

# Exchangeable Thermoblock for slides DC

Operating instructions

**eppendorf**

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## 1 General / 2 Safety instructions

### 1 General

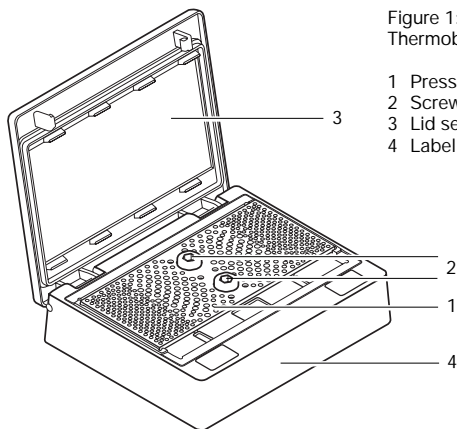
Only experienced laboratory personnel are permitted to use the slides thermoblock. The exchangeable Thermoblock for slides DC is especially designed for processing either DNA or protein microarrays using the Eppendorf hybridization frames in research laboratories in the fields of bioscience, medicine and chemistry. The Thermoblock for slides DC can be used on both the Thermomixer comfort or the ThermoStat plus. It can be used for rotational movement up to a maximum of 1,400 rpm and at a maximum temperature of 70 °C.

### 2 Safety instructions

- When exchanging a heated block, please keep in mind that contact with the surface of the opened exchangeable thermoblock, its underside or the thermal base on the basic device can result in burns! Exchange the thermoblock once it has cooled down.
- Make certain that the slides are inserted precisely into the recesses. The Thermoblock for slides DC is compatible with slides with a maximum length of 76.70 mm.
- Make sure that the block is clean (no glass particles) before placing slides.
- Make sure that the pressure plate is correctly fixed. See mounting part of this manual.
- The lid of the Thermoblock for slides DC must be tightly closed (lid parallel to block) prior to using the mix function.
- Be sure to observe the maximum rotational speed of 1,400 rpm and the maximum temperature setting of 70 °C. The ThermoStat plus basic device has no block recognition function. There is no automatic limitation of the temperature control.
- Do not use damaged thermoblocks.
- Exchangeable thermoblocks may only be used in conjunction with the ThermoStat plus and Thermomixer comfort devices. See their respective operating manuals for more information.
- This operating manual must also be handed over if you give the slides thermoblock to someone else.

### 3 Mounting

1. To mount the exchangeable Thermoblock for slides DC, open the lid by simultaneously pressing the two pressure points on the front edge of the lid. The pressure points are labeled with "push".



2. Alternately unscrew the 2 screws of the pressure plate until the pressure is completely released (Figure 1).
3. Adjust the exchangeable Thermoblock for slides DC on the basic device in such a way that the label can be seen from the front. Screw it tight using a Hexagon key.

## 3 Mounting

4. Place the slides (up to 4) in the Thermoblock for slides DC. The slides have to be inserted with the sticker facing the front part of the thermoblock (Figure 2).

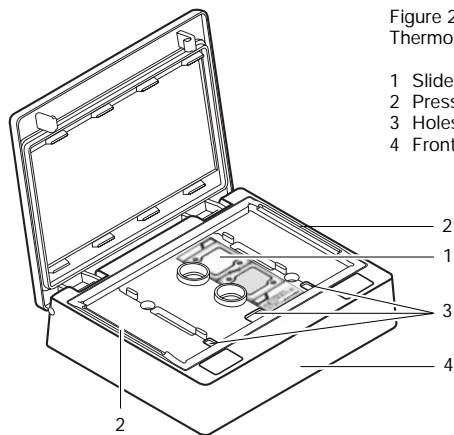


Figure 2: Drawing of the opened Thermoblock for slides DC

- 1 Slide
- 2 Pressure plate location ridges
- 3 Holes to remove the slide
- 4 Front part of the thermoblock

### 3 Mounting

5. Position the pressure plate on top of the Thermoblock for slides DC and push it firmly into the location ridges. Hold both plate and thermoblock tightly and alternately fasten both screws completely using the screwing tool (Figure 3).

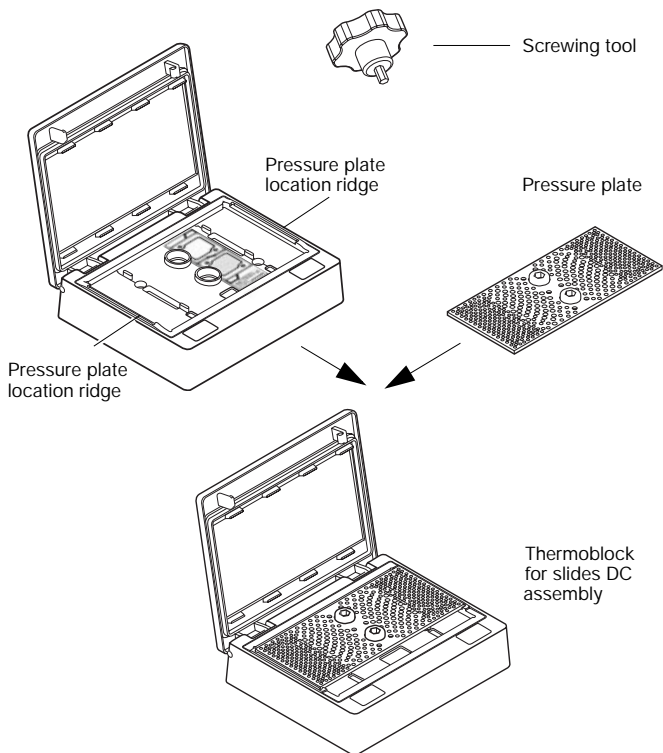


Figure 3: Schematic drawing of the Thermoblock for slides DC assembly and the screwing tool.

### 3 Mounting / 4 Application

6. Close the lid and push down the 2 pressure points on the front edges of the lid. It is absolutely necessary to ascertain that the lid has been correctly closed prior to starting the device.

In the case of the Thermomixer comfort, block identification occurs after the exchangeable Thermoblock for slides DC has been correctly positioned. This results in an automatic limitation of maximum possible rotational speed (1400 rpm) and temperature setting (70 °C).

In the case of the ThermoStat plus there is no block identification function for technical reasons. Please set for max. temperature of 70 °C.

7. After the incubation step, open the Thermoblock for slides DC lid and unscrew the pressure plate (**caution:** hot plate) by alternating between both screws.

#### 4 Application

An Eppendorf hybridization frame must be positioned above the microarray on the slide surface in order to carry out the reaction.

In the case of using DualChip™ microarrays from Eppendorf, hybridization frames are already placed on the slides.

Four slide positions are provided on the exchangeable Thermoblock for slides DC.

## 5 Cleaning / Service

- To clean the Thermoblock for slides DC, switch off the power supply and unplug the device.
- Ascertain that the surface of the opened Thermoblock for slides DC and its underside as well as the thermal base on the basic device have cooled down completely to minimize the risk of burns.
- Unscrew the block from the basic device.
- Clean the exchangeable Thermoblock for slides DC immediately if sample liquid finds its way into the bores. A mild soap solution or lab cleaner can be used for cleaning. The device should be protected from organic solutions and aggressive chemicals. For disinfection purposes, please use alcohol-based infectants.
- The sealant material in the lid can be removed and cleaned or replaced.

### 5.1 Replacing the snap seal

If sample liquid finds its way into the two snap seals of the block, remove them from the block and wash them separately in a soap solution or in an ultrasonic bath or replace them.

The removal of the locking devices from the exchangeable Thermoblock for slides DC is carried out by pressing both of the side catches beneath the block together and simultaneously pressing them out of the block (see Figure 4). Be aware of the direction when reinserting the locking systems into the block: the directional marking on the right side must point forward while that on the left side points to the rear.

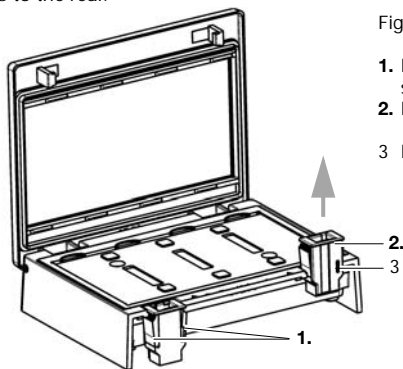


Figure 4: Changing the snap seal

1. Press the side catches together simultaneously
2. Push out the lock
3. Directional marking



## 5 Cleaning / Service

### 5.2 Replacing the lid

The lid, including the seal, can also be replaced when damaged: To do this, loosen and remove the 2 slotted head screws at the side of the lid with a slotted head screwdriver (N° 2). Replace the lid and refasten it by retightening the 2 slotted head screws (Figure 5).

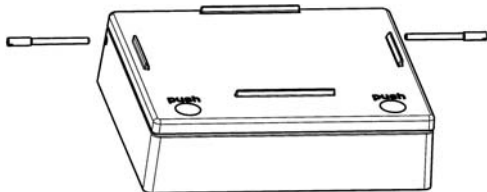


Figure 5: Replacing the lid

## 6 Technical data

Slide positions:	max. of 4 positions
Slide dimensions:	Length 74.5 – 76.7 mm Width 24.7 – 26.3 mm Height 0.9 – 1.2 mm
Rotational speed:	max. 1400 rpm
Temperature control:	to a maximum of 70 °C possible
Temperature homogeneity:	$T_{\max} - T_{\min} \leq 2 \text{ K}^*$ (at 70 °C) $T_{\max} - T_{\min} \leq 0,5 \text{ K}^*$ (at 45 °C)
Heating-up speed of the thermoblock:	> 5 K / min *
Chemical resistance:	The use of strong acids, bases or acetone is not recommended. This could result in damage to the surface.
Cooling-off period from 70 °C to 10 K above the ambient temperature:	20 min

\* Data determined with a Thermomixer comfort.

## 7 Ordering information

<b>Product Description</b>	<b>Order no. for North America</b>	<b>Order no. International</b>
Thermoblock for slides DC	022670786	5368 000.100
Lid with seal	0022670727	5368 851.002
Snap seal	0022670743	5368 852.009
<b>Products</b>		
Thermomixer comfort / R		5355 000.011
115 V	022670107	
220 V	022670158	
ThermosStat plus (without block)	022670204	5352 000.010
Silverquant <sup>®</sup> adapter	956015073	5368 000.037



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The product named below fulfills the relevant fundamental requirements of the EC directives and standards listed. In the case of unauthorized modifications to the product or an unintended use this declaration becomes invalid.

Produktbezeichnung, Product name:

Wechselblock für slides DC / Exchangeable Thermoblock for slides DC

Produkttyp, Product type:

Thermoblock / Thermoblock

Einschlägige EG-Richtlinien/Normen, Relevant EC directives/standards:

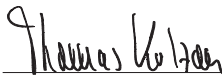
98/79/EG, EN 14971



Vorstand, Board of Management:

14.07.2005

Hamburg, Date:



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