



SmartExtender

Instructions for use

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1 Operating instructions

1.1 Using this manual

Before using the SmartExtender for the first time, read these instructions for use and the operating manual of the ThermoMixer that you use the SmartExtender with. You can find the current version of the operating manual on the Internet at www.eppendorf.com/manuals.

These instructions for use are a supplement to the operating manual of the ThermoMixer C, ThermoStat C and ThermoMixer F0.5/F1.5/F2.0/FP. These instructions for use do not replace the operating manual.

2 Safety

2.1 Intended use



The SmartExtender is a thermoblock designed for the devices Eppendorf ThermoMixer C, Eppendorf ThermoStat C and Eppendorf ThermoMixer F and is used for sample preparation and to hold inserted vessels during sample tempering.

The SmartExtender is exclusively intended for indoor use. All country-specific safety requirements for operating electrical equipment in laboratories must be observed. Only use Eppendorf accessories or accessories recommended by Eppendorf.

The SmartExtender may only be operated by adequately trained and skilled personnel.

The product can be used for training, routine and research laboratories in the areas of life sciences, industry or chemistry. This product is intended to be used for research purposes only. Eppendorf does not provide a warranty for other applications. The product is not suitable for use in diagnostic or therapeutic applications. The product may only be used by skilled personnel who have been trained in the areas mentioned above.

2.2 Danger symbols on the device

Symbol	Meaning	Location
	Risk of burns from hot surfaces.	On the SmartExtender
	Hazard point Risk of injury from moving parts. ▶ Observe the operating manual.	On the SmartExtender

3 Product description

3.1 Features

The SmartExtender is used together with the ThermoMixer C, ThermoStat C and ThermoMixer F.

The SmartExtender heats up lab vessels independently from the SmartBlock in a second temperature zone.

- Suitable vessels: 1.5 mL micro test tubes
- Temperature range: 3 °C above ambient temperature – 110 °C

4 Installation and operation

4.1 Installing the SmartExtender



WARNING! Risk of personal injury or material damage due to chemically or mechanically damaged SmartExtender.

- ▶ Do not use SmartExtenders that show signs of corrosion or mechanical damage.
- ▶ Check the condition of the SmartExtender at regular intervals.



WARNING! Contamination due to opening seals of consumables.

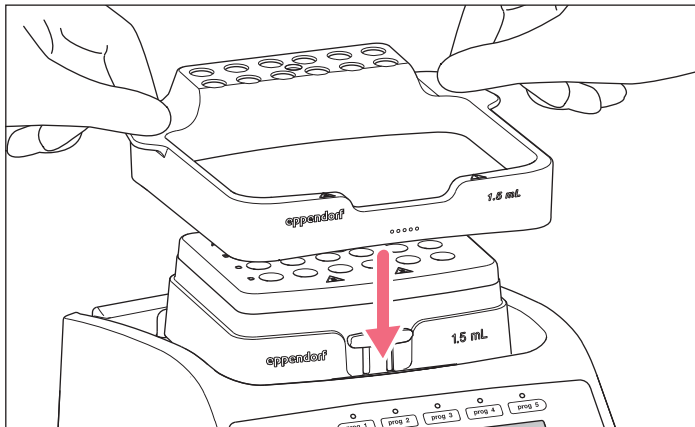
In the following cases, the seals of tubes or plates may open.

- High vapor pressure of the content
 - Improperly closed lid
 - Damaged sealing lip
- ▶ Always check that consumables have been sealed tightly before use.
-

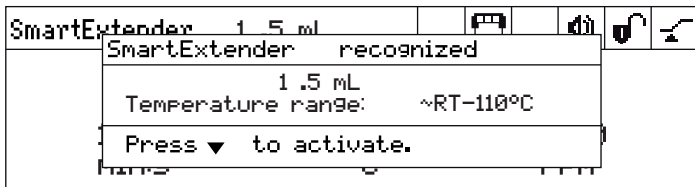
4.1.1 Fitting the SmartExtender

Prerequisites

ThermoMixer C, ThermoStat C and ThermoMixer F: Software version 3.0.0. or higher



- ▶ Fit the SmartExtender onto the device from above until it clicks into place. The spigots behind the heating/cooling plate fit into the recesses of the SmartExtender. The device automatically recognizes the SmartExtender when it is fitted. A message appears on the display saying that the SmartExtender has been recognized and the SmartExtender symbol is shown.



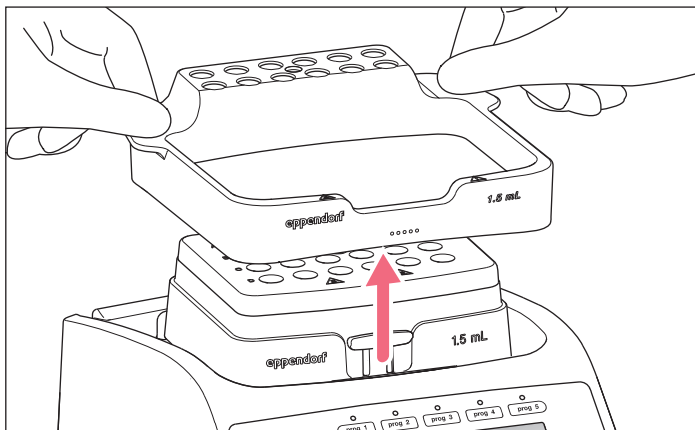
4.1.2 Removing the SmartExtender



WARNING! Risk of burns from hot surfaces.

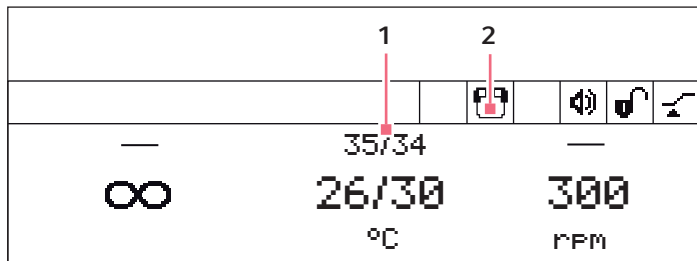
The thermoblock, the SmartExtender and the heating/cooling plate reach high temperatures that can lead to burns.

- ▶ Allow the thermoblock, the SmartExtender and the heating/cooling plate to cool down before removing the SmartExtender or the thermoblock.



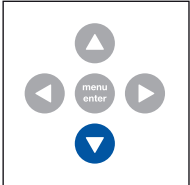
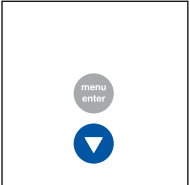
1. Pull the SmartExtender upwards using the two removal handles.
2. Remove the SmartExtender.

4.2 Activating the SmartExtender

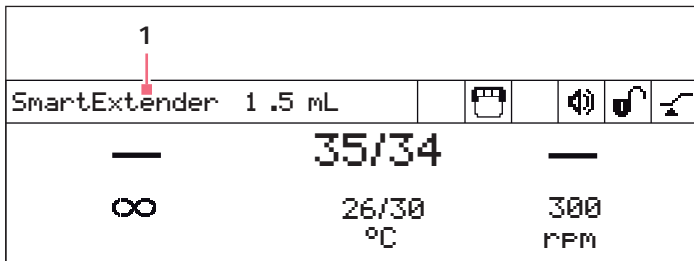


1 SmartExtender temperature indication. 2 The SmartExtender is operational.

4.2.1 Activating SmartExtender with an arrow key

ThermoMixer C ThermoStat C	ThermoMixer F
	

- ▶ Press the bottom arrow key on the control panel.
 - The temperature setting is switched from the thermoblock to the SmartExtender.
 - On the display, the SmartExtender temperature indication is shown larger. The SmartExtender temperature can now be set.



1 The SmartExtender is active.

The temperature can be set.

4.2.2 Activating SmartExtender via the menu

1. To open the menu, press the **menu/enter** key.
2. Select the SmartExtender menu item with the **up** and **down** arrow keys.
3. Press the **menu/enter** key to confirm your selection.

4.3 Inserting tubes

**WARNING! Risk of injury due to incorrect consumables.**

- Not properly inserted vessels may come out of the SmartExtender bores.
 - Glass tubes can smash.
- ▶ Only use the SmartExtender with the consumables designed for it.
- ▶ Never use vessels made of glass or other fragile materials.
-

**NOTICE! Material change of consumables at extreme temperatures.**

Extreme temperatures (e.g. during refrigeration or autoclaving) affect the material. The mechanical strength, dimensions and shape of the consumable will change.

- ▶ Use consumables that are suitable for the selected temperature range or the selected procedure.
-

- ▶ Use closed vessels only.
- ▶ Insert the tubes completely into the bores of the SmartExtender.

4.4 Setting the temperature on the SmartExtender

Prerequisites

The SmartExtender has been activated.

- ▶ Use the **temp** arrow keys to set the target temperature.
The SmartExtender starts heating immediately.

If no key is pressed within several seconds, the device switches back to the temperature setting of the thermoblock.



With the SmartExtender it is not possible to enter a temperature control duration.

5 Maintenance

5.1 Cleaning



WARNING! Risk of burns from hot surfaces.

The thermoblock, the SmartExtender and the heating/cooling plate reach high temperatures that can lead to burns.

- ▶ Allow the thermoblock, the SmartExtender and the heating/cooling plate to cool down before removing the SmartExtender or the thermoblock.
-



NOTICE! Damage from the use of aggressive chemicals.

- ▶ Do not use any aggressive chemicals on the device or its accessories, such as strong and weak bases, strong acids, acetone, formaldehyde, halogenated hydrocarbons or phenol.
- ▶ If the device has been contaminated by aggressive chemicals, clean it immediately using a mild cleaning agent.



NOTICE! Corrosion due to aggressive cleaning agents and disinfectants.

- ▶ Do not use any corrosive cleaning agents, aggressive solvents or abrasive polishes.



NOTICE! Damage to the SmartExtender due to penetration of liquids

- ▶ Do not allow any liquids to run over the SmartExtender.
 - ▶ Do not rinse the SmartExtender with aqueous, alcoholic or other liquids.
 - ▶ Only wipe the SmartExtender with slightly moistened cloths.
-

Auxiliary equipment

- Lint-free cloth
- Soft bottle brush or cotton swabs
- Mild soap-based laboratory cleaner
- Dist. water.

Clean the SmartExtender immediately if sample fluid enters the bores or comes into contact with the surfaces.

1. Wipe the SmartExtender with a mild soap solution and a cloth. Clean the bores with a soft bottle brush or cotton swabs.
2. Wipe off the soap solution with a damp cloth.
3. Let the cleaned SmartExtender dry with the bores pointing downwards. Do not dry the SmartExtender in a drying cabinet.

5.2 Disinfection/decontamination



WARNING! Risk to health due to contaminated accessories.

1. Observe the information in the decontamination certificate. It is available as a PDF document on our webpage (www.eppendorf.com/decontamination).
2. Decontaminate all the parts you want to send.
3. Include the fully completed decontamination declaration for product returns in the shipment.



NOTICE! Damage to the SmartExtender due to penetration of liquids

- ▶ Do not allow any liquids to run over the SmartExtender.
 - ▶ Do not rinse the SmartExtender with aqueous, alcoholic or other liquids.
 - ▶ Only wipe the SmartExtender with slightly moistened cloths.
-
- ▶ Select a disinfection method which complies with the legal regulations and guidelines applicable to your area of application. Use, e.g., alcohol (ethanol, isopropanol) or disinfectants containing alcohol.

6 Transport, storage and disposal

6.1 Disposal

If the product needs to be disposed of, the relevant legal regulations must be observed.

Information on the disposal of electrical and electronic devices in the European Community:

Within the European Community, the disposal of electrical devices is regulated by national regulations based on EU Directive 2012/19/EU pertaining to waste electrical and electronic equipment (WEEE).

According to these regulations, any devices supplied after August 13, 2005, in the business-to-business sphere, to which this product is assigned, may no longer be disposed of in municipal or domestic waste. To document this, they have been marked with the following marking:



Because disposal regulations may differ from one country to another within the EU, please contact your supplier if necessary.

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