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 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 1\textsuperscript{st} 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

\textbf{NOTE} In the G1316C TCC the valve has to be configured manually.

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.

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.
7 Click **Ok** to confirm the valve head type.

The TCC is still offline and an error message is displayed, when hovering over the status bar.
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**.

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

**NOTE** It is not possible to read or set the serial number of the Quick Change Valve Head with the new RFID Tag.
**Modules affected (with A-firmware)**

- Quick Change Valve Heads in G1316C TCC

<table>
<thead>
<tr>
<th>Current Firmware Version</th>
<th>Recommended Compatible Version</th>
</tr>
</thead>
<tbody>
<tr>
<td>A.06.10 to A.06.17</td>
<td>A.06.18</td>
</tr>
<tr>
<td>A.06.30 to A.06.32</td>
<td>A.06.33</td>
</tr>
<tr>
<td>A.06.50 to A.06.54</td>
<td>A.06.55 or higher</td>
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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

<table>
<thead>
<tr>
<th>Current Firmware Version</th>
<th>Recommended Compatible Version</th>
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<tbody>
<tr>
<td>B.06.10 to B.06.27</td>
<td>B.06.28 (except for the G7100ACE)</td>
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<tr>
<td>B.06.30 to B.06.44</td>
<td>B.06.45</td>
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<tr>
<td>B.06.50 to B.06.71</td>
<td>B.06.73 or higher</td>
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Modules affected (with C-firmware)

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

<table>
<thead>
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<th>Current Firmware Version</th>
<th>Recommended Compatible Version</th>
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<tr>
<td>C.06.40 to C.06.44</td>
<td>C.06.45</td>
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<tr>
<td>C.06.50 to C.06.71</td>
<td>C.06.72 or higher</td>
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</table>

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.