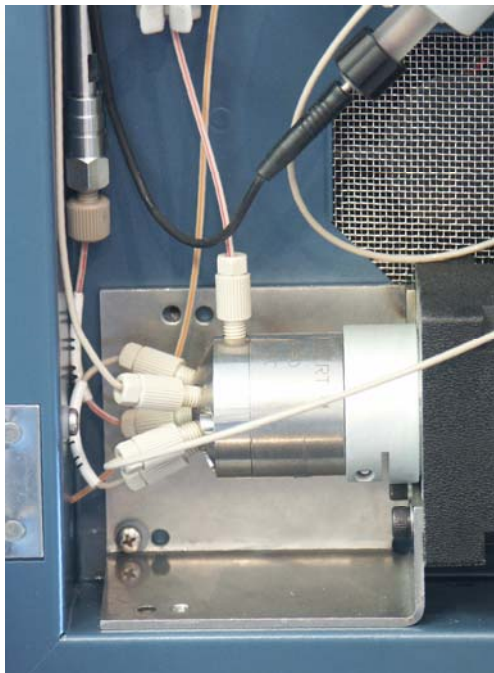


# Installation guide electrical-actuated injector on DECADE II





## Symbols

The following pictogram is used in this installation guide:



Caution

## General precautions



Execute periodic leak checks on LC tubing and connections. Do not allow flammable and/or toxic solvents to accumulate. Do not close or block drains. Follow a regulated, approved waste disposal program. Never dispose of such products through the municipal sewage system.



**Use proper eye and skin protection when working with solvents.**



**Use of this product outside the scope of this guide may present a hazard.**

## Spare parts and service availability

Manufacturer provides operational spare parts of instruments and current accessories for a period of five years after shipment of the final production run of the instrument. Spare parts will be available after this five years period on an 'as available' basis.

Manufacturer provides a variety of services to support her customers after warranty expiration. Repair service can be provided on a time and material basis. Contact your local supplier for servicing. Technical support and training can be provided by qualified chemists on both contractual or as-needed basis.

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## CHAPTER 1

## Precautions

### Introduction

The electrical valve kits p/n 250.0017, 250.0022 and 250.0024 are tailor-made kits for the installation of a 6-port, 4-port or 10-port electrical Valco valve (respectively) inside the oven compartment of a DECADE II or on the left side panel of a DECADE II.

### Unpacking

Inspect the *transport box* for possible damage as it arrives. Immediately inform the transport company in case of damage, otherwise she may not accept any responsibility. Keep the transport box as it is designed for optimum protection during transport and it may be needed again. Carefully unpack the kit and inspect it for completeness and possible damage. The contents of the kit is shown in figure 1.



**Figure 1.** Contents of 6-port electrical valve kit, p/n 250.0017.

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Contact your supplier in case of damage or if not all marked items on the checklist are included. Prior to shipment, the parts of your CS valve option kit have been inspected and tested to ensure the best possible performance.

**For optimal performance the metal parts of the CS valve should be passivated with a 15% nitric acid solution for 20 minutes.**

### Tools

The following tool are necessary for the installation of the CS valve option:

- 5/16" - 1/4" wrench
- Small flat head screw driver
- PEEK tubing cutter
- Phillips screw driver
- Allen key 9/64"



**Figure 2.** Photograph of listed tools. From left-to-right (Allen key not shown).



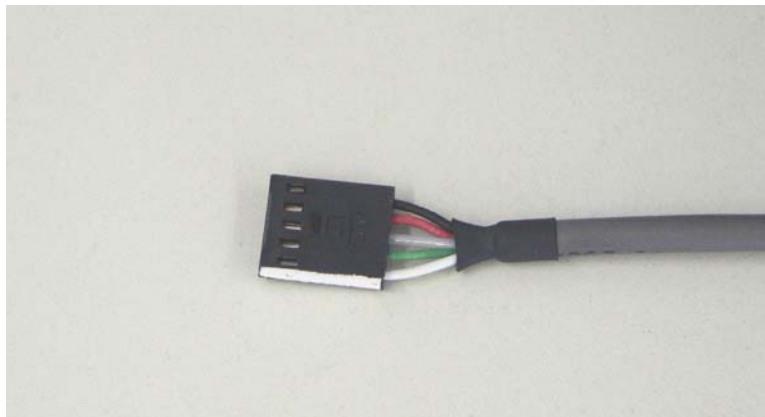
## CHAPTER 2

## Installation inside the oven compartment

In case the electrical valve should be mounted onto the left side panel, skip chapter 2 and follow the instructions in chapter 3.

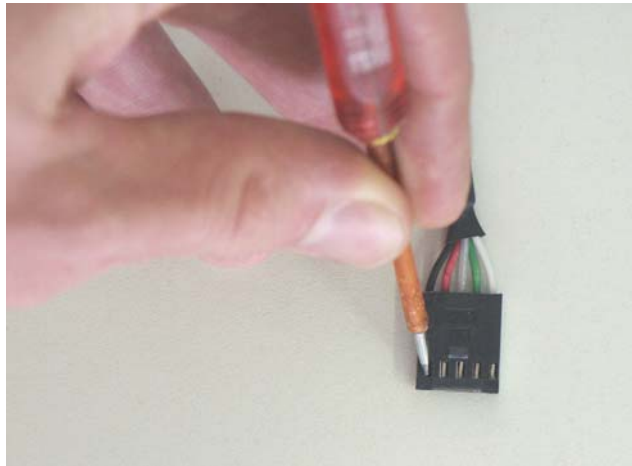
### Installation of the valve-to-control module cable

- Take the valve-to-control module cable from the box. This cable can be identified by the black molex connector with white marker stripe on the side.

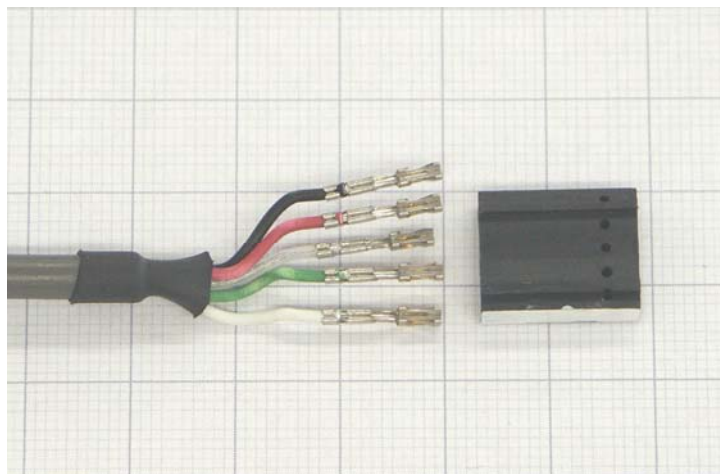


**Figure 3.** Valve-to-control module cable (note white marker stripe on the side of the black Molex connector).

- Remove all contacts inside the black molex connector as depicted in figure 4. Use a flat screwdriver to unlock the contact from the plastic housing. Unlocking is achieved by inserting the screw driver in the slit, and gentle pushing the metal contact while simultaneously pulling the wire out of the housing.



**Figure 4.** Removing contacts of the black molex connector on the valve-to-control module cable.



**Figure 5.** Connector with all contacts removed.

- Remove the black protective rubber tube out of the DECADE II tubing hole located on the lower right side of the oven compartment (see figure 6).



**Figure 6.** Installation of valve-to-module cable inside DECADE II.

Guide the valve-to-control module cable (from the side of the free contacts) through the tubing hole, from the oven compartment to the outside of the detector as depicted in figure 6.

- Subsequently insert the free contacts back into the black Molex connector to restore its original configuration.

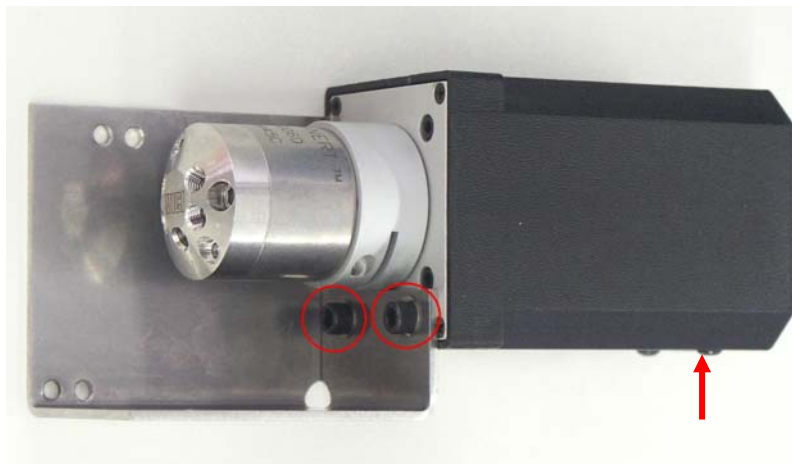


**Install the contacts in the right order as depicted in figure 3. The wire color order is: white-green-transparent-red-black. Make sure that the contacts are firmly locked into the plastic connector housing.**

**INCORRECT WIRING OR LOOSE CONTACTS CAN LEAD TO EXCESSIVE HEATING OF THE ACTUATOR CONTROL MODULE OR POWER ADAPTOR AND CAN RESULT IN A RISK OF FIRE.**

## Installation of valve

- Remove the pre-mounted Valco bracket from the electrical valve by unscrewing the two hex screws using the Allen key. Mount the valve on the DECADE II internal valve bracket, p/n 250.0018 supplied in the kit, as depicted in figure 7.



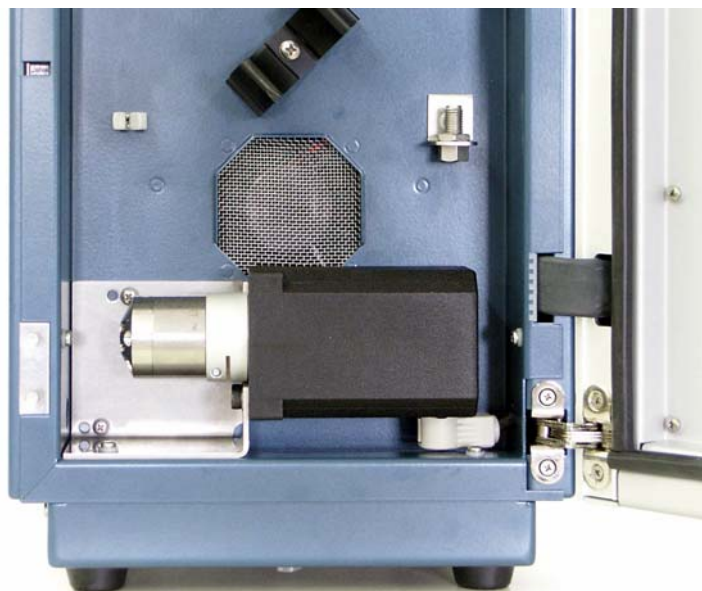
**Figure 7.** Valve mounted on DECADE II valve bracket, p/n 250.0018. Red circles: location of mounting screws. Red arrow: location of connector.

- Connect the DIN plug of the valve-to-control module cable to the valve plug. The connector is located on the bottom part of the black housing (see red arrow in figure 7) .
- Remove the three M3 screws (circled in red) from the oven compartment using a Philips screw driver, as depicted in figure 8.



**Figure 8.** Installation of valve cable inside DECADE II.

- Mounting the bracket with valve into the DECADE II oven compartment using the same three M3 screws (see figure 9).



**Figure 9.** Valve with bracket mounted in oven compartment.



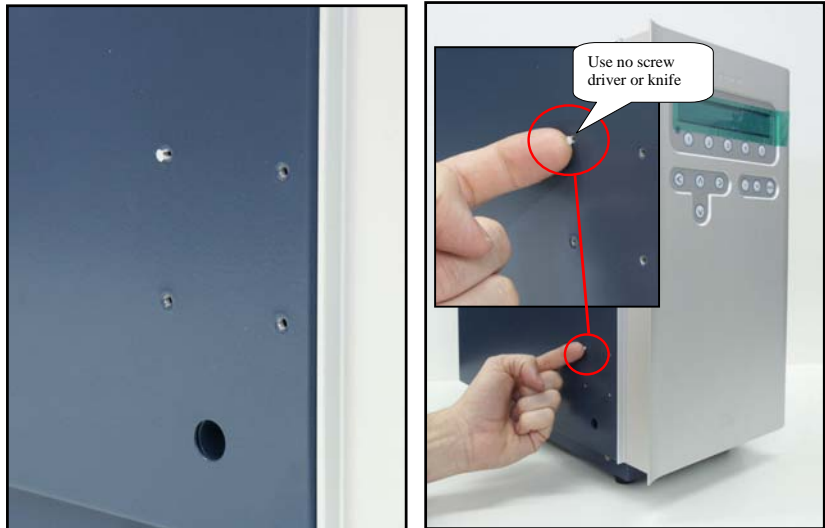
## CHAPTER 3

## Installation on left side panel

Follow the instructions in chapter 2 in case of installation of the valve inside the oven compartment is required.

### Installation of bracket

- Remove protective plastic covers.



**Figure 10.** Protective plastic covers on side panel.

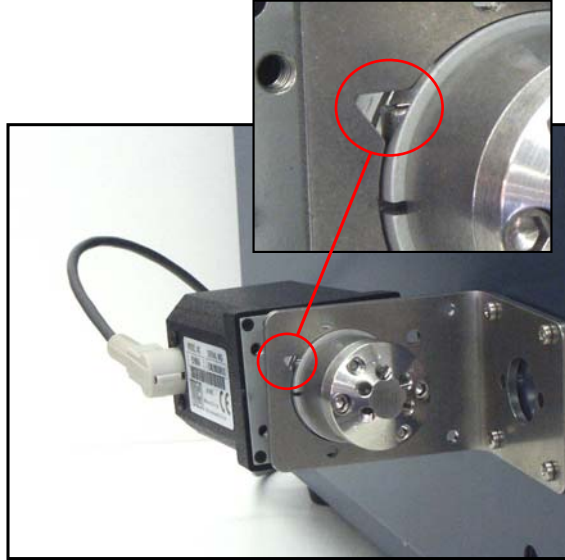
- Mount external valve bracket, p/n 250.0019 on DECADE II.



**Figure 11.** External valve bracket.

## Installation of valve

- Mount valve in DECADE II bracket. Note: there is a special indentation (see red circle) in the bracket to facilitate the screw to secure the valve head. Make sure that port 1 of the valve is positioned upwards.



**Figure 12.** Mounting valve in external valve bracket.

- Secure valve in bracket using the supplied Allen screws.



**Figure 13.** Securing valve in external valve bracket.



C H A P T E R 4

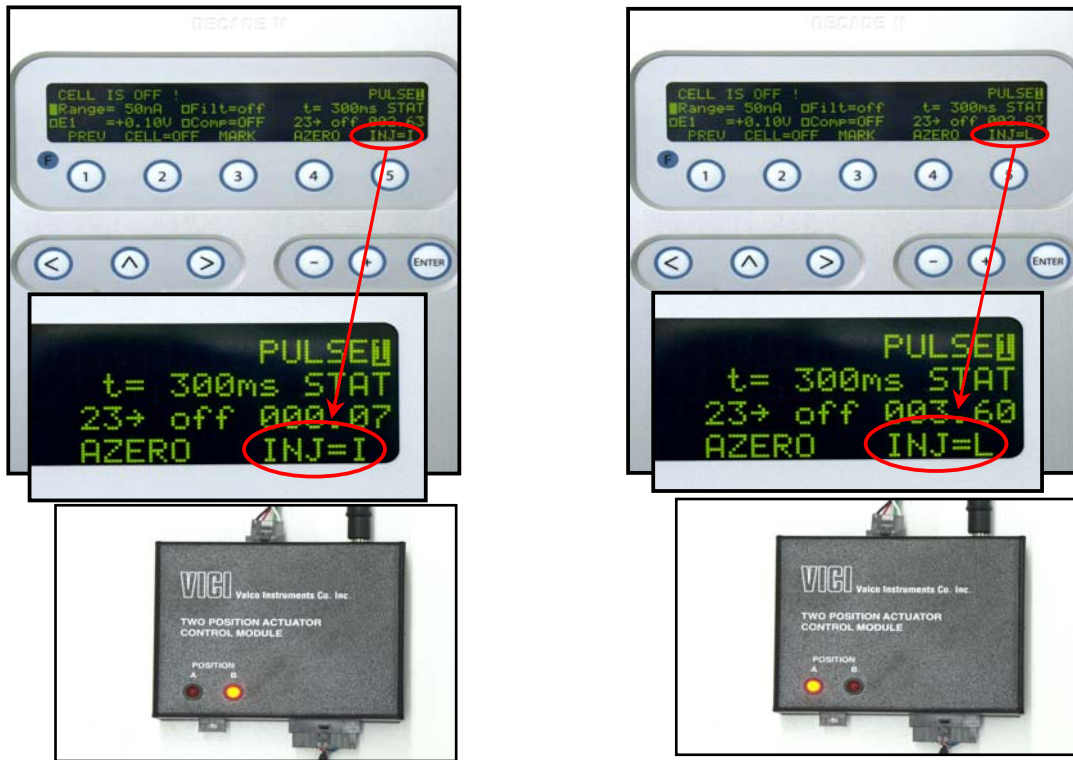
## Electrical connections

- Connect valve cables as shown on photograph. Connect IO cable p/n 250.0016 to connector B on the DECADE II



**Figure 14.** Cable connections DECADE II to valve.

- Valve is automatically detected by the DECADE II software. In the CONFIG menu “Valve = present” is visible.



**Figure 15.** Correspondence between status on the actuator control module and valve status in the DC or PULSE mode STATUS screen of DECADE II



For information on event and time file programming to control the electric valve please refer to chapter 6 of the DECADE II user manual p/n 171.0010.

## APPENDIX A

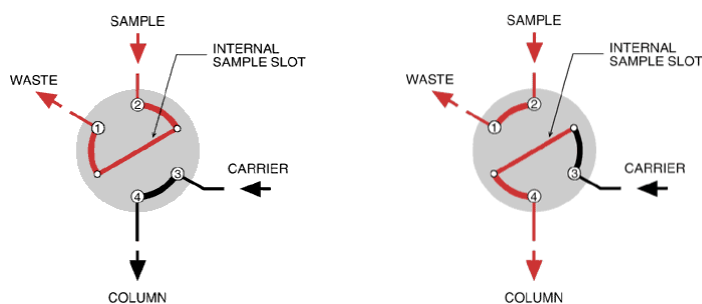
## Valve LC connections

The exact configuration of LC connections on the valve is depending on the specific application for which the DECADE II with electrical valve is used. Please refer to the specific application note or LC connection kit installation guide for further information. Both guides and application notes can be downloaded from the Antec Leyden internet site at: the following address:

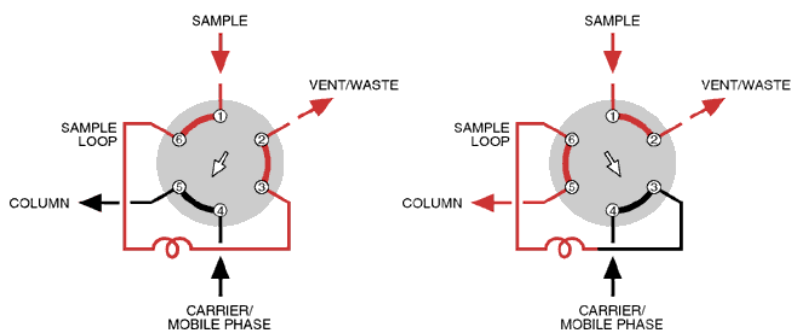
[www.antecleyden.com](http://www.antecleyden.com)

Below several possible valve configurations are shown (  position A and  position B):

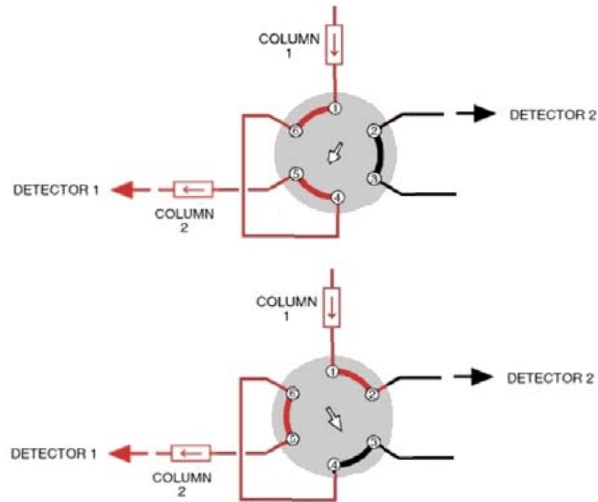
### 4-port valve - microvolume sample injection



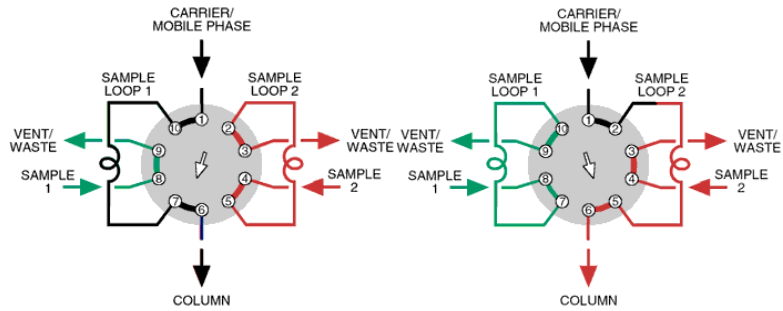
### 6-port valve - sample injection



**6-port valve - column switching**



**10-port valve - Two different samples to same column**



**10-port valve - simultaneous injection of sample onto separate columns**

