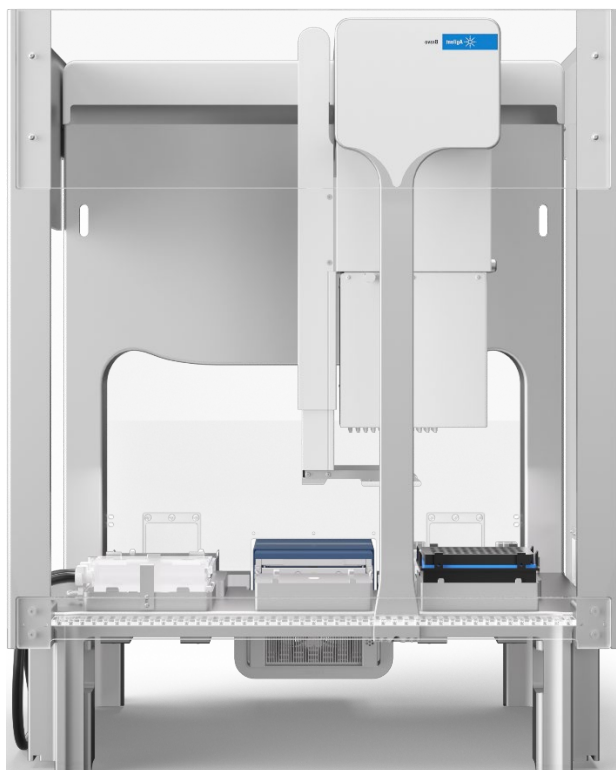


## Agilent CrossLab Start Up Services

# Agilent G5297AA/GA ODTTC with Bravo Deck Upgrade Installation Checklist



Thank you for purchasing an instrument from **Agilent Technologies**. CrossLab Start Up is focused on helping customers shorten the time it takes to start realizing the full value of their instrument investment. Installation, Introduction and First Run Assist are service engagements to get your new instrument system on track for lab productivity. Success starts here.

This CrossLab Start Up Installation Checklist is used as an activity guide for setting up your new system. A signed copy of this checklist is provided for your records.

# Introduction

## Customer Responsibilities

- Customers should leave the instrument shipment for the engineer to unpack.
- Customers should provide all necessary operating supplies upon request of the engineer.
- A customer representative should be available to the engineer while performing the installation.
- While Agilent is delivering **Installation and Introduction** services, users of the instrument should be present throughout these services; otherwise, they will miss important operational, maintenance and safety information. Specific activities are noted with *(Customer presence recommended)* to indicate the especially important tasks for the customer.
- Some installation tasks will be beneficial to you if you are present – refer to sections in this checklist.

**To prevent potential injury and damage to the equipment, ensure that all operators are trained in the correct and safe operation of the Bravo Platform.**

The following guides, which are shipped with the Bravo Platform, describe the potential safety hazards and how to avoid them.

- *Automation Solutions Products General Safety Guide* (part number G5500-90015)
- *Bravo Platform Safety and Installation Guide* (part number G5563-90002)

## Not Included at Installation

- Training on LAN.
- Connecting the instrument to the customer's network (available as an additional service).
- PC/Software backup recovery (unless it has been purchased or available upon time/material).

## Important Customer Web Links

- To access Agilent training and education, visit <http://www.agilent.com/chem/training> to learn about training options, which include online, classroom and onsite delivery. A training specialist can work directly with you to help determine your best options.

- To access the **Agilent Resource Center** web page, visit <https://www.agilent.com/en-us/agilentresources>. The following information topics are available:
  - Sample Prep and Containment
  - Chemical Standards
  - Analysis
  - Service and Support
  - Application Workflows
- The **Agilent Community** is an excellent place to get answers, collaborate with others about applications and Agilent products, and find in-depth documents and videos relevant to Agilent technologies. Visit <https://community.agilent.com/welcome>
- Videos about specific preparation requirements for your instrument can be found by searching the **Agilent YouTube** channel at <https://www.youtube.com/user/agilent>
- **Need to place a service call?** [Flexible Repair Options | Agilent](#)

## Service Engineer's Responsibilities

- Only complete/printout pages that relate to the system being installed.
- Complete empty fields with the relevant information.
- Complete the relevant checkboxes in the checklist using a tick mark "✓".
- Check "**Section not applicable**" check boxes to indicate services/tasks not delivered, as appropriate.
- Complete the **Service Review** section together with the customer.
- Complete the fields for page numbers at the foot of each selected page.
- Add relevant page numbers to selected pages and complete the total number of pages field in the Service Verification section.
- Complete Signature Page and attach Signature Page to Service Order.

## Additional Instruction Notes

- Unpack the deck with the ODTG cutout, the ODTG, and the Bravo Deck Upgrade Kit.

- Save the packing materials and shipping container in case the customer is required to move or ship the device. Packing the Bravo Platform parts using other materials might damage the device and void the warranty.
- Ensure that you have access to the following installation and configuration guides that are referenced throughout this checklist.

Title	Part Number	Comments
<i>Bravo ODTC User Guide</i>	D0024535	Included in the VWorks 14.3 software and on the web at <a href="http://WWW.automation.help.agilent.com">WWW.automation.help.agilent.com</a>
<i>Bravo ODTC Installation and Upgrade Guide</i>	D0026622	Available on the Agilent Field Portal.
<i>Bravo Platform User Guide</i>	D0004797	Included in the VWorks 14.3 software and on the web at <a href="http://WWW.automation.help.agilent.com">WWW.automation.help.agilent.com</a>
<i>Agilent G5297AA/GA ODTC with Bravo Deck Upgrade Introduction Checklist</i>	D0031350	Summarizes the operation and maintenance of the ODTC.
<i>VWorks Automation Control 14.3 Software Site Preparation Checklist</i>	D0006693	Explains the site requirements.
<i>VWorks Automation Control 14.3 Software Installation Checklist</i>	D0006694	Summarizes the installation and configuration procedures.
<i>VWorks Automation Control 14.3 Installation Guide</i>	D0025966	Included on the software installation media.

**IMPORTANT** Ensure the specific installation instructions in the *Bravo Platform Safety and Installation Guide* are followed. Failure to perform the setup instructions in the order given may result in damage to the Bravo Platform.

# Instrument Installation

## System Information

- Check this box if an instrument configuration report is attached instead of completing the table.

<b>Instrument System Name and ID</b>	
<b>Instrument System Site and Location</b>	

## System Components

- Check this box if an instrument configuration report is attached instead of completing the table

List System Component Product Numbers	List the Serial Numbers of each Component
1.	
2.	
3.	
4.	
5.	
6.	
7.	
8.	
9.	

## Preparation

- Discuss any specific questions or issues with the customer before starting.
- Verify that the *Agilent G5297AA/GA ODTG with Bravo Deck Upgrade Site Preparation Checklist* has been followed and fully completed. Verify that the installation location meets the site requirements.
- Refer to the *Bravo ODTG Installation and Upgrade Guide* to verify the condition and completeness of shipment. For discrepancies, use the following table and appropriate process for resolution.

Product or Part Description	Observation	Action

- Discuss any configuration options with the customer before starting.
- If the PC is customer-supplied, check that the PC meets the minimum requirements specified for the VWorks 14.3 software. See the *VWorks Automation Control 14.3 Software Site Preparation Checklist*.

**Note: additional time and labor may be required for non-Agilent provided PCs**

- Ensure that the required administrator account is on the PC for future use. It may be needed to update certain files. Customer IT or administration resources may be required.
- Discuss any configuration options with the customer before starting.
  - LAN connections. The Agilent-computer has two Ethernet ports. One connects to the Bravo instrument. The second Ethernet port may be used to connect to the customer's company LAN.

**IMPORTANT:** Always verify the computer LAN connection to the Bravo Platform before connecting any other networks.

- Determine user management authentication type and indicate selection here.

Authentication Type	Description	Type Selected?
Internal (default)	Users are created in OpenLab Control Panel.	
Windows Domain	Users are imported from Windows Domain and assigned to VWorks groups in OpenLab Control Panel.	

- Locate appropriate license authorization codes and/or license certificates and verify against sales order.
- Check for required service note applicability and firmware updates if connecting to instruments.
- Ensure with the customer that instrument control settings, data, methods etc. have been properly saved or archived before starting any installation procedures.
- Measure the main outlet line voltage \_\_\_\_\_ VAC.

## Installation Procedure

Except where noted, refer to the *Bravo ODTC Installation and Upgrade Guide* (part number D0026622) for the following tasks.

### Computer Workstation

Refer to the *Agilent G5263AA, G5264AA VWorks Software 14.3 Installation Checklist* (part number D0006694) and the *VWorks 14.3 Installation Guide* (part number D0025966).

- Section not applicable**
- Install the Agilent-supplied computer, if applicable.
- Connect the computer, monitor, mouse, and keyboard.
- Install OpenLab version 2.7.0.787.
- Install VWorks software version 14.3 and the SiLA XMLRPC Server on the controlling computer.
- Configure OpenLab Control Panel and set up VWorks 14.3.
- Install the Inheco ODTC Script Editor 3.0.1 on the ODTC device.
- Install the Inheco ODTC Device Manager 1.1.0 on the ODTC device.
- Open VWorks software and start the SiLA XMLRPC Server.

### Deck Replacement

- Section not applicable**
- Prepare the Bravo for deck replacement:
  - Lower the head 100 mm before turning off the Bravo device.
  - Remove all accessories, plate pads, and pipette head.
  - Remove risers, if installed.
  - Move the z- assembly to the back.
  - Lay the bravo on its back on the foam pad that comes with the new deck.
- Remove the attachment screws on the tie bar.
- Remove the rail and tie-bar plate block.
- Remove the deck.
- Install the rail and tie-bar plate block from the existing deck onto the deck with the ODTC cutout.
- Install the support brackets for the ODTC.
- Mount the new deck onto the Bravo back plate.
- Loosely install the tie-bar onto the rail.



## Bravo Risers

- Section not applicable**
- Install the Bravo risers.
- Set the Bravo device upright.
- Tighten tie-bar attachment screws.

## L-Bracket Installation

- Section not applicable**
- Remove the gripper cover and gantry cover.
- Remove the gripper assembly, head lock latch, and outer z-assembly cover.
- Remove the inner z-assembly cover.
- Remove the rail block protector.
- Install the L-bracket.

## Flat-Flex Cable Loop Extension

- Section not applicable**
- Remove the bracket holding the flat-flex head cable.
- Loosen the bracket holding the cable in the horizontal position.
- Rebend the cable 11-mm down from the existing bend.
- Feed extra cable into the horizontal loop.
- Tighten and reinstall cable brackets.

## Y-Axis Adjustment

- Section not applicable**
- Remove the y-axis hard stops and shorten them from 19.6-mm to 17.4-mm.
- Reinstall y-axis stops, reinstall covers and head lock.

## ODTC Installation

- Section not applicable**
- Connect the ODTc to the PCU and the PCU to a grounded outlet.
- Turn on the ODTc and verify status light is green.
- Turn off the ODTc and disconnect it from the PCU.
- Mount the ODTc in deck location 2.
- Reconnect the ODTc to the PCU.

## Y-Axis Hard Stop Verification

- Section not applicable**
- Connect the Bravo power cord.
- Connect the Ethernet cable to the controlling computer.
- Install the liquid-handling head and place a tip on the A1 barrel.
- Turn on the Bravo device.
- Start VWorks, create a device file using Bravo and create a Bravo profile.
- Install the ODTC teach plate.
- Initialize the device.
- Open Bravo Diagnostics and using commands in the Jog/Teach tab, attempt to move the head to the ODTC teachpoint.
- If head can reach the teachpoint, continue with the next step in the installation.
- If the head is unable to reach the teachpoint, adjust the y-axis hard stop.
  - Measure the distance the pipette tip needs to move to intersect the center of the ODTC teachpoint.
  - Remove the y-axis stops and shorten them by the distance measured.
  - Verify the teachpoint can be reached.
- Ensure the z-assembly will not rub up against the back plate during normal operation by checking the gap between the z-cover and the back:
  - Push the z-assembly all the way to the back until it hits the hard stop.
  - Insert the 0.5 mm (yellow) feeler gauge. It should slide through.

## Bravo ODTC Setup

- Section not applicable**
- Install the liquid-handling head, if not already installed.
- Turn on the Bravo, open VWorks, and start the SiLa Server.
- Create a VWorks device file for the Bravo Platform.
- Upload any provided pre-methods and methods to the Bravo ODTC.

*Note:* The ODTC temperature profiles (pre-methods and methods) must be uploaded to the ODTC accessory using the ODTC Device Manager utility before the methods are available for use in the VWorks software.

The ODTC methods are created using Inheco ODTC Script Editor. See the *Inheco ODTC Device Manager User's Manual*.

- Configure the ODTC accessory.
- Initialize the profile in Bravo Diagnostics.
- Set the teachpoint for the ODTC at deck Location 2.
  - If necessary, adjust the y-axis min range or the y-axis hard stop. Refer to the *Bravo ODTC Installation and Upgrade Guide* (part number D0026622) for a procedure.

- Use Bravo Diagnostics to test communication with the ODTC.
- Set the labware class for labware allowed on the ODTC.

## Bravo Platform and Accessories

- Section not applicable**
- Install the platepads or other deck accessories at the other 8 deck locations, as applicable. Refer to the *Bravo Platform User Guide* (part number D0004797).
- Ensure a short platepad is installed at deck location 5, which is directly in front of the Bravo ODTC.
- In the VWorks software, create or open the Bravo device file (.dev).
- Configure the other accessories.
- In the Configuration tab, test the accessories using the Diagnose Accessory feature.
- Update and save the profile.
- Initialize the profile.
  - Verify that the indicator lights on the Bravo front panel change colors correctly.
- Set the teachpoints for the other 8 deck locations.
- In the Gripper tab, verify the gripper y-axis offset.
  - Test the pick-and-place feature in fast and slow mode to ensure that the gripper operation is correct.
  - Ensure good gripping is possible and no abnormal sounds are present.
  - Update and save the profile.

## Bravo Safety Equipment

- Section not applicable. Customer signed Safety Waiver.**
- Install the Light Curtain and emergency-stop pendant. See *G5562A, G5563A Bravo Platform Safety and Installation Guide*.
- Verify the Light Curtain and emergency-stop pendant function correctly.
- Install all applicable shields and the shield access covers.

## Installation Checkout (Customer presence recommended)

- Section not applicable**


Refer to the *Bravo Platform User Guide* (part number D0004797) for the following tasks.

- Perform a test/mock run of a protocol to test the following basic tasks:
  - Tips On
  - Mix or Aspirate and Dispense

□ Tips Off

Note: You can add a loop in the protocol to do this multiple times.

## Service Review

- Attach available reports/printouts to this documentation.
- Record the time/date of installation or upgrade completion in the customer's records/logbook.
- Complete the following Service Engineer comments section if there are additional comments.
- Review the installation/upgrade with the customer.
- Explain Agilent warranty for instruments.
- Explain how to access the user guides and help in the VWorks Knowledge Base:
  - From the Windows desktop, go to Start > Apps > Agilent Technologies > VWorks Knowledge Base.
  - In the VWorks software, demonstrate the Context-Sensitive Help button .
  - Online, go to <https://automation.help.agilent.com>
- Explain how to get self-help, and FAQs online.
- Explain how to log an instrument service call and support services that are available.
- Advise customer of additional instrument training options.
- If the instrument firmware was updated, record the details of the change in the service engineer's comments box or if necessary, in the customer's IQ records.
- Complete Signature Page and attach Signature Page to Service Order.

## Signature Page

### Service Engineer Comments (optional)

If there are any specific points you wish to note as part of performing the service review or other items of interest for the customer, please write in this box.

## Service Verification

Service Request Number:

Date of Service Completion:

Service Engineer Name:

Customer Name:

Service Engineer Signature:

Total number of pages in this document: