediate panel

2. Hold the calibration scales onto the inside of the machine housing and fasten them on the machine housing from the outside using the supplied screws.



1. Machine housing, front  
2. Calibration scales

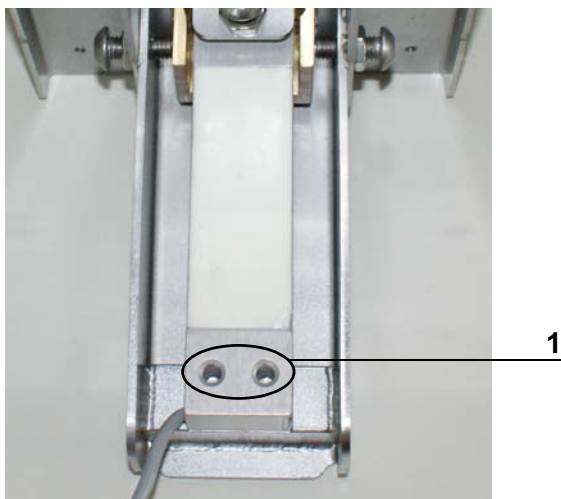
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<b>Attention</b>	Please observe the cables on the inside of the machine housing when inserting the calibration scales.
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3. Fasten the mixer bracket and the cover plate onto the machine housing.




4. Fasten the grounding cable onto the calibration scales using the supplied screw.

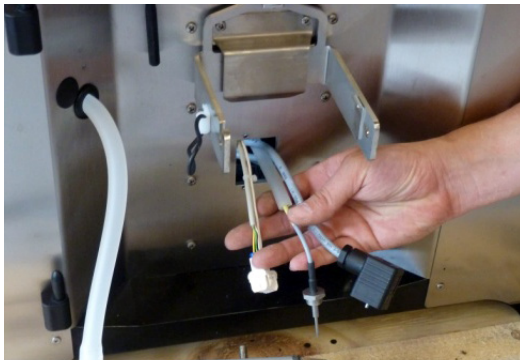


1. Holes for the grounding screws
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- Pull both the cable for the electrode and the cable for the temperature sensor as well as the power cable for the mixer through to the outside using the lower opening in the mixer duct.



- Connect the electrode to the appropriate cable.
- Press the cable for the temperature sensor (with protective hose) into the holder in the mixer and push the temperature sensor into the mixer glass through the rubber plug.

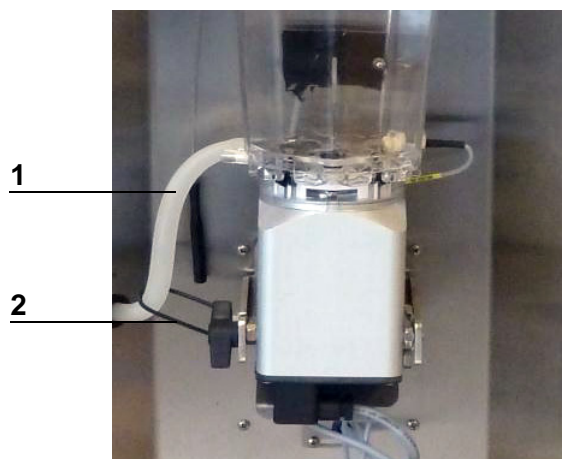


- Fasten the cable for the temperature sensor on the mixer using a cable tie.
- Insert the plug for the power supply back onto the mixer.

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10. Attach the mixer back into the mixer bracket.

11. Guide the suction hose through the holder (rubber ring), which is fastened to the left side of the mixer bracket, and connect the hose to the mixer box.






1. Suction hose
2. Holder (rubber ring)

<b>Attention</b>	Make sure that the suction hose is guided through the rubber ring, since otherwise the calibration scales will not function correctly.
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12. Push the cables underneath the mixer back into the machine housing and fasten the cover for the cable opening beneath the mixer bracket again.

<b>Note</b>	The length of cables should be made to match the tilting of the mixer.
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13. Adjust the eccentric disc on the mixer bracket such that the rear edge of the mixer is 3 mm away from the mixer duct.

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To do this, use a screwdriver to move the screw for the eccentric disc until it is correctly set.

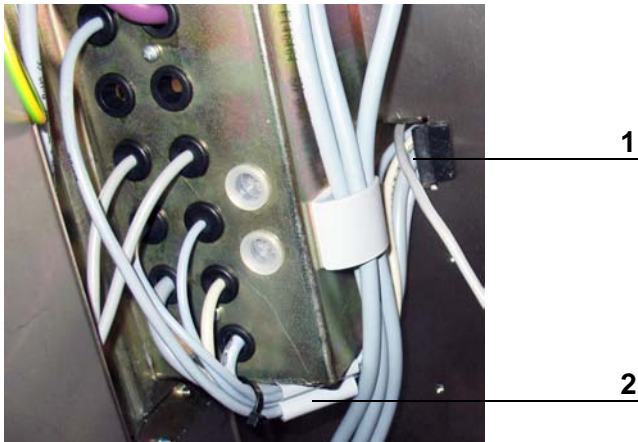


<b>Attention</b>	Make sure that the mixer glass and the suction hose leading away from the mixer do not make contact with the machine housing, fly screen, and powder dosing device (if present), since the calibration scales would otherwise not function correctly.
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14. Tighten the wing nut on the left side of the mixer in order to stabilize it.

15. Guide the cable for the calibration scales from the inside, through the cable opening in the machine housing designed for that purpose, and to the outside. Then fasten the cable in the holder clip on the inside of the machine.

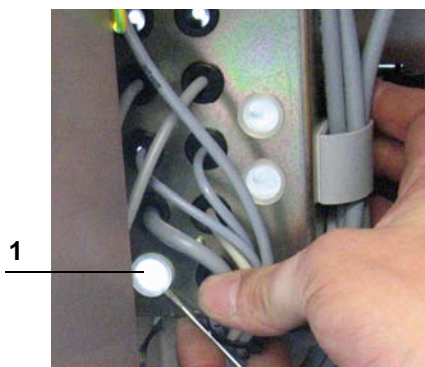
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- |                  |
|------------------|
| 1. Cable opening |
| 2. Holder clip   |


16. Open the control box for the automatic feeder.

17. Replace the relevant dummy plug on the control box with the supplied grommet.

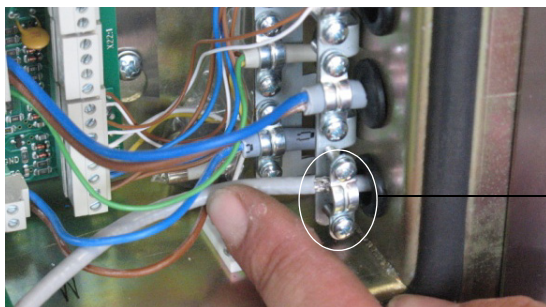


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|---------------|
| 1. Dummy plug |
|---------------|

<b>Attention</b>	Make sure that the grommet is fitted tightly in the control box, since otherwise moisture could penetrate the control system.
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18. Guide the cable for the calibration scales through the grommet and the cable clamp and into the control box, and tighten the cable clamp.



1. Cable clamp


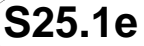

<b>Attention</b>	Make sure that the position of the cable where the insulation is interrupted and the shield can be seen is exactly underneath the cable clamp.
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19. Fasten the circuit board in the control system using the supplied screws.



1. Circuit board

20. Connect the cable for the calibration scales to the circuit board (see circuit diagram).

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21. Connect the control box.

22. Fasten the cable for the calibration scales into the holder clip on the inside of the machine and fix the cables in place using the supplied cable ties.







23. **Only when the combi version is being used:** Reinstall the intermediate panel and the valve unit.

24. If necessary, reattach the fly screen door at the front of the automatic feeder.



### 4.3 Activating the calibration scales

Activate the calibration scales in **Setup** for the automatic feeder. This is done as follows:

1. Switch off the automatic feeder.
2. Press  and keep the button pressed down while you switch on the automatic feeder again. After a short period of time you will see the Setup menu in the display from which you can select the **calibration scales** line.
3. Select **yes** in the **activated** line.


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Other menu items then appear in the display in which you can:


- adjust the calibration scales,
  - read the currently assigned calibration factor, and
  - read the date on which the calibration scales were last adjusted.
4. To exit the setup, press  until the message **Exit setup?** appears in the display. Choose  to confirm.

#### 4.4 Adjusting the calibration scales


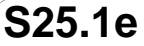

The calibration scales have to be adjusted in the setup for the automatic feeder.

1.  > **Setup > Adjust > calibration scales?**
2. The adjustment process begins with the taring of the calibration scales. You will be informed of this in the **calibration scales will be tared** message.
3. A menu appears where you need to enter the reference weight in grams that you require for the adjustment. If need be, adapt the respective value in this menu (default value: 500 g).

<b>Note</b>	A 500 g reference weight is included in the scope of delivery.
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4. Place the reference weight with the hole on the screw in the feeding box such that it is fixed in place, and then press  in order to start the adjustment process.





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5. After completion of the adjustment process, a respective message about the success or lack of success of the adjustment will be issued. At the same time, the currently determined weight value will be shown. After removing the calibration weight, 0 grams should be shown here.

## 4.5 Diagnosis

In the **Diagnosis** menu, you can check whether the calibration scales are providing correct weighing values and, if need be, initiate an adjustment of the scales.

### 4.5.1 Checking weighing values

1.  > **Diagnosis > Calibration scales**
2. Press  in **check?**.
3. Now the current weighing values will be displayed. Put the calibration weight whose weight you know in the feeding box and check whether the value displayed is the same as that of the calibration weight.