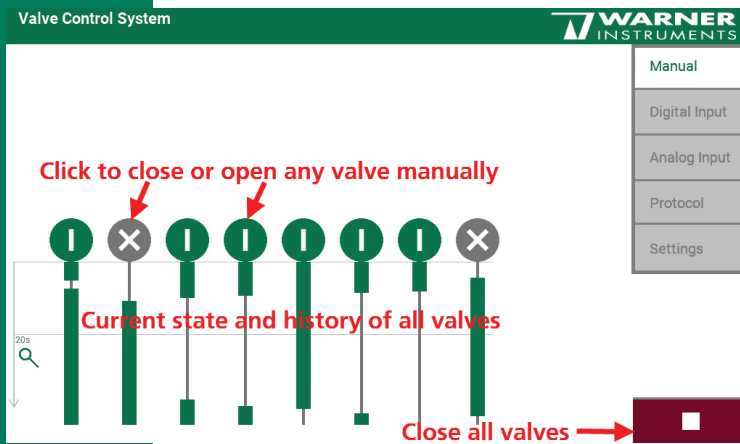


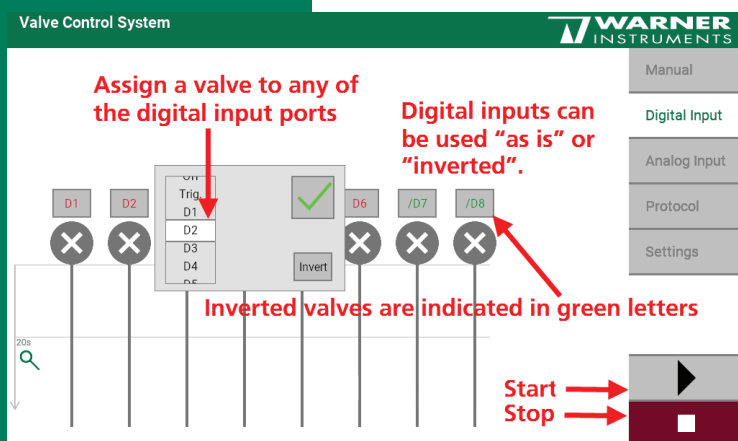
Operating the Valve Control System via Touch Screen

It is possible to operate the Valve Control System without software control via touch screen on the control unit. The touch screen provides most control functions of the VCS which are also available via software. The Valve Control System can be operated in four different modes: "Manual"; "Digital"; "Analog" and in "Protocol" mode with a computer. Before changing the operation mode it is necessary to close all valves.



Manual Mode

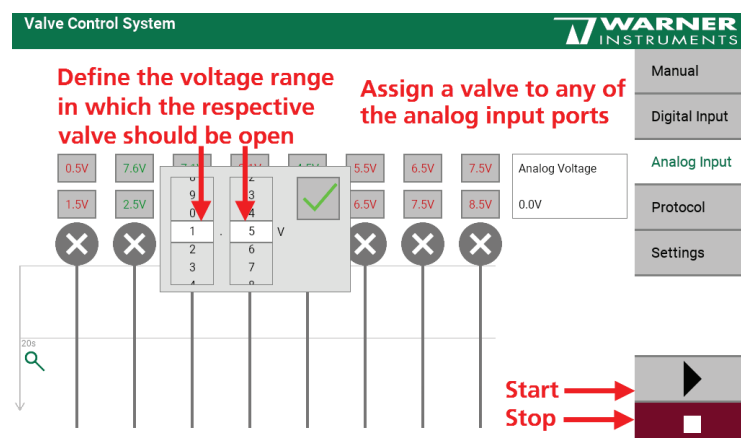
Control each valve individually by clicking on the icon or start and stop all valves together via "Start" button. Use the red "Emergency" button to close all valves immediately, if necessary. The time span after starting the first valve is recorded in the history part of the screen. Times with open valves are indicated in vertical green bars, if the valve is closed you only see the grey time line.



Digital Mode

Connect the digital input port on the back side of the control unit. Assign valves to digital input ports via the drop down menus and decide whether the digital input should be used "as is" or "inverted". Inverted valves are indicated in green letters above the valve icon. If a digital input has been assigned to a valve, the valve will directly reflect the logical states on the digital port:

Digital Input	Valve state "as is"	Valve state "inverted"
HIGH	open	closed
LOW	closed	open



Analog Mode

Connect the analog input port on the back side of the control unit. Define the voltage range in which the respective valve should be open. Change the default voltage threshold ranges of the valves by using the drop down menu. Adapted values are indicated in green numbers. Voltage threshold ranges may overlap each other.

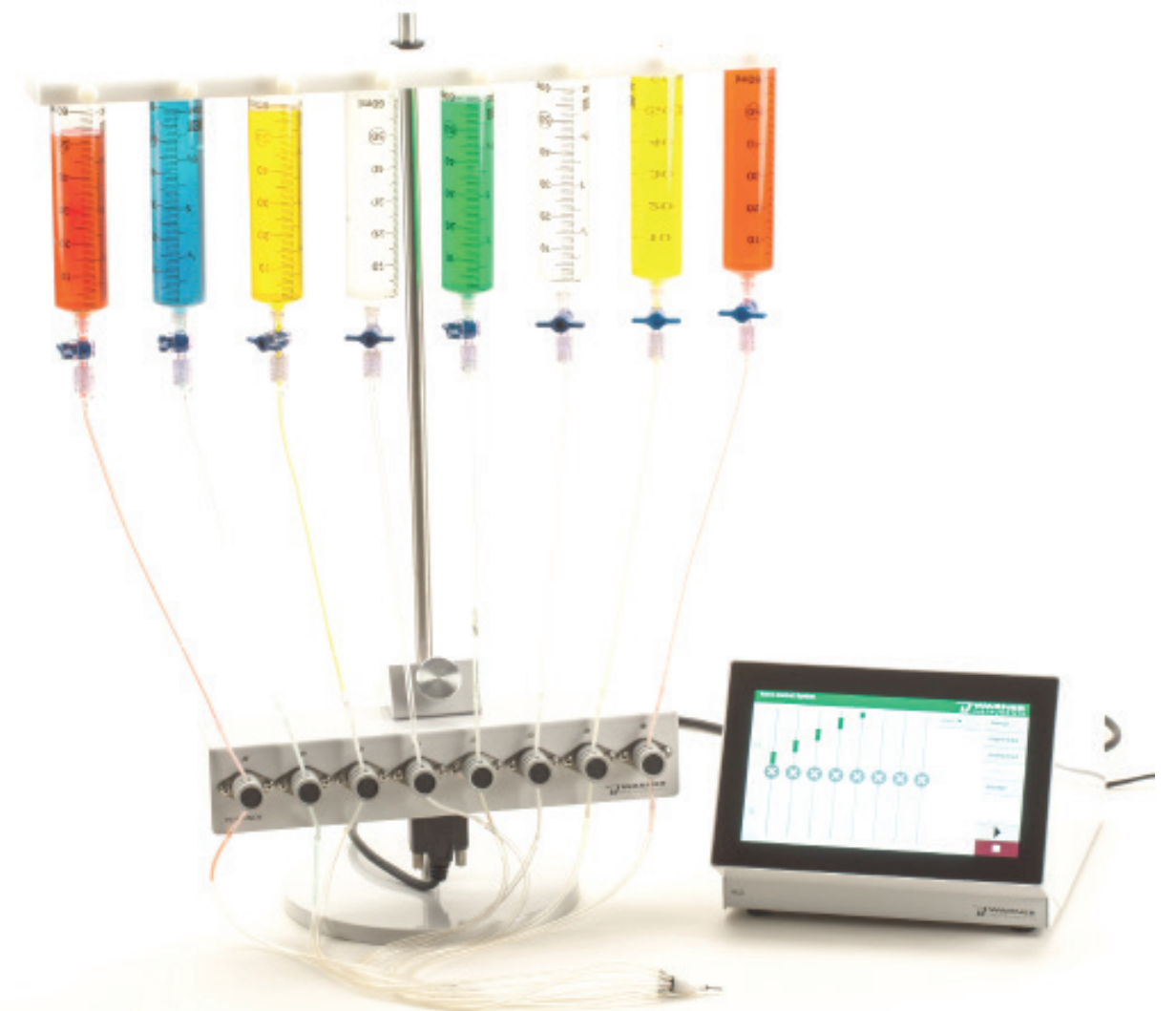
● Made
● in
● Germany



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Valve Control System VCS Installation Guide for Pinch Valve Systems

- Setting up a Pinch Valve Control System VCS
- Valve Control via Touch Screen and Computer
- For more information:
 - Manuals on the provided USB stick
 - <https://www.warneronline.com/product/485>

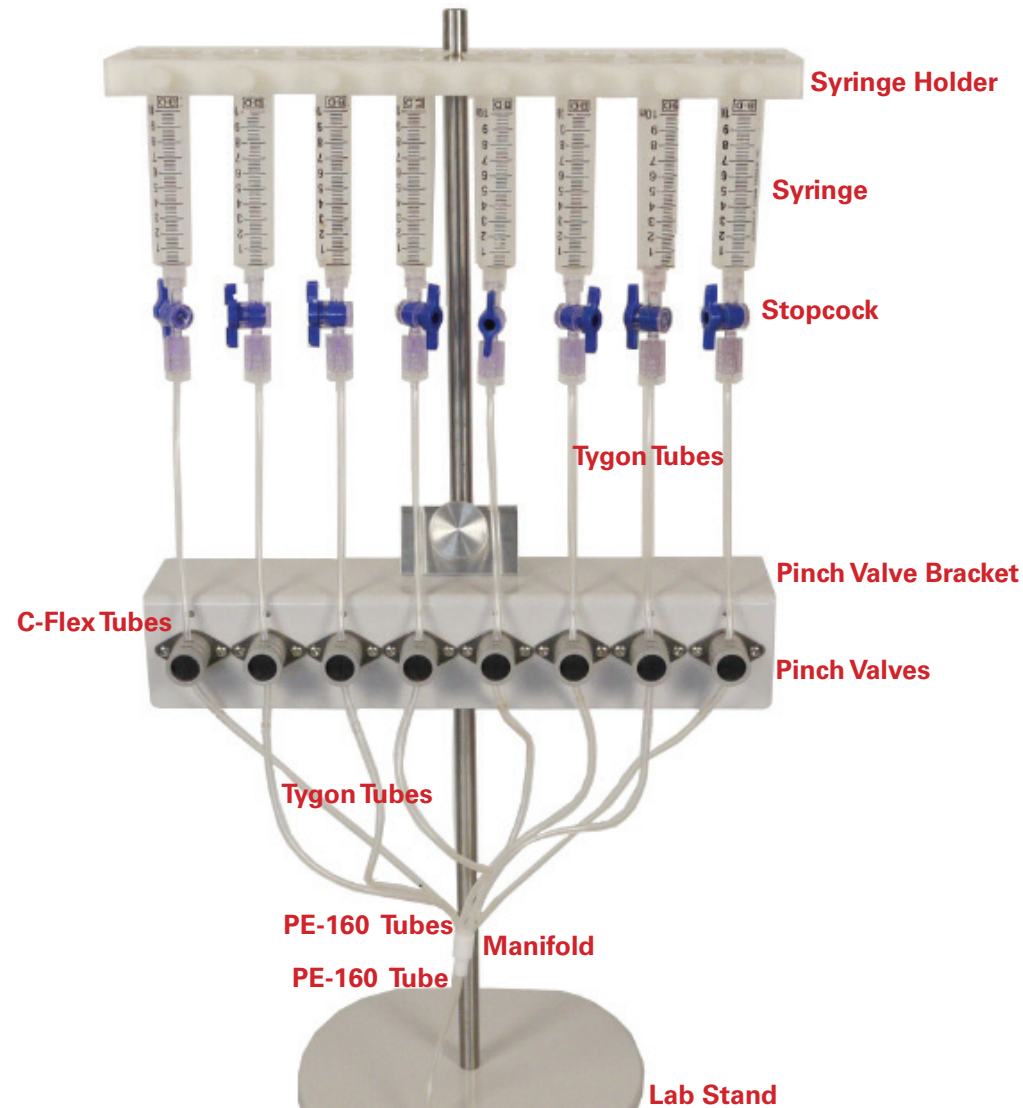
1

Overview: Pinch Valve Control System

Please read also the Valve Control System Manual!

Valve Control System VCS

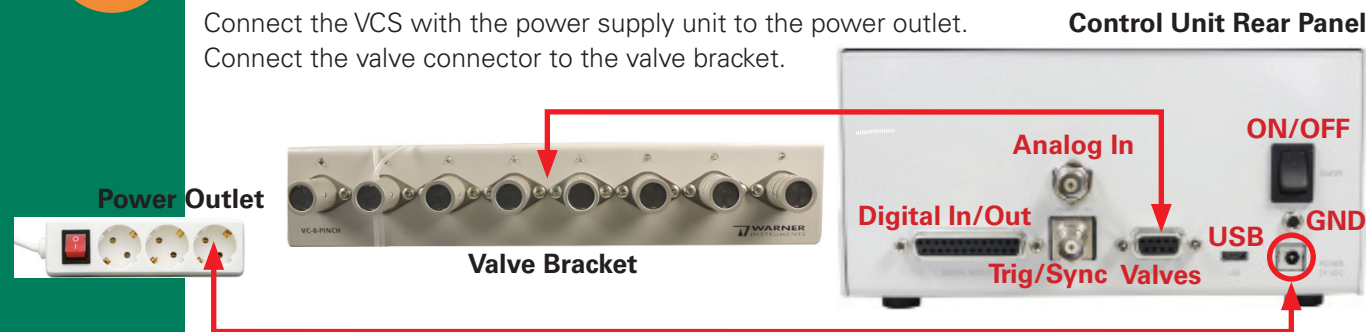
The complete valve control system includes the control unit, a lab stand with valve bracket and valves, a connecting cable from the valve bracket to the control unit, a power cable, a syringe holder, a manifold, syringes, stopcocks, three types of tubings, and an assortment of tubing connectors.



2

Cable Connection

Connect the VCS with the power supply unit to the power outlet.
Connect the valve connector to the valve bracket.



3

Tubing and Valves

1. Mount the **Valve Bracket** in the lower half of the lab stand.
Please fix the bracket with the provided screw.
2. Mount the **Syringe Holder** and fix it on top of the lab stand.
3. Insert the syringes in the holder and add a **Luer Stopcock** at each syringe.

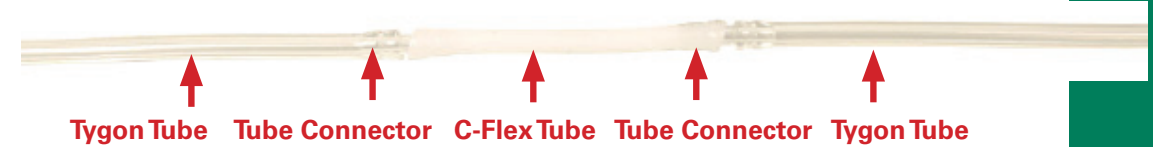


Three types of tubes are available
Tygon® Tubes
C-Flex Tubes
PE-160 Tubes
Please do not mistake the type of the tube during installation!

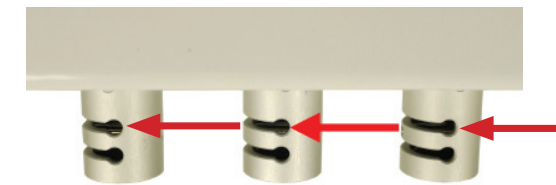
4. Insert a Tygon® tube into each luer stopcock and add **Tube-to-Tube Connectors** at the ends of the Tygon® tubes.



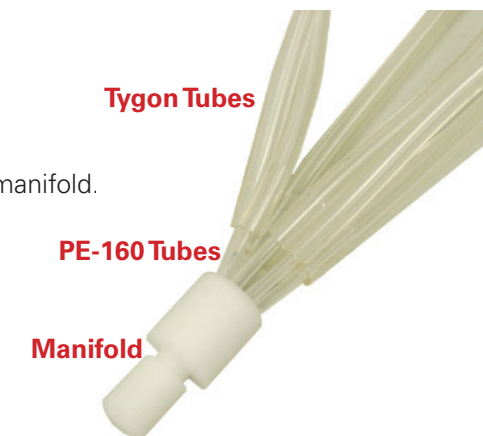
5. Connect the **Tygon® Tubes** via tube-to-tube connectors to one end of the **C-Flex Tubes** and the other end of the C-Flex tube via tube-to-tube connectors to **Tygon® Tubes** again.



6. Insert the **C-Flex tube** into the interior slot of the **Pinch Valves**.



7. Insert a short length of **PE-160 Tubing** into the lower end of the Tygon® tubing and make a connection to the **Manifold**.



8. Insert **PE-160 Tubing** into the output port of the manifold.