Covaris Plate Adapter

Installation Guide

Original Instructions

Agilent Technologies

Notices

© Agilent Technologies, Inc. 2018

No part of this manual may be reproduced in any form or by any means (including electronic storage and retrieval or translation into a foreign language) without prior agreement and written consent from Agilent Technologies, Inc. as governed by United States and international copyright laws.

User Guide Part Number

G5573-90005

Edition

Revision A, May 2018

Contact Information

Agilent Technologies Inc.
Automation Solutions
5301 Stevens Creek Blvd.
Santa Clara, CA 95051
USA

Technical Support: 1.800.979.4811 (US) or +1.408.345.8011 (rest of world)
service.automation@agilent.com

Customer Service: 800-227-9770 (US and Canada)
By country: http://www.agilent.com/en-us/contact-us/page

Documentation feedback:
documentation.automation@agilent.com

Web:
http://www.agilent.com/en-us/products/automation-solutions

Acknowledgments

Microsoft and Windows are registered trademarks of the Microsoft Corporation in the United States and other countries.

Warranty

The material contained in this document is provided "as is," and is subject to being changed, without notice, in future editions. Further, to the maximum extent permitted by applicable law, Agilent disclaims all warranties, either express or implied, with regard to this manual and any information contained herein, including but not limited to the implied warranties of merchantability and fitness for a particular purpose. Agilent shall not be liable for errors or for incidental or consequential damages in connection with the furnishing, use, or performance of this document or of any information contained herein. Should Agilent and the user have a separate written agreement with warranty terms covering the material in this document that conflict with these terms, the warranty terms in the separate agreement shall control.

Technology Licenses

The hardware and/or software described in this document are furnished under a license and may be used or copied only in accordance with the terms of such license.

Restricted Rights Legend

If software is for use in the performance of a U.S. Government prime contract or subcontract, Software is delivered and licensed as "Commercial computer software" as defined in DFAR 252.227-7014 (June 1995), or as a "commercial item" as defined in FAR 2.101(a) or as "Restricted computer software" as defined in FAR 52.227-19 (June 1987) or any equivalent agency regulation or contract clause. Use, duplication or disclosure of Software is subject to Agilent Technologies' standard commercial license terms, and non-DOD Departments and Agencies of the U.S. Government will receive no greater than Restricted Rights as defined in FAR 52.227-19(c)(1-2) (June 1987). U.S. Government users will receive no greater than Limited Rights as defined in FAR 52.227-14 (June1987) or DFAR 252.227-7015 (b)(2) (November 1995), as applicable in any technical data.

Safety Notices

A WARNING notice denotes a hazard. It calls attention to an operating procedure, practice, or the like that, if not correctly performed or adhered to, could result in personal injury or death. Do not proceed beyond a WARNING notice until the indicated conditions are fully understood and met.

A **CAUTION** notice denotes a hazard. It calls attention to an operating procedure, practice, or the like that, if not correctly performed or adhered to, could result in damage to the product or loss of important data. Do not proceed beyond a **CAUTION** notice until the indicated conditions are fully understood and met.

Covaris Plate Adapter Installation Guide

This guide contains the following topics:

- "About this guide" on page 2
- "Before you start" on page 3
- "Installing the Plate Adapter" on page 5
- "Using the Plate Adapter" on page 9
- "Uninstalling the Plate Adapter" on page 11

About this guide

What this guide covers

This guide describes how to install the Covaris Plate Adapter on a Bravo Peltier Thermal Station. The Plate Adapter is an adjustable retaining bracket for use with Covaris microtube racks. The following figures show examples of the Plate Adapter and Covaris microtube racks installed on the Peltier Thermal Station.

Figure Plate Adapter securing a Covaris 12 Place 8 Microtube Strip rack

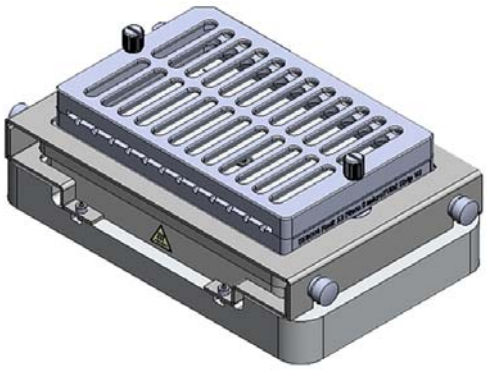
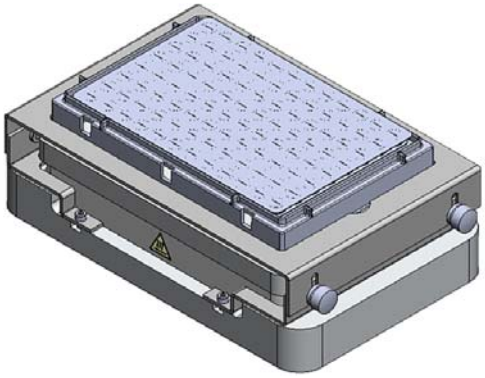


Figure Plate Adapter securing a Covaris 96 Microtube rack



Related guides

Use this guide in conjunction with the following:

- *Bravo Platform Safety and Installation Guide*. Describes potential safety hazards and how to avoid them, and how to install the Bravo Platform.
- *Bravo Platform User Guide*. Describes how to set up, operate, and maintain the Bravo Platform.

To access the product user guides, do one of the following:

- From within the VWorks software, select **Help** > **Knowledge Base** or press F1.
- From the Windows desktop, do one of the following:
  - *Windows 10*. Select **Start** > **All Apps > Agilent Technologies > VWorks Knowledge Base.**

- *Windows 7.* Select **Start** > **All Programs > Agilent Technologies > VWorks** > **User Guides** > **VWorks Knowledge Base.**

- Go to the Agilent Automation Solutions Knowledge Base web pages at www.agilent.com/chem/askb.

Before you start

Required resources

Ensure that the Peltier Thermal Station is already installed on the Bravo deck. For instructions on how to install the Peltier Thermal Station, see the appropriate installation guide for the given Bravo Platform, for example:

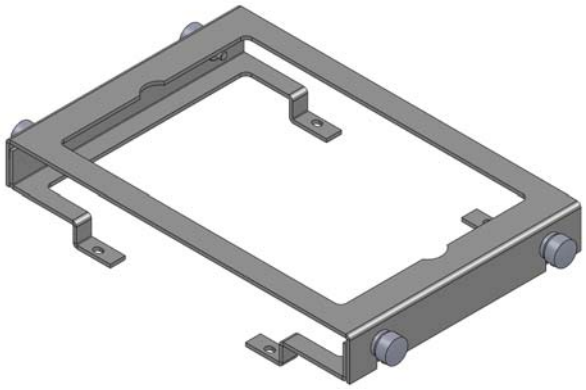
- *G5573A Bravo NGS Option A Installation Guide*
- *G5574A and G5575A NGS Workstation Option B Installation Guide*

Ensure that you have the following:

- Hex drivers for M3 and M2.5 screws
- Covaris Plate Adapter
- If applicable, an appropriate plate insert to ensure efficient heat transfer between the Peltier Thermal Station and your labware

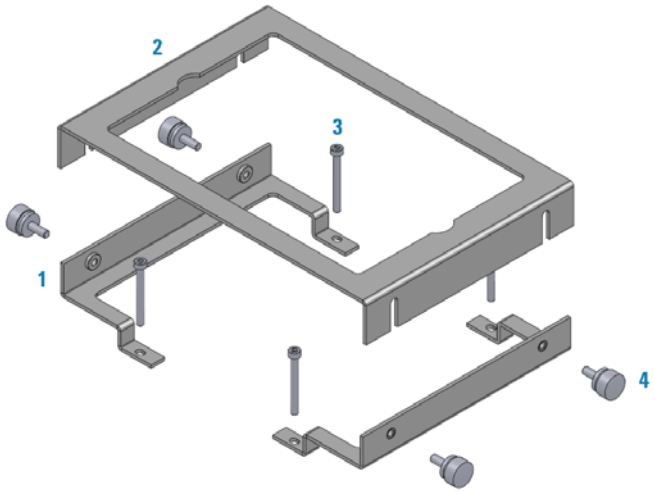
About the Plate Adapter components

The Plate Adapter is shipped partially assembled as the following figure shows.



The following figure and table describe the Plate Adapter components.

Figure Covaris Plate Adapter components

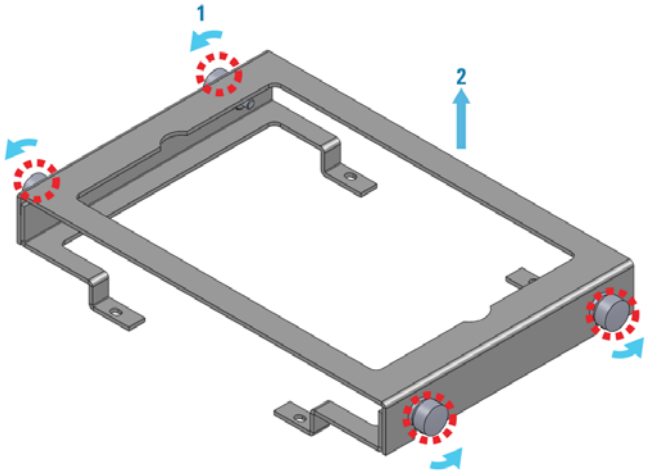


Item	Description	Quantity
1	Adjustable bottom labware retainers	2
2	Adjustable top labware retainer	1
3	Hex cap screws M2.5 X 0.45 25 mm	4
4	Thumbscrews *Note:* The thumbscrews enable you the adjustment of the top and bottom labware retainers to accommodate different labware heights.	4

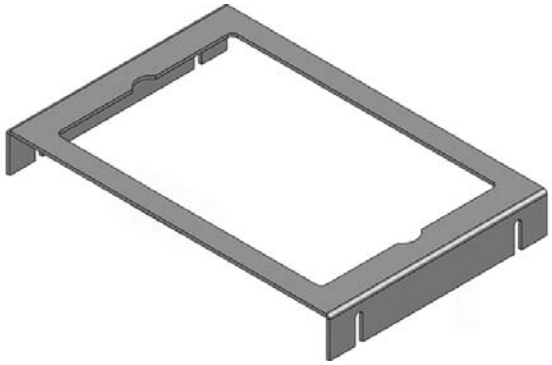
Preparing the Plate Adapter for installation

To prepare the Plate Adapter for installation:

1 Loosen the four thumbscrews by turning them counterclockwise, as shown in the following figure, item 1.



2 Slide the top labware retainer (item 2) up off of the bottom labware retainer.



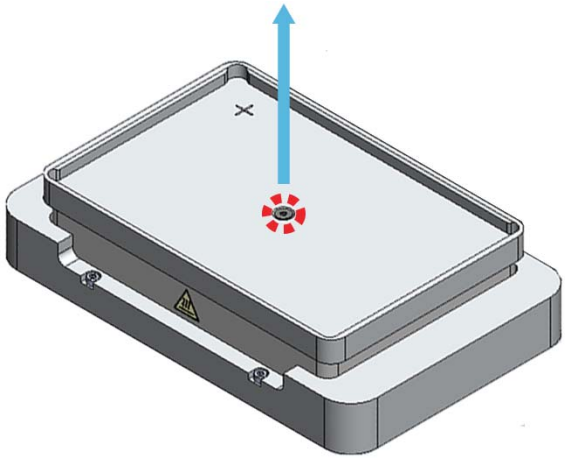
Installing the Plate Adapter

To install the Plate Adapter:

1 Uninstall the M3 hex flathead screw from the center of the plate nest on the Peltier Thermal Station. Remove the plate nest.

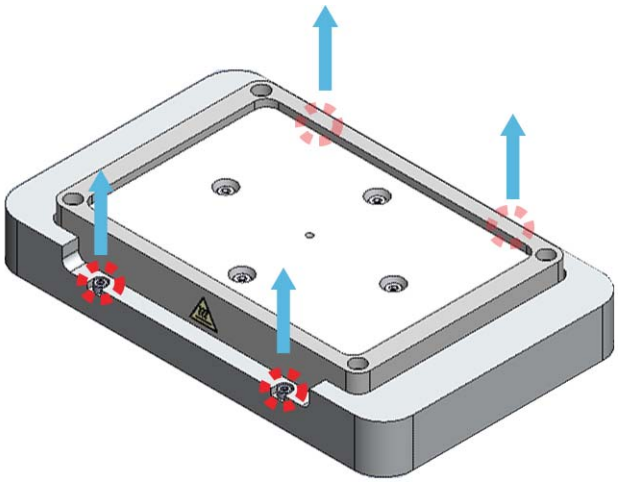
Set aside the plate nest and screw to be re-installed in a later step.

Figure Peltier Thermal Station on Bravo deck



2 Uninstall the four hex cap screws (M2.5 X 0.45 20 mm), two on each side, from the station base. Set aside the screws for future reuse.

Figure Peltier Thermal Station with plate nest removed

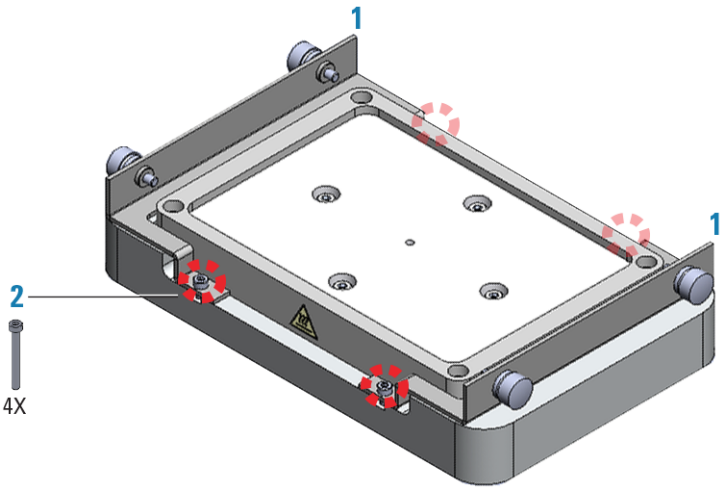


3 Install the Adapter Plate bottom labware retainers on each end of the Peltier Thermal Station, as follows:

a Position a bottom labware retainer on each end of the station, as shown in the following figure, item 1.

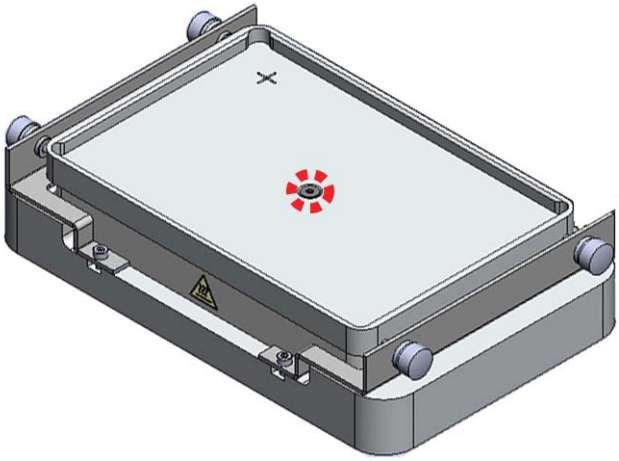
b Position four M2.5 X 0.45 25-mm hex screws, two on each side, in the screw holes. See figure, item 2.

Ensure the slots of the bottom labware retainer are centered on the screws, and then tighten the screws just enough to keep the retainer from sliding freely. Do not fully tighten the screws yet.

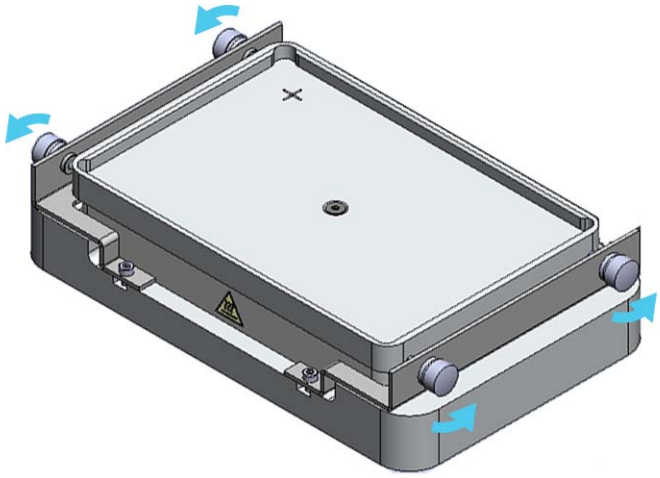


4 Reposition the plate nest on the Peltier Thermal Station, orienting the plate nest so that the crosshairs (+) are towards the rear end of the deck.

Install the M3 hex flathead screw in the center of the plate nest to secure it.



5 Loosen the four thumbscrews just enough so that you can position the top labware retainer slots onto the thumbscrews.



6 Temporarily, position the following:

a If applicable, ensure the appropriate thermal plate insert is seated in the plate nest of the Peltier Thermal Station.

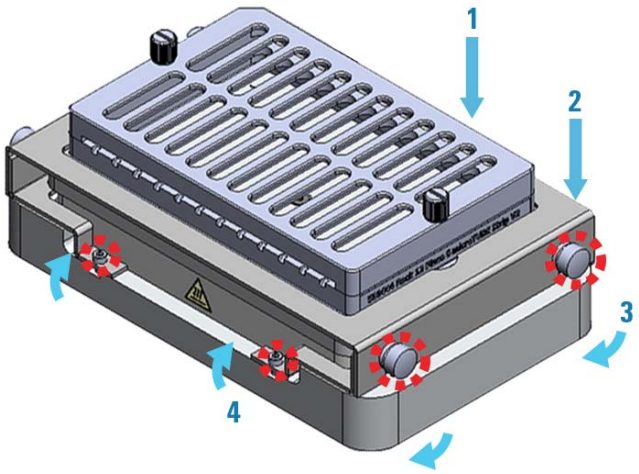
b Place the Covaris labware in the plate nest (figure, item 1). Ensure that the labware is fully seated within the plate nest.

c Position the top labware retainer on the Covaris labware (figure, item 2), aligning the four slots of the top retainer with the four thumbscrews in the bottom retainer.

If necessary, adjust the position of the bottom labware retainers. Ensure that the top labware retainer sits level on the labware skirt.

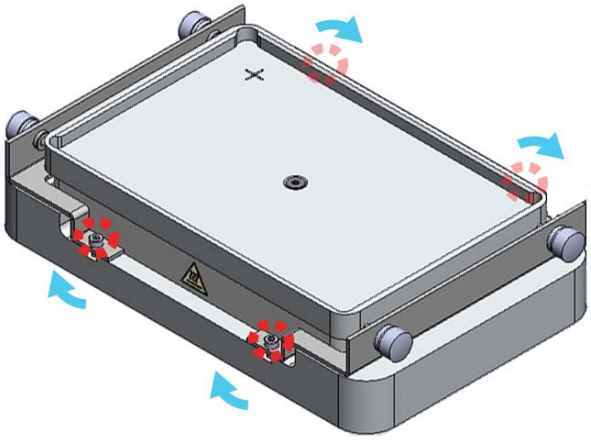
d Turn the thumbscrews clockwise (figure, item 3) to barely tighten them. Do not fully tighten.

e Tighten the four hex screws (figure, item 4) just enough to keep the bottom labware retainers in position.



7 Turn the thumbscrews counterclockwise to loosen them, and then lift off the labware and the top labware retainer.

8 Fully tighten the four M2.5 X 0.45 25-mm hex screws.



Using the Plate Adapter

Before you start:

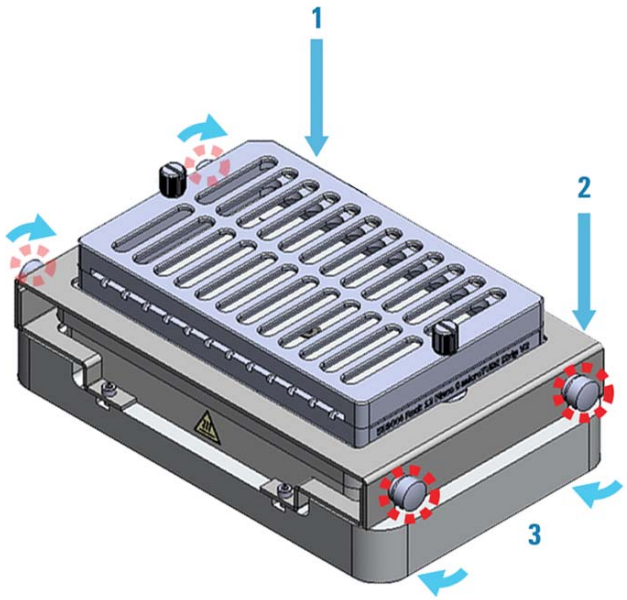
If this is the first time to use the setup:

- Ensure that your labware definitions are correct for the labware you are using. For details, see the *VWorks Automation Control Setup Guide*.
- If applicable, verify that the deck location teachpoint accounts for the thermal plate insert. For instructions, see the appropriate installation guide for your Bravo Platform, such as:
  - *G5573A Bravo NGS Option A Installation Guide*
  - *G5574A and G5575A NGS Workstation Option B Installation Guide*
- Use the following procedure to install the labware, and then perform a mock run without reagents to verify the setup.

Installing the labware for a protocol run

To install the labware for a protocol run:

1. If applicable, ensure the appropriate thermal plate insert is seated in the plate nest of the Peltier Thermal Station.
2. Place the Covaris labware (figure, item 1) in the plate nest of the Peltier Thermal Station. Ensure that the labware is fully seated within the plate nest.
3. Position the top labware retainer (figure, item 2) atop the Covaris labware. Ensure that the top labware retainer is fully seated on the skirt of the labware.
4. Tighten the four thumbscrews (figure, item 3) to secure the top labware retainer.

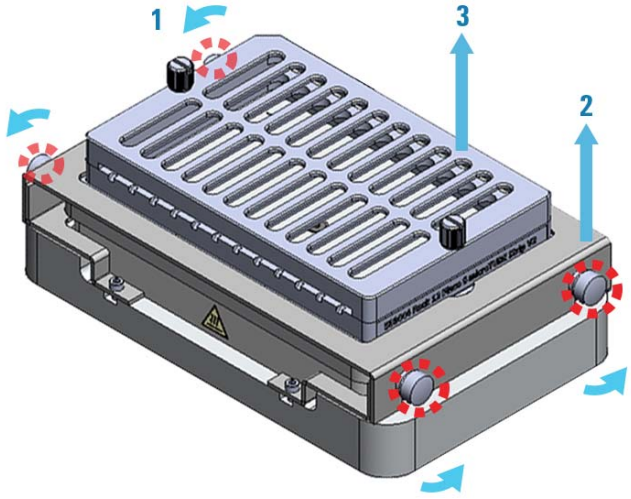


Removing labware from the Plate Adapter

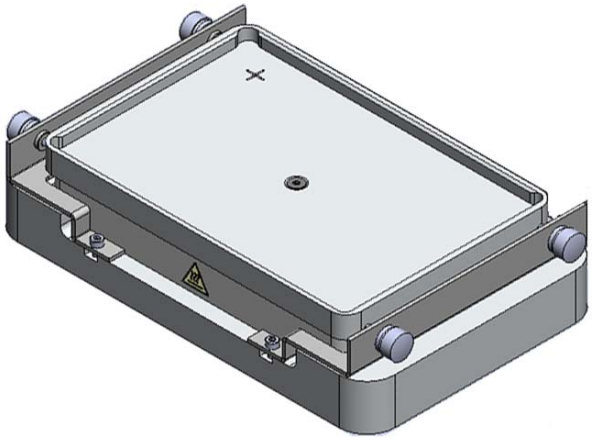
After running your protocol, you remove the labware from the Plate Adapter as follows.

To remove labware from the Plate Adapter:

1. Loosen the four thumbscrews (figure, item 1) on each end of the Plate Adapter. Turn the thumbscrews counterclockwise to loosen them.
2. Slide the top labware retainer (figure, item 2) up off of the labware. Set aside.
3. Lift the labware (figure, item 3) up out of the Peltier Thermal Station.



You can leave the bottom labware retainer installed on the Peltier Thermal Station until it is required again.



Uninstalling the Plate Adapter

Before you start

Ensure that you have the following:

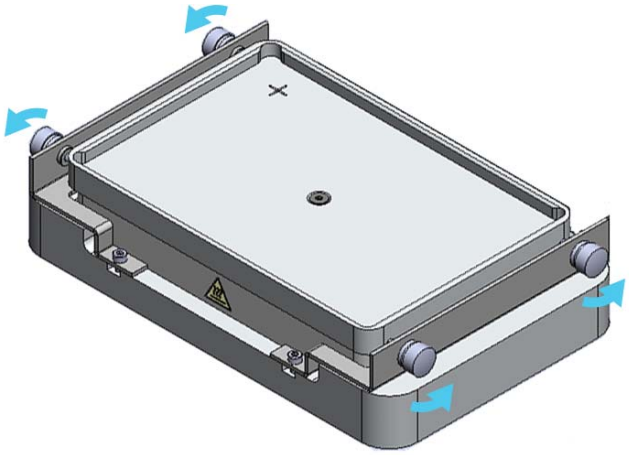
- Hex drivers for M3 and M2.5 screws
- Four hex cap screws (M2.5 X 0.45 20 mm) that you uninstalled from the Peltier Thermal Station when you installed the Plate Adapter

See "Installing the Plate Adapter" on page 5.

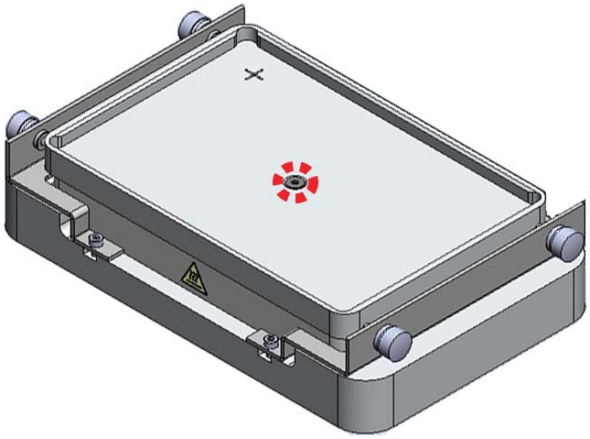
Procedure

To uninstall the Plate Adapter from the Peltier Thermal Station:

1 Loosen the four thumbscrews on the ends of the bottom labware retainers. Turn the thumbscrews counterclockwise to loosen them. If you have not already done so, lift off the top labware retainer and the labware.

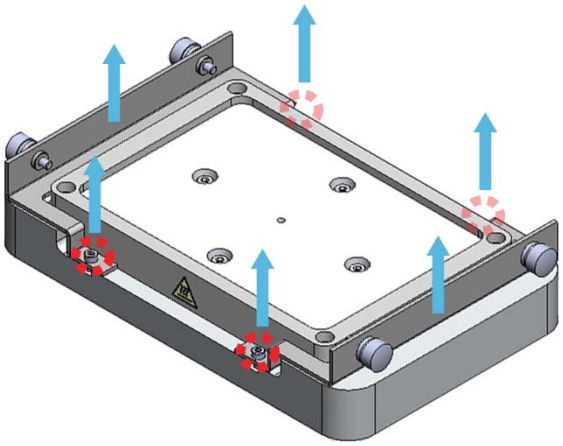


2 Uninstall the M3 hex flathead screw in the center of the plate nest, remove the plate nest, and set it aside temporarily.

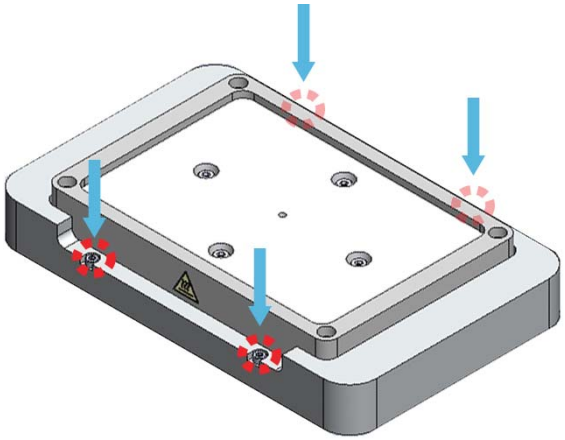


3 Uninstall the four M2.5 X 0.45 25-mm hex screws from the station base. Remove the two bottom labware retainers from the station base.

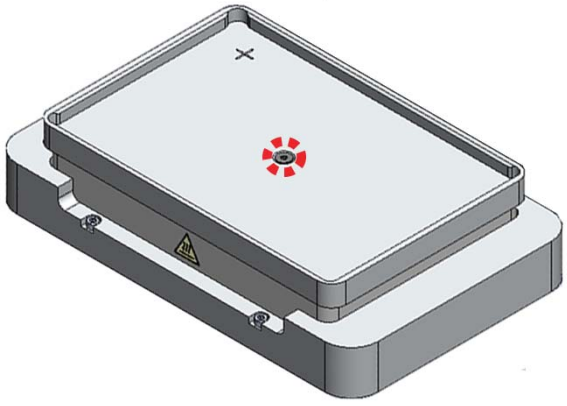
Set aside the labware retainers and screws in case you want to re-install the Plate Adapter.



4 Install the four M2.5 20-mm hex-head screws on the sides of the station base.



5 Reposition the plate nest on the station base. Ensure that it is fully seated, and then install the M3 hex flathead screw in the center of the plate nest.



Agilent Technologies

User Guide

G5573-90005

Revision A, May 2018