

Configuration of Agilent Quick Change Valve Heads with new RFID Tag

Technical Note

This Technical Note describes the configuration of Agilent Quick Change Valve Heads with new RFID Tag in G1316C TCC, G1170A Infinity Valve Drive, G4227A Flexible Cube.

Contents

Agilent Quick Change Valve Heads 2

Configuration of a Quick Change Valve Head with new RFID Tag for usage in G1316C TCC 3

Configure the Quick Change Valve Head with CDS
Chemstation 3

Configure the Quick Change Valve Head with LabAdvisor 11

Modules affected (with A-firmware) 14

Modules affected (with B-firmware) 14

Modules affected (with C-firmware) 15

Modules affected (with D-firmware) 15

Firmware Compatibility 16

Software 16



Agilent Technologies

Agilent Quick Change Valve Heads

The Agilent Quick Change Valve Heads are equipped with an RFID (radio-frequency identification) Tag, which stores information on valve type, pressure, ports and positions as well as the serial number. From September 1st 2016 the original RFID Tag for the Agilent Quick Change Valve Heads is no longer available on the worldwide market.

Due to this reason the RFID Tag used in recent Agilent assemblies has been changed to a new version of RFID Tag. The old and new tags can be distinguished visually by the colour of the tag. The old tag is black, while the new tag is grey. The difference in colour of the old and new RFID Tag is shown in [Figure](#) on page 2. The implementation of this change was started in the second half of 2015 and implies that the selected instruments need an update to a compatible firmware revision. This new firmware revision will allow the usage of both, old and new RFID Tag versions in the TCC (see “[Modules affected \(with A-firmware\)](#)” on page 14, “[Modules affected \(with B-firmware\)](#)” on page 14 (when they host the C-module), “[Modules affected \(with C-firmware\)](#)” on page 15, and “[Modules affected \(with D-firmware\)](#)” on page 15).

Old RFID Tag vs new RFID Tag

NOTE

In the G1316C TCC the valve has to be configured manually.

NEW RFID Tag (gray)



OLD RFID Tag (black)



If a Quick Change Valve Head with a new RFID Tag is to be used in the G1316C TCC a firmware update is required that allows the user to manually select the appropriate valve type via Chemstation (Agilent OpenLAB CDS A.02.02 SR2 ChemStation Edition with Agilent RC.Net Drivers rev. A.02.13 or higher) or the Agilent Lab Advisor (version B.02.07 or higher).

Configuration of a Quick Change Valve Head with new RFID Tag for usage in G1316C TCC

Configure the Quick Change Valve Head with CDS Chemstation

Prerequisites:

Before starting to configure the new Quick Change Valve Head:

- Verify that LC stack has the newest firmware set.
- If necessary update the firmware to the newest set.
- For further information on firmware and latest Firmware revision, see

<http://www.agilent.com/en-us/firmwareDownload?whid=69761>

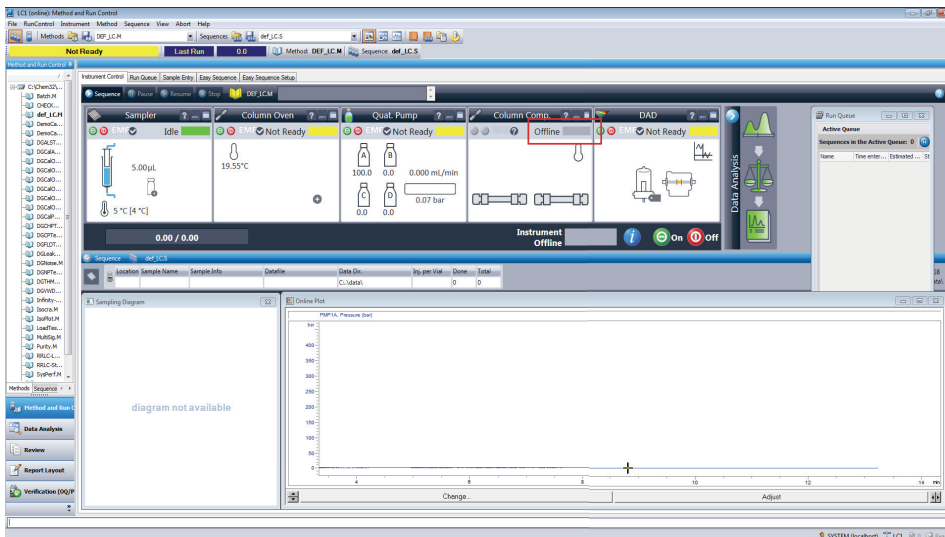
- 1 Install a Quick Change Valve Head, for example a 4 Column Selector G4237A (5067-4287), in a G1316C TCC.
- 2 Start the G1316C TCC.

NOTE

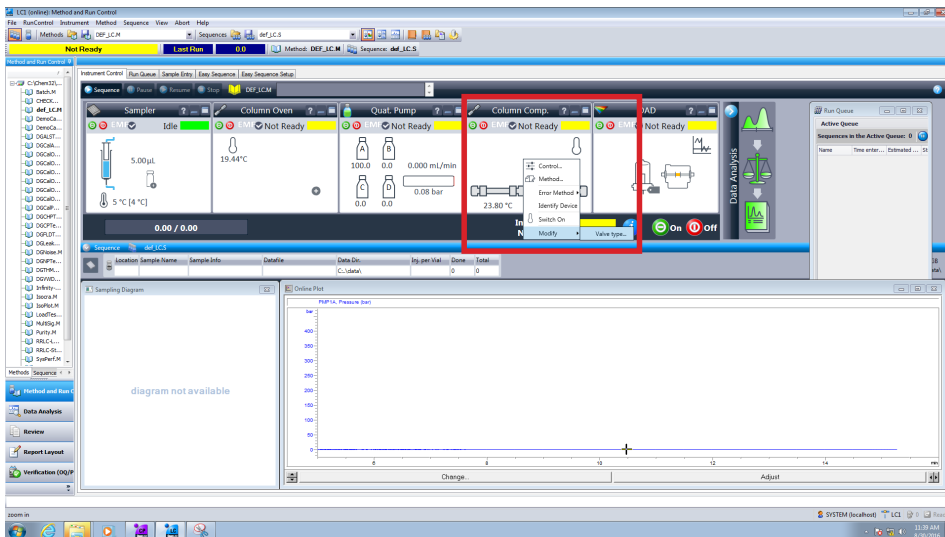
The information from the RFID Tag is read from the RFID-reader of the module only during the initialization.

3 Start OpenLab CDS Chemstation Edition (revision: C.01.07 SR2 [255])

Situation after restart of OpenLab CDS Chemstation Edition: TCC appears offline due to changed configuration.



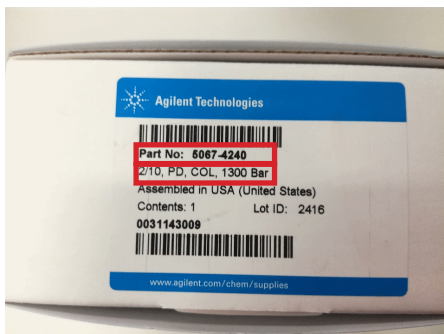
4 To set the correct valve tag right click in the Dashboard of the TCC and select **Modify > Valve type** from the dropdown list.



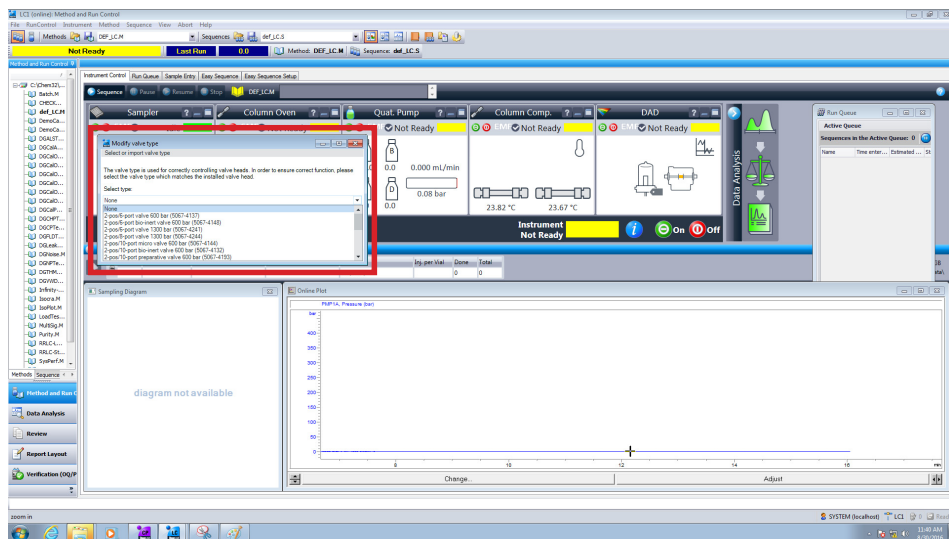
5 Select the correct description of the Quick Change Valve Head in use.

NOTE

Information on the valve type and the part number, for example 5067-4xxx, can be found on the box in which the valve was delivered.



6 Select the type of the Quick Change Valve Head.



The screenshot displays the LCI (online) Method and Run Control software interface. The top status bar indicates the system is 'Not Ready' and shows the 'Last Run' value as '0.0'. The main panel is divided into several sections for instrument control:

- Sampler:** Shows 'Idle' status.
- Column Oven:** Shows 'Not Ready' status.
- Quat. Pump:** Shows 'Not Ready' status. A 'Modify valve type' dialog box is open, displaying instructions: 'The valve type is used for correctly controlling valve heads. In order to ensure correct function, please select the valve type which matches the installed valve head.' Below this, a list of valve types is shown, with 'C10001000 valve (00 has (0001-0001))' selected. The 'Ok' button is highlighted with a red rectangle.
- Column Comp.:** Shows 'Not Ready' status.
- DAD:** Shows 'Not Ready' status.

The bottom panel features a 'Sampling Diagram' and a 'PUF1A Pressure (bar)' graph. The graph shows a pressure reading of approximately 14 bar, with a 'Change' button and an 'Adjust' slider. The status bar at the bottom indicates 'room in' and 'SYSTEM (scaled)'. The top right corner shows 'Run Queue' and 'Active Queue' information.

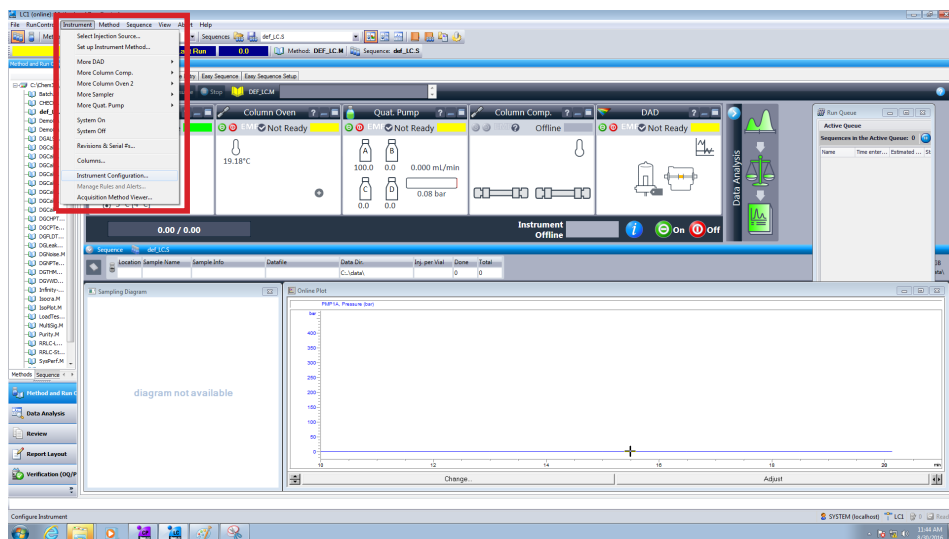
The screenshot displays the Shimadzu LabSolve software interface. At the top, the status bar indicates 'Not Ready'. The main window is divided into several sections:

- Instrument Control:** Shows the status of various components:
 - Sampler:** Idle, 5.00 μ L, 5 °C [4 °C].
 - Column Oven:** Not Ready, 19.21 °C.
 - Quat. Pump:** Not Ready, 100.0, 0.0, 0.000 mL/min, 0.08 bar.
 - Column Comp.:** Offline.
 - DAD:** Offline.
- Configuration Mismatch Warning:** A red box highlights a message:
 - Connection condition: GL316C DBAC210102 - Configuration mismatch.
 - The last value loaded from file is 10.
 - Add a Valve version with value 4 (no 20-port valve 600 bar (DSF 4287)).
 - Add Maximum Pressure with value 600.
- Sequence Panel:** Shows the 'Sequence' tab with a table of sample runs. The first row is highlighted:

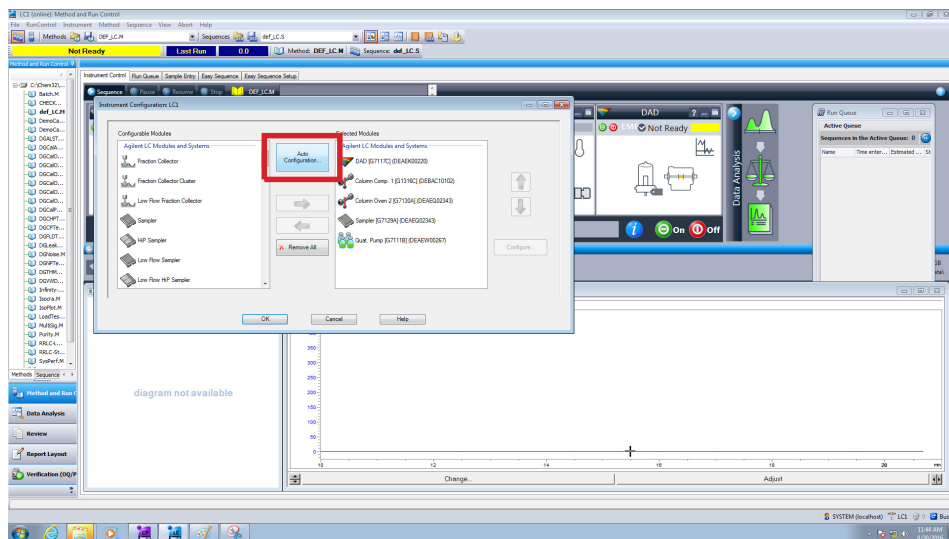
Location	Sample Name	Sample Info	Date/Inj.	Con.	Inj. per Vial	Done	Total
1	Sampling Diagram				0	0	0
- Online Plot:** Displays a 'PUMP1A, Pressure (bar)' graph. The y-axis ranges from 0 to 400 bar, and the x-axis ranges from 10 to 20 minutes. The plot shows a flat line at approximately 10 bar.

The bottom of the interface shows the 'SYSTEM (scaled)' and 'LC1' status, along with a 'Run' button.

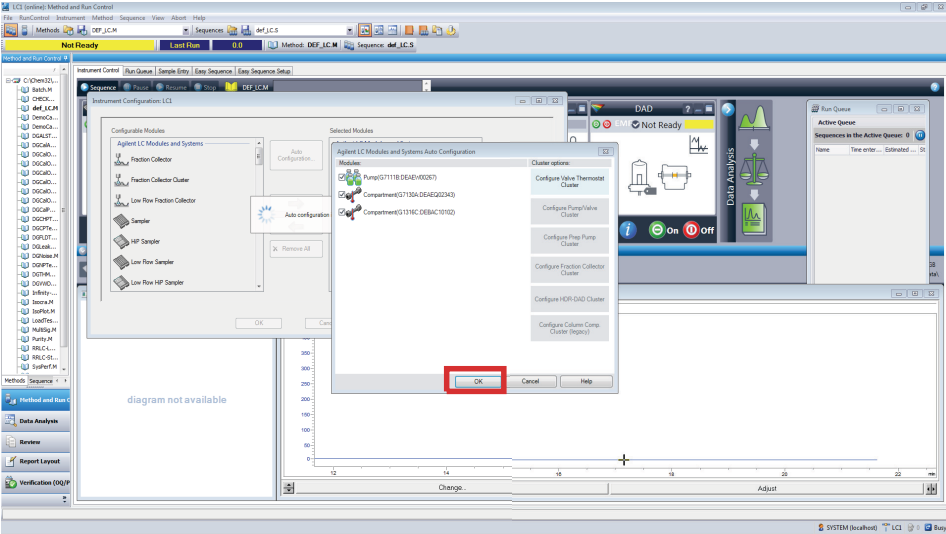
8 Select **Instrument > Instrument Configuration** and continue to re-configure the LC stack.



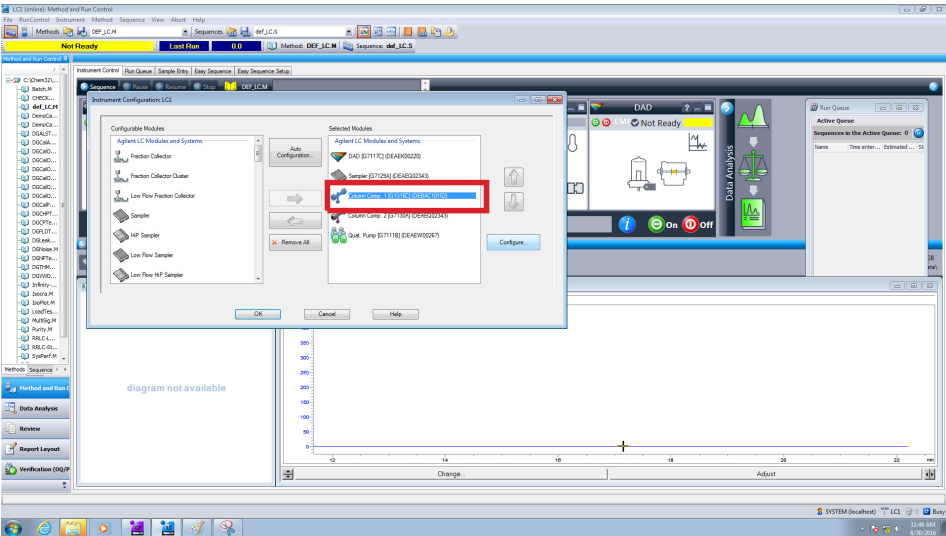
9 Select **Auto Configuration**.



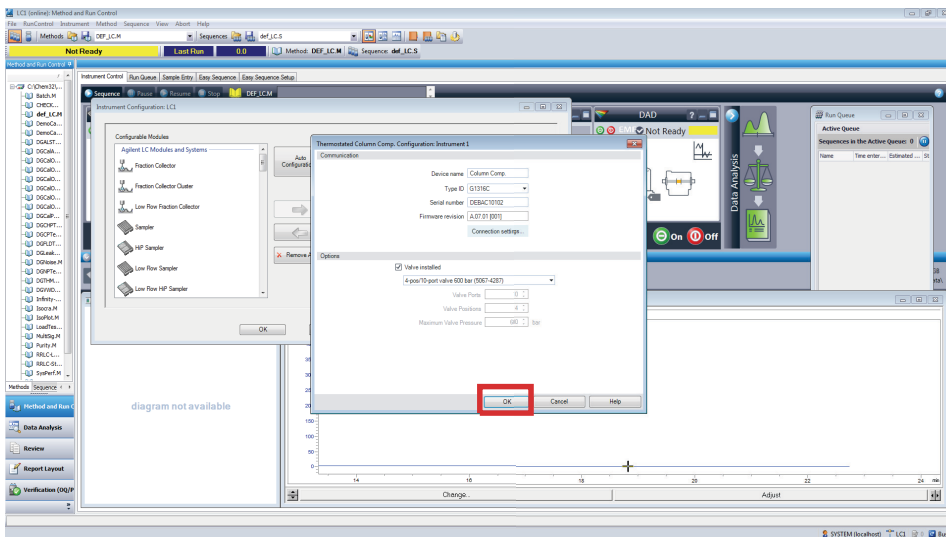
10 Continue by clicking **Ok**.



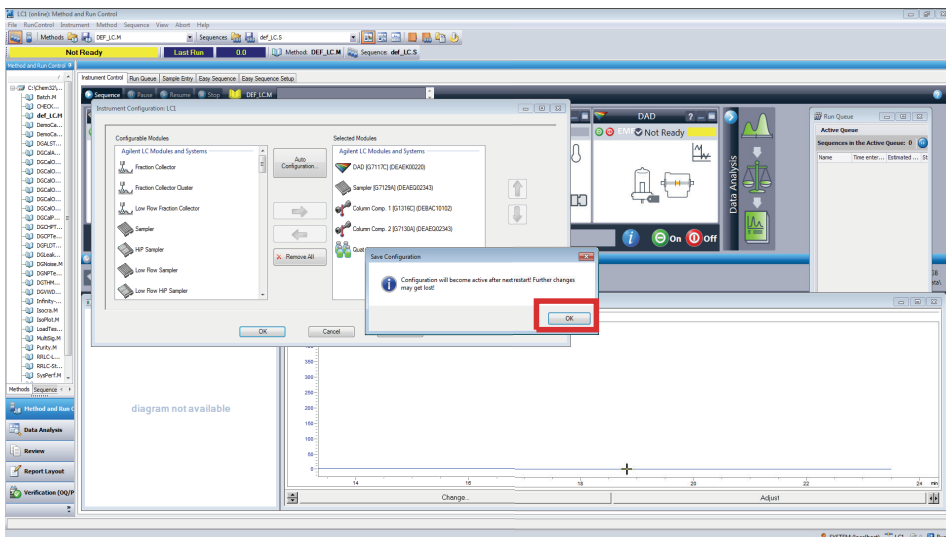
11 Select the Column Compartment (**Column Comp.**) in the selection menu to verify that the correct configuration is selected.



In the dialog box **Thermostated Column Comp Configuration Instrument 1** under **Options** the tick box **Valve installed** should be selected. In addition, in the drop-down menu below the correct valve type with the part number should be displayed.



12 Close this dialog box by clicking **Ok**. This will direct one back to **Instrument Configuration**.

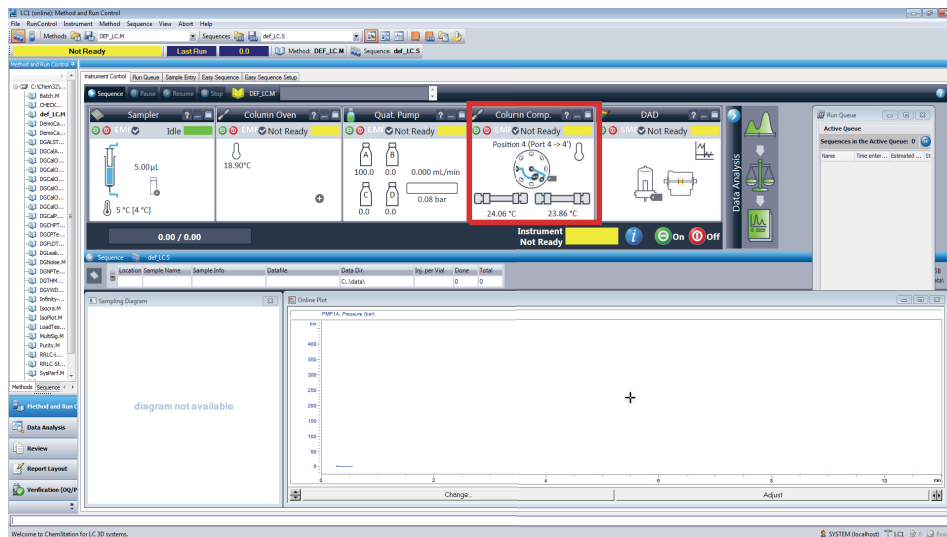


13 In **Instrument Configuration** select **Ok**.

14 Restart the software to save this configuration.

During the restart the TCC initializes as well and the information is read from the RFID Tag.

The TCC is online again and the Quick Change Valve Head is displayed correctly in the dashboard of the TCC.



Configure the Quick Change Valve Head with LabAdvisor

It is also possible to configure the Quick Change Valve Head with the new RFID Tag with LabAdvisor (recommended Version: B.02.08 [178] SP1 or later).

Prerequisites:

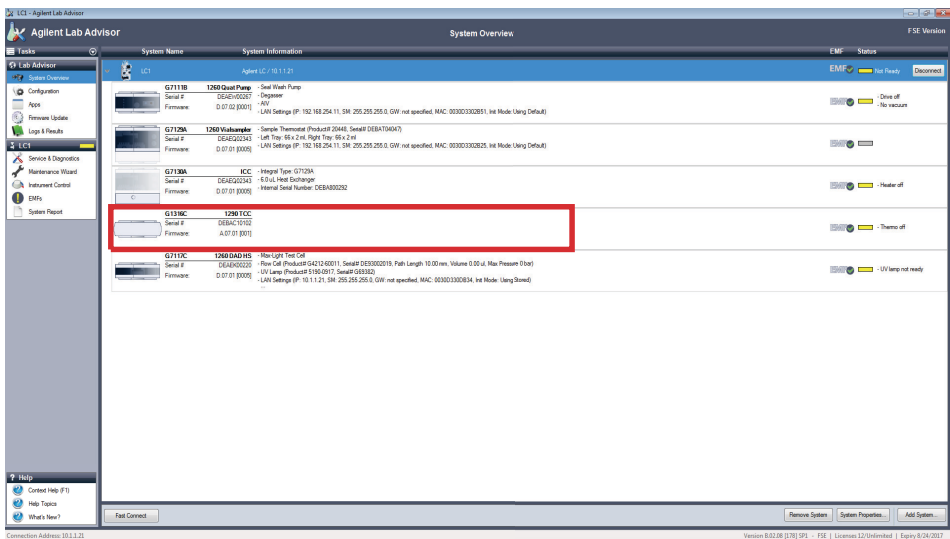
Before starting to configure the new Quick Change Valve Head:

- Verify that LC stack has the newest firmware set.
- If necessary update the firmware to the newest set.
- For further information on firmware and latest Firmware revision, see <http://www.agilent.com/en-us/firmwareDownload?whid=69761>

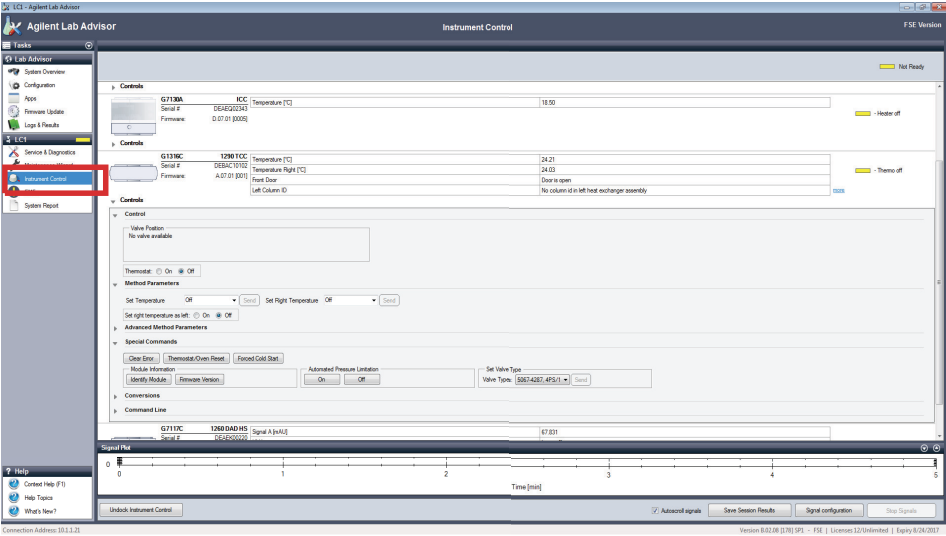
- 1 Install the Quick Change Valve Head.
- 2 Start LabAdvisor and connect to the LC stack.

NOTE

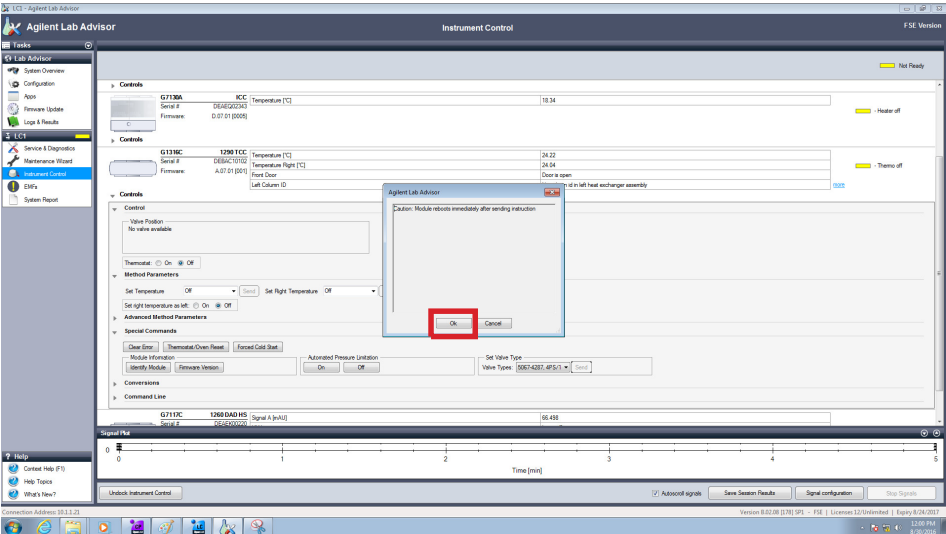
The RFID Tag of the valve head is not read automatically. Under **System Overview** there is no valve displayed.



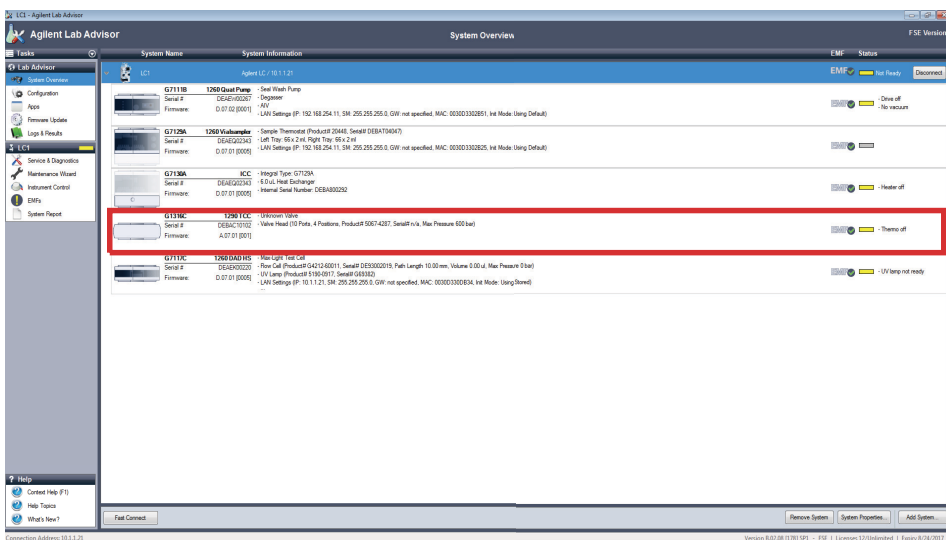
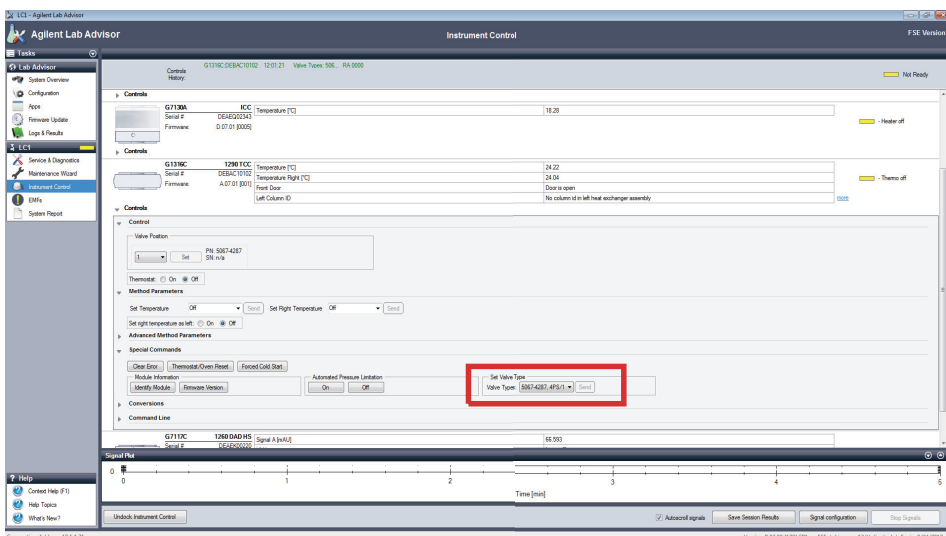
3 Select Instrument Control.



4 Under **Special commands** you find **Set Valve Type**. Select the correct valve type of the Quick Change Valve Head (the information on the type of valve head is found on the box, see figure in step 5 on page 5) and click **Ok**.



The hardware reboots automatically. After reboot the correct Quick Change Valve Head is displayed in the **Instrument Control** and in the **System Overview**.



NOTE

It is not possible to read or set the serial number of the Quick Change Valve Head with the new RFID Tag.

5 Start Chemstation and perform steps step 8 on page 7 to step 14 on page 10.

Modules affected (with A-firmware)

- Quick Change Valve Heads in G1316C TCC

Current Firmware Version	Recommended Compatible Version
A.06.10 to A.06.17	A.06.18
A.06.30 to A.06.32	A.06.33
A.06.50 to A.06.54	A.06.55 or higher

As the Valve Heads have been migrated to the new RFID Tags, the G1316C TCC needs a new firmware that allows the user to manually select the appropriate Valve Head via the Agilent Lab Advisor (B.02.08 [178] SP1 or later (see [“Configure the Quick Change Valve Head with LabAdvisor”](#) on page 11) or OpenLab CDS Chemstation Edition.

Modules affected (with B-firmware)

- Lamps/Flow Cells in G1314D/E/F VWD, G1315C/D DAD, G1365C/D MWD, G4212A/B DAD, G4294B DAD (1220 LC) and G7100ACE
- Pump Heads, Purge Valves, Mixers in G4204A, G4220A/B, G7104A, G7120A pumps

Current Firmware Version	Recommended Compatible Version
B.06.10 to B.06.27	B.06.28 (except for the G7100ACE)
B.06.30 to B.06.44	B.06.45
B.06.50 to B.06.71	B.06.73 or higher

Modules affected (with C-firmware)

- Quick Change Valve Heads in G1170A Infinity Valve Drive, G4227A Flexible Cube

Current Firmware Version	Recommended Compatible Version
C.06.40 to C.06.44	C.06.45
C.06.50 to C.06.71	C.06.72 or higher

Modules affected (with D-firmware)

The Infinity II platform supports both RFID versions since firmware version D.06.70.

NOTE

For A-, B-, C-, or D-version firmware, it is critical that you update all the modules in your stack to the corresponding / latest firmware of the firmware set in use, not just the module using this assembly. This ensures full compatibility of your modules between each other.

Firmware Compatibility

In case you require a firmware version that has a version number lower than the compatible revision, we assure that this newer firmware is 100% backward compatible to earlier firmware versions and therefore will not have an impact to your control software.

The firmware update does not require requalification of the LC module/system.

Please refer to our firmware compatibility statements within the firmware release documents available on the Agilent web (see below).

Software

The following software revisions are recommended:

- Agilent RC.Net Drivers rev. A.02.13 or higher
- Agilent OpenLAB CDS A.02.02 SR2 ChemStation Edition
- LabAdvisor B.02.08 [178] SP1 or later (see [“Configure the Quick Change Valve Head with LabAdvisor”](#) on page 11)

Workflows using earlier revisions of the software will vary in detail.



01200-90133

Part Number:
01200-90133

Edition: 12/2016
Printed in Germany

© Agilent Technologies, Inc 2016

Agilent Technologies, Inc
Hewlett-Packard-Strasse 8
76337 Waldbronn, Germany