



Wechselblock slides Exchangeable Thermoblock slides

Bedienungsanleitung
Operating instructions

eppendorf

Inhalt / Table of contents

Bedienungsanleitung	3
Operating instructions	12

Nachdruck und Vervielfältigung – auch auszugsweise – nur mit Genehmigung.
No part of this publication may be reproduced without the prior permission of the
copyright owner.
Copyright© 2005 Eppendorf AG, Hamburg

Table of contents

1	General	13
2	Safety instructions	13
3	Mounting	14
4	Application	14
5	Cleaning / Service	16
5.1	Replacing the snap seal	17
5.2	Replacing the lid	18
6	Technical data	19
7	Ordering information	20

1 General / 2 Safety instructions

1 General

Only experienced laboratory personnel are permitted to use the slides thermoblock. The exchangeable Thermoblock "slides" (object carriers) is designed for processing microarrays composed of either nucleic acids or proteins. The slides thermoblock is used to process microarrays; these can be based on nucleic acids as well as proteins. The slides thermoblock is only intended to be used with the Thermomixer comfort / R and ThermoStat plus basic devices. See their respective operating manuals for more information. The slides thermoblock is designed for rotary speeds up to 1400 rpm and a temperature of up to 99 °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!
- When changing a hot block, do not touch the surface or underside of the opened block or the thermobase on the basic device!
- Always tighten screws finger-tight when changing a block.
- Do not use the thermoblock if it is visibly damaged.
- Before using the mix function, the lid of the slides thermoblock must be firmly shut (lid parallel to block).
- If the block is not identified automatically by older Thermomixer comfort / R basic devices, it is vital that you observe the maximum rotation speed of 1400 rpm (the rotation speed is not automatically limited in this case). Please contact our Customer Service department (see page 22) to update the software in your basic device.
- This operating manual must also be handed over if you give the slides thermoblock to someone else.
- Make certain that the slides are inserted precisely into the recesses.
- The outer 4 mm of both face sides of the standard slides are required for fixing in the device through the lid. This means that they are not available as a reaction area. The combined height of the slide and the reaction area shall not exceed 5 mm.
- Please use desalted water when positioning a damp chamber in the block.

3 Mounting / 4 Application

3 Mounting

To mount the exchangeable Thermoblock "slides", open the lid by simultaneously pressing the two pressure points on the front edge of the lid. The pressure points are labeled with "push". Adjust the exchangeable Thermoblock on the basic device in such a way that the label can be seen from the front. Screw it tight using an Allen key.

After loading the exchangeable Thermoblock with up to 4 slides, and prior to temperature control / rotation, the lid must be closed by simultaneously pressing the two pressure points. It is absolutely necessary to ascertain that the lid has been correctly closed prior to starting the device. The slides are only fixed when the lid is closed, and only then rotation can begin.

After placing the slides thermoblock on Thermomixer comfort / R basic devices, the block is identified. This automatically limits the maximum rotation speed to 1400 rpm. If the block is not identified automatically by older Thermomixer comfort basic devices, it is vital that you observe the maximum rotation speed of 1400 rpm. Please contact our Customer Service department (see page 22) to update the software in your basic device.

4 Application

Four slide positions are provided on the exchangeable Thermoblock. A reaction area must be positioned above the microarray on the slide surface in order to carry out the reaction. Commercially available hybridization chambers or cover glass of various sizes are currently used to create the reaction chamber. When using hybridization chambers or cover glass it is important to consider that 4 mm of the front sides of a standard slide are not available as reaction area due to the fixing by the lid of the exchangeable Thermoblock. The total height of the slide and the hybridization chamber shall also not exceed 5 mm. Also it is important that the hybridization chamber doesn't overlap the edges of the slide.

The hybridization chamber or the cover glass must be fixed on the slide surface and sealed as air-tight as possible, thus preventing the leakage of reaction solution during temperature control and / or rotation.

4 Application

In order to effectively counteract evaporation of reaction solution from the reaction area, a "damp chamber" can also be applied during temperature control and rotation. For this purpose three recesses between the slide positions have been provided on the exchangeable Thermoblock, in which related polymer strips serve as moisteners following a brief dampening with desalted water. The Silverquant[®] adapter is held by four rods on the lid (fig. 3).

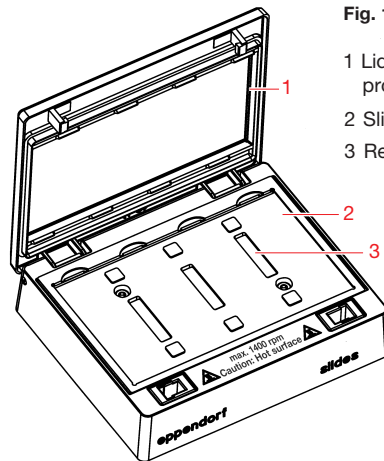


Fig. 1: Exchangeable Thermoblock slides

- 1 Lid seal and fixing projections for the slides
- 2 Slide positions
- 3 Recess for reservoir pads

5 Cleaning / Service

To clean the exchangeable Thermoblock slides, switch off the power supply and pull the plug.

Ascertain that the surface of the opened exchangeable Thermoblock and its underside as well as the thermal base on the basic device have cooled down completely. There is otherwise a danger of burns.

Now screw off the block from the basic device.

Clean the slides thermoblock immediately if any liquid from samples enters the hole. A mild soapy solution or laboratory cleaning agent can be used to clean the block. The block should be protected from organic solvents and aggressive chemicals. Alcohol-based disinfectants are permitted for decontamination purposes.

When returning thermoblocks and their base units, please ensure that they have been completely decontaminated. Go to www.eppendorf.com for more information.

5 Cleaning / Service

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 is carried out by pressing both of the side catches beneath the block together and simultaneously pressing them out of the block (see Fig. 2). Be aware of the direction when reinserting the snap seal into the block: the directional marking on the right side must point forward while that on the left side points to the rear.

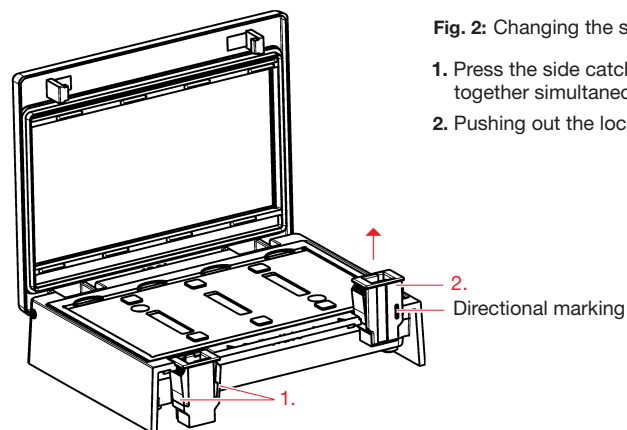


Fig. 2: Changing the snap seal

1. Press the side catches together simultaneously
2. Pushing out the lock

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 two slotted head screws at the side of the lid with a slotted head screwdriver (No. 2). Replace the lid and refasten it by retightening the two slotted head screws.

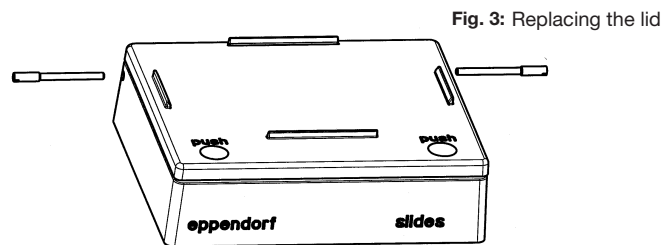


Fig. 3: Replacing the lid

6 Technical data

Slide positions:	max. of 4 positions
Slide dimensions:	Length 75.0 – 76.5 mm Width 25.0 – 26.0 mm Height 0.9 – 1.2 mm
Rotational speed:	max. 1400 rpm
Temperature control:	max. 99 °C
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 / R.

7 Ordering information

Product Description	Order no. for North America	Order no. International
Thermoblock for slides	0022670158	5368 000.010
Lid with seal	0022670727	5368 851.002
Reservoir pads	0022670760	5368 001.408
Snap seal	0022670743	5368 852.009
Products		
Thermomixer comfort / R		5355 000.011
115 V	022670107	
220 V	022670158	
ThermosStat plus (without block)	022670204	5352 000.010
Silverquant® adapter	956015073	5368 000.037

Eppendorf Offices

AUSTRALIA / NEW ZEALAND

Eppendorf South Pacific Pty. Ltd.
Tel. +61 2 98 89 50 00
Fax +61 2 98 89 51 11
E-Mail: Info@eppendorf.com.au
Internet: www.eppendorf.com.au

AUSTRIA

Eppendorf Austria GmbH
Tel. +43 (0) 1 890 13 64 0
Fax +43 (0) 1 890 13 64 20
E-Mail: office@eppendorf.at
Internet: www.eppendorf.at

BRAZIL

Eppendorf do Brasil Ltda.
Tel. +55 11 3095 9344
Fax +55 11 3095 9340
E-Mail: eppendorf@eppendorf.com.br
Internet: www.eppendorf.com.br

CANADA

Eppendorf Canada Ltd.
Tel. +1 905 826 5525
Fax +1 905 826 5424
E-Mail: canada@eppendorf.com
Internet: www.eppendorfna.com

CHINA

Eppendorf China Ltd.
Tel. +86 21 38560500
Fax +86 21 38560555
E-Mail: market.info@eppendorf.cn
Internet: www.eppendorf.cn

CZECH REP. & SLOVAKIA

EPPENDORF Czech & Slovakia s.r.o.
Tel. +420 323 605 454
Fax +420 323 605 454
E-Mail: eppendorf@eppendorf.cz
Internet: eppendorf.cz
Internet: eppendorf.sk

FRANCE

EPPENDORF FRANCE S.A.R.L.
Tel. +33 1 30 15 67 40
Fax +33 1 30 15 67 45
E-Mail: eppendorf@eppendorf.fr
Internet: www.eppendorf.fr

GERMANY

Eppendorf Vertrieb
Deutschland GmbH
Tel. +49 2232 418-0
Fax +49 2232 418-155
E-Mail: vertrieb@eppendorf.de
Internet: www.eppendorf.de

HUNGARY

Eppendorf Austria GmbH
Tel. +43 (0) 1 890 3 64 0
Fax +43 (0) 1 890 3 64 20
E-Mail: bosze.z@eppendorf.at
Internet: www.eppendorf.hu

INDIA

Eppendorf India Limited
Tel. +91 44 42 11 13 14
Fax +91 44 42 18 74 05
E-Mail: info@eppendorf.co.in
Internet: www.eppendorf.co.in

Eppendorf Offices

ITALY

Eppendorf s.r.l.
Tel. +390 2 55 404 1
Fax +390 2 58 013 438
E-Mail: eppendorf@eppendorf.it
Internet: www.eppendorf.it

JAPAN

Eppendorf Co. Ltd.
Tel. +81 3 5825 2363
Fax +81 3 5825 2365
E-Mail: info@eppendorf.jp
Internet: www.eppendorf.jp

NORDIC

Eppendorf Nordic Aps
Tel. +45 70 22 29 70
Fax +45 45 76 73 70
E-Mail: nordic@eppendorf.dk
Internet: www.eppendorf.dk

SOUTH & SOUTHEAST ASIA

Eppendorf Asia Pacific Sdn. Bhd.
Tel. +60 3 8023 2769
Fax +60 3 8023 3720
E-Mail:
eppendorf@eppendorf.com.my
Internet: www.eppendorf.com.my

SPAIN

Eppendorf Ibérica S.L.U.
Tel. +34 91 651 76 94
Fax +34 91 651 81 44
E-Mail: iberica@eppendorf.es
Internet: www.eppendorf.es

SWITZERLAND

Vaudaux-Eppendorf AG
Tel. +41 61 482 1414
Fax +41 61 482 1419
E-Mail: vaudaux@vaudaux.ch
Internet: www.eppendorf.ch

UNITED KINGDOM

Eppendorf UK Limited
Tel. +44 1223 200 440
Fax +44 1223 200 441
E-Mail: sales@eppendorf.co.uk
Internet: www.eppendorf.co.uk

USA

Eppendorf North America, Inc.
Tel. +1 516 334 7500
Fax +1 516 334 7506
E-Mail: info@eppendorf.com
Internet: www.eppendorfna.com

OTHER COUNTRIES

Internet:
www.eppendorf.com/worldwide

eppendorf
In touch with life

Your local distributor: www.eppendorf.com/worldwide

Eppendorf AG · 22331 Hamburg · Germany · Tel: +49 40 538 01-0 · Fax: +49 40 538 01-556
E-mail: eppendorf@eppendorf.com

Eppendorf North America, Inc. · 102 Motor Parkway · Hauppauge, NY 11788-5178 · USA
Tel: +1 516 334 7500 · Toll free phone: +1 800 645 3050
Fax: +1 516 334 7506 · E-mail: info@eppendorf.com

Applications Support

Europe, International: Tel: +49 1803 666 789 · E-mail: support@eppendorf.com
North America: Tel: +1 800 645 3050, menu option 2 · E-mail: techserv@eppendorf.com
Asia Pacific: Tel: +60 3 8023 6869 · E-mail: support_asiapacific@eppendorf.com

eppendorf® is a registered trademark.
B 5368 900.003-03/1109 · Printed in Germany