Install pH valve V9-pH and V9H-pH

Installation Instructions

Scope

This document describes how to install pH valve **V9-pH** and **V9H-pH** on ÄKTA™ systems. For instructions on how to install a pH electrode on the pH valve, see the *User Manual* of the instrument.

Location

The pH valve should be located after the UV monitor and the conductivity monitor in the flow path of the system.

Instruction

The instruction below describes how to install or replace a module or module panel. Module panels must be used in positions not occupied by modules.

Note: *The illustrations show the principle of how to replace and install a module. The position of the module on the instrument and the type of module used will depend on the module being installed.*

CAUTION

Disconnect power. Always switch off power to the ÄKTA instrument before replacing any of its components, unless stated otherwise in the user documentation.

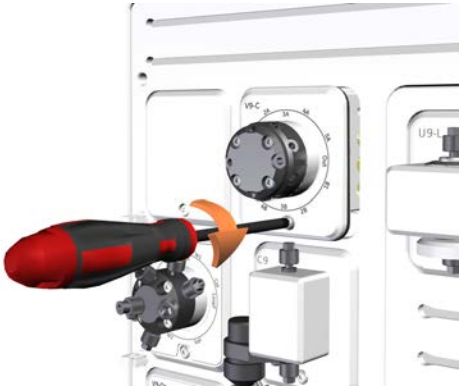
Step	Action
1	Disconnect power from the instrument by using the instrument power button.
2	If a module is to be replaced, loosen the tubing connectors and remove the tubing from the existing module.

Step	Action
3	Loosen the screw in the module or module panel with a Torx™ T20 screwdriver.

4	Remove the module or module panel and disconnect the cable at the back.

Step	Action
5	Connect the cable to the new module or module panel.

6	Insert the module or module panel and fasten it with a Torx T20 screwdriver.

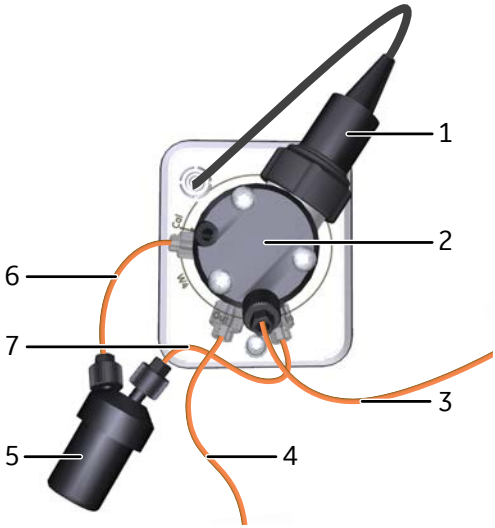


Note: *When a module is removed or a new module is installed the system configuration must be updated in UNICORN™ system control software. See* *Software configuration, on page 5* *for instructions.*

Connect pH valve and Flow restrictor

When installing the pH valve, the flow restrictor should be moved from its normal position on the conductivity monitor to the pH valve.

The illustration below shows the parts and connected tubing to the flow restrictor and pH valve **V9-pH** and **V9H-pH**.



Part	Function
1	pH electrode
2	pH flow cell
3	Tubing **8/8pH**, connects the conductivity monitor to port **In**.
4	Tubing **9/9pH**, connects port **Out** to the outlet valve.
5	Flow restrictor
6	Tubing **1R**, connects port **ToR** to the flow restrictor.
7	Tubing **2R**, connects the flow restrictor to port **FrR**.

Node ID

All modules have a pre-configured Node ID according to their function. The Node ID is used by the instrument to distinguish between several units of the same type.

The Node ID for the pH valves **V9-pH** and **V9H-pH** is 11. Check the Node ID of the module when troubleshooting. See the *User Manual* of the instrument for more information.

Note: *The function of a module is defined by the module type and the Node ID, not by its physical position.*

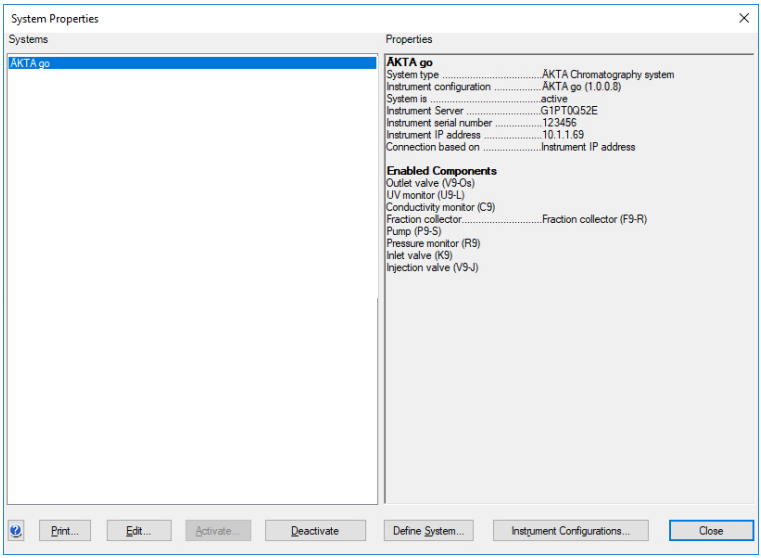
Software configuration

Instruction

If a module is removed or a new module is installed, follow the steps below to update the system configuration in UNICORN.

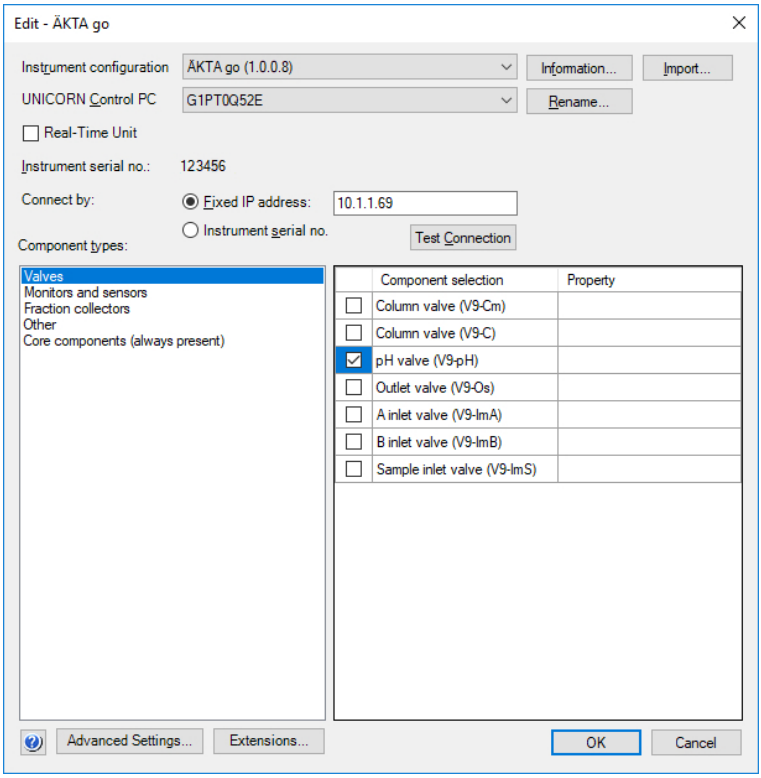
Note: *Replacement of a module does not require system configuration.*

Step	Action
1	On the ***Tools*** menu in the ***Administration*** module, click ***System Properties*** or click the ***System Properties*** icon to open the dialog. *Result:* The ***System Properties*** dialog is displayed.



2	Select the system of interest in the ***System Properties*** dialog and click ***Edit***. *Result:* The ***Edit*** dialog is displayed.

Step	Action



Note:

Only active systems can be edited.

3 Select ***Valves*** from the ***Component types*** list.

Result:

All available valves are shown in the ***Component selection*** list.

Note:

Instrument modules are referred to as ***Components*** *in UNICORN.*

4 Click the ***pH valve (V9-pH)*** or the ***pH valve (V9H-pH)*** checkbox.

5 Click ***OK*** to apply the changes.

Delay volume

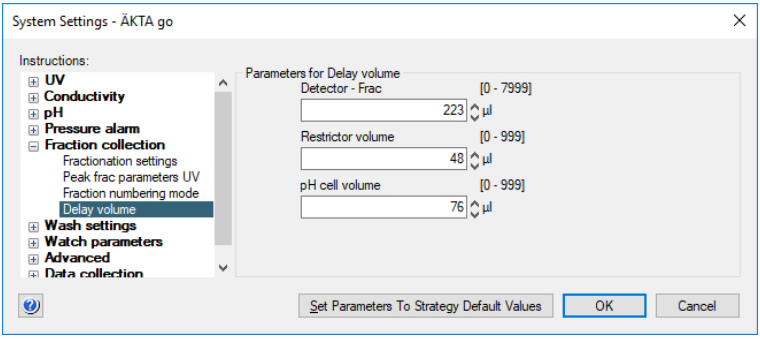
When a module has been installed after the UV monitor in the flow path, the delay volume has to be adjusted in the ***System Settings*** dialog in UNICORN, to make sure that the collected fractions correspond to the fractions indicated in the chromatogram.

Delay volumes can be set for the options ***Detector - Outlet valve***, ***Detector - Frac***, ***Detector - Frac 2***, ***Restrictor volume***, and ***pH cell volume***. Depending on the system configuration used, different delay volume options will be available for selection in the ***System Settings*** dialog. The delay volume has to be set for all displayed options.

Follow the instructions below to check and set the delay volumes:

Note: *Check the User Manual of the instrument for delay volumes and standard tubing configurations of modules.*

Step	Action
1	In the ***System Control*** module, choose ***System*** → ***Connect to Systems*** or click the ***Connect to Systems*** icon. *Result:* The ***Connect to Systems*** dialog opens.
2	• Select a system. • Select ***Control*** mode. • Click ***OK***. *Result:* The selected instrument can now be controlled by the software.
3	When the system is in state ***Ready***, select ***System*** →***Settings***. *Result:* The ***System Settings*** dialog is displayed.



Step	Action
4	• Click ***Fraction collection*** and select ***Delay volume***. • Check the delay volumes in each field and enter a new value if necessary. • Click ***OK***. ***Note:*** *It is recommended not to alter the default values for restrictor and pH cell delay volumes when standard modules and standard tubing for Flow Restrictor are used.*

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28968644 AF V:5 05/2021