

Pin Tool

Assembly Guide

For Research Use Only. Not for use in diagnostic procedures.

Original Instructions

Notices

© Agilent Technologies, Inc. 2017

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

G5412-90002

Edition

Revision A, June 2017

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

(June 1987) 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.



Pin Tool Assembly Guide

This guide describes how to modify a Pin Tool from V&P Scientific, Inc. for use on the Agilent Bravo Automated Liquid Handling Platform or the Agilent Vertical Pipetting Station.

This guide contains the following topics:

- “About this guide” on page 2
- “Before you start” on page 4
- “Installing the dovetail assembly on the Pin Tool base assembly” on page 6
- “About installing the pin head on the assembled Pin Tool” on page 8

About this guide

Who should read this guide

This user guide is for people with the following job roles:

Job role	Responsibilities
Installer	Unpacks, installs, and tests the device before it is used.
Integrator	Configures hardware and writes software.

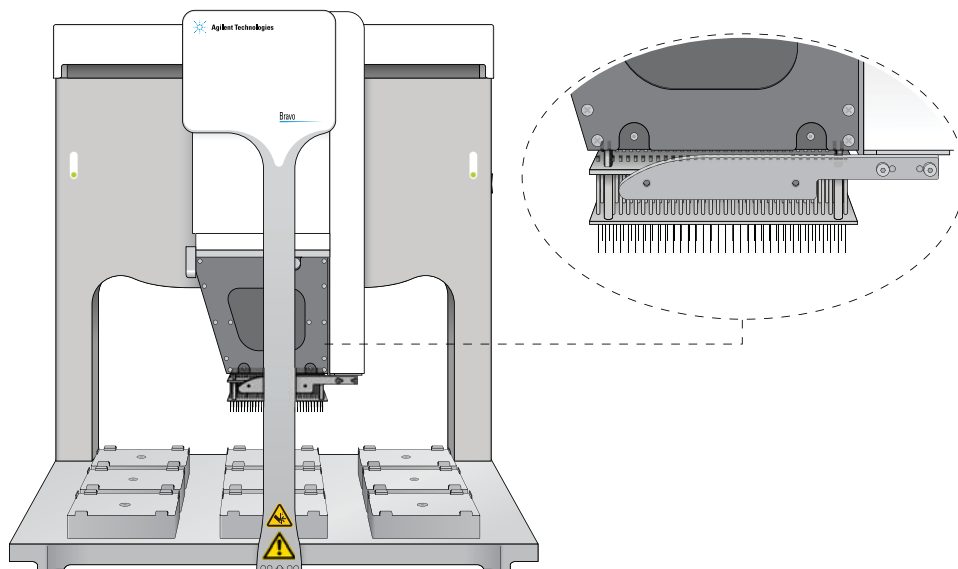
The instructions in this guide assume that you have experience in the following:

- Using the Agilent Bravo Platform or the Agilent Vertical Pipetting Station on which the Pin Tool will be used, including how to install the liquid-handling head and how to set the device teachpoints.
- Working on mechanical equipment and using basic mechanical tools.

What this guide covers

This guide describes how to upgrade a V&P Scientific Pin Tool for use on the Agilent Bravo Platform or the Agilent Vertical Pipetting Station.

Figure Bravo Platform with Pin Tool installed



Related guides

Use this guide in conjunction with the corresponding user guide for your product:



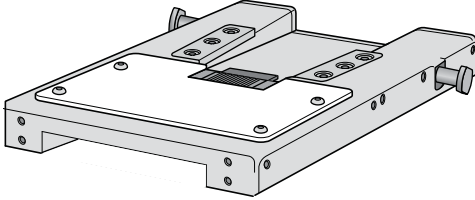
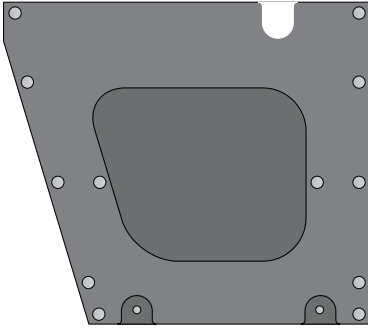
- *Bravo Automated Liquid Handling Platform Safety and Installation Guide*. Describes potential safety hazards and how to avoid them. This guide also describes how to install the Bravo Platform.
- *Bravo Automated Liquid-Handling Platform User Guide*. Describes how to set up, operate, and maintain the Bravo Platform.
- *Vertical Pipetting Station User Guide*. Describes potential safety hazards and how to avoid them, installation, and how to set up, operate, and maintain the Vertical Pipetting Station.

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

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

Before you start

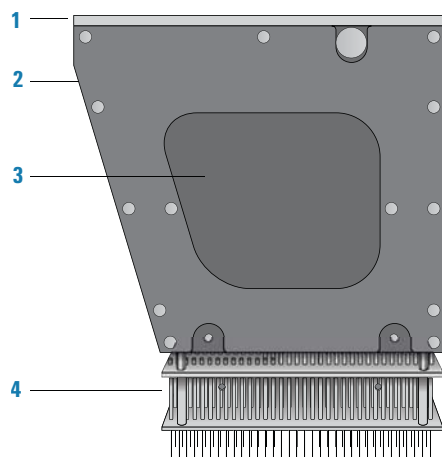
Required resources

Tools and materials	Description	Quantity
Hex driver, M2.5		1
Cross-tip driver, no. 1		1
Agilent Pin Tool Dovetail assembly, including screws		1
V&P Scientific Pin Tool base assembly		1

Pin Tool components

The following figure shows the components in a fully assembled Pin Tool that is ready to be installed on the Agilent Bravo Platform or the Agilent Vertical Pipetting Station.

Figure Pin Tool components (side view): (1) Dovetail assembly, (2) base assembly, (3) side covers, and (4) pin head



Workflow

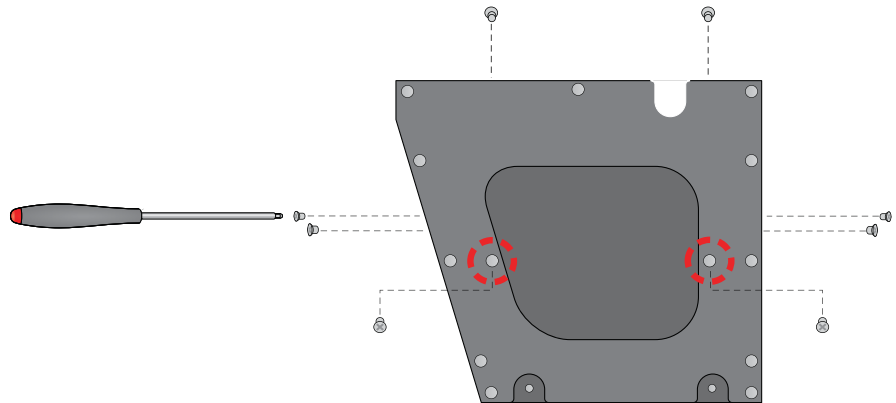
Step	For this task...	See...
1	Install the dovetail assembly on the Pin Tool base assembly.	“Installing the dovetail assembly on the Pin Tool base assembly” on page 6
2	Install the pin head on the Pin Tool base assembly.	“About installing the pin head on the assembled Pin Tool” on page 8
3	Install the Pin Tool on the liquid-handling device.	The user guide for your product <ul style="list-style-type: none"> • <i>Bravo Automated Liquid-Handling Platform User Guide</i> • <i>Vertical Pipetting Station User Guide</i>
4	Start the VWorks software, open Diagnostics for the device, and create a device profile for the Pin Tool.	
5	Set the teachpoints for the assembled Pin Tool.	

Installing the dovetail assembly on the Pin Tool base assembly

To install the dovetail assembly on the Pin Tool base assembly:

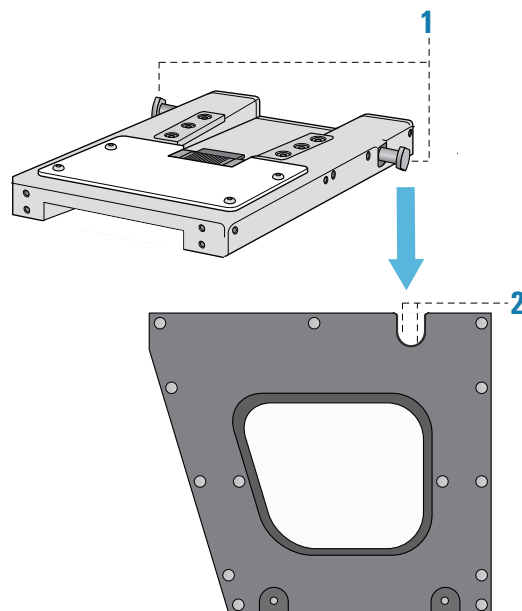
- 1 Using a cross-tip screwdriver, remove the four black side covers from the Pin Tool base assembly. Two screws attach each cover to the assembly.

Figure Side cover attachment screws on Pin Tool base (side view)



Set aside the four covers and six screws for re-installation in a subsequent step.

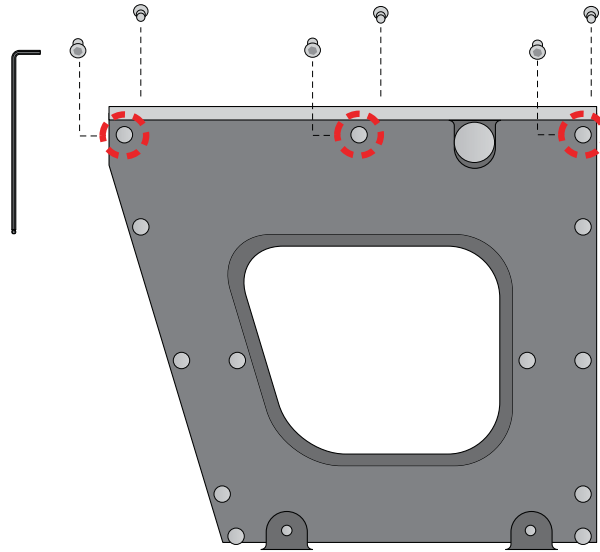
- 2 Position the Dovetail assembly on top of the Pin Tool base assembly, inserting the (1) two retainer pins of the Dovetail assembly into the (2) two slots on the Pin Tool assembly base.



Ensure the Dovetail assembly is firmly seated within Pin Tool base assembly.

Note: The ridge on the long sides of the Dovetail assembly sits on the top edges of the Pin Tool base.

- 3 Install the six M3 screws, provided. Three screws secure each side of the of the Dovetail assembly in place on the Pin Tool base assembly.



The short ends of the Dovetail assembly should be flush with the edges of the Pin Tool assembly base.

About installing the pin head on the assembled Pin Tool

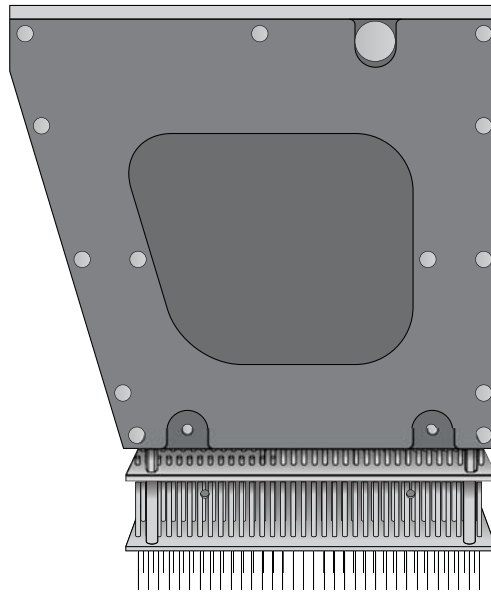
CAUTION An improperly aligned pin head can cause positional errors and may result in a collision, causing equipment damage. Ensure that the pin head is fully aligned with the Pin Tool base assembly before you set the device teachpoints.

You can install a 96-pin, 384-pin, or 1536-pin head on the Pin Tool base assembly.

To install the pin head on the base assembly, refer to the V&P Scientific pin head installation instructions.

After you install the pin head, you can reinstall the four black side covers using the screws that you set aside in step 1 of [“Installing the dovetail assembly on the Pin Tool base assembly”](#) on page 6.

Figure Fully assembled Pin Tool (side view) with pin head





User Guide

G5412-90002

Revision A, June 2017