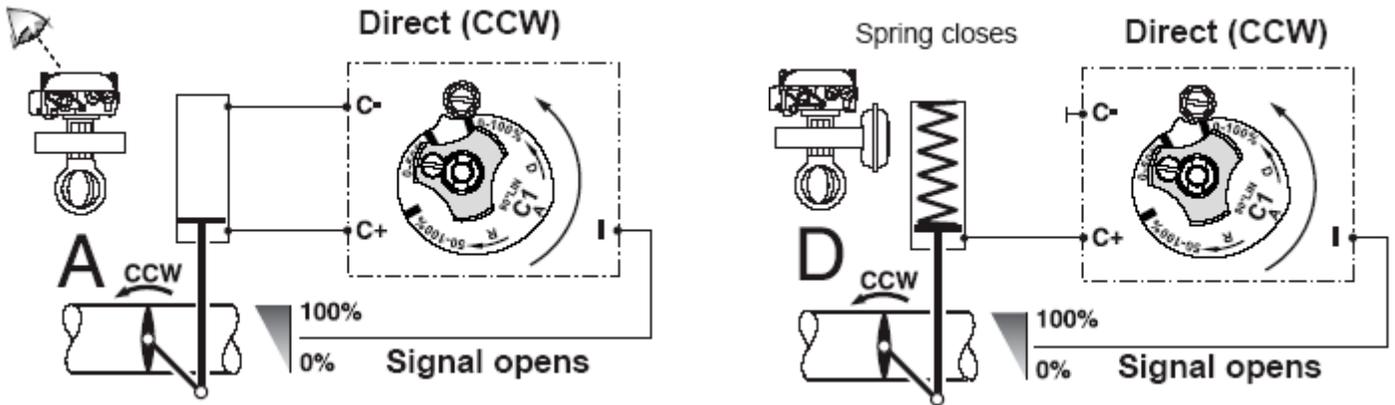
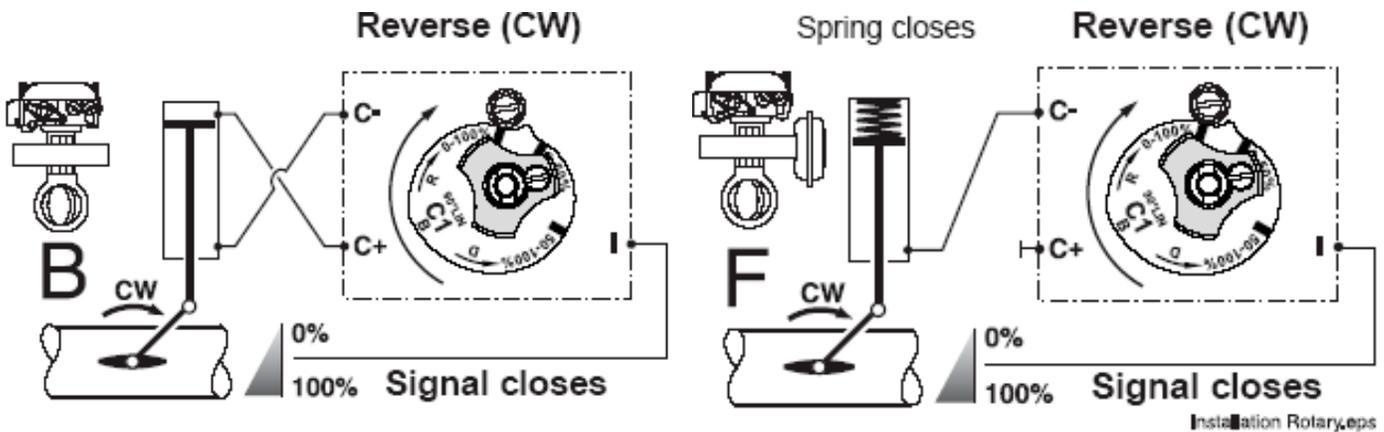


Reverse Positioner Action

A common question that Valve Accessories & Controls often gets from the field is that a customer has a valve package with our positioner however they wish to reverse the input signal and action of the valve. For example a customer has a valve that is closed at 4mA and open at 20mA. The below diagrams are 4mA closed and 20mA open. The diagram on the left is a double acting actuator and the one on the right is single acting.



The customer would now like the opposite from their valve. They would like to have open at 4mA and closed at 20mA. The diagrams below are 4mA open and 20mA closed. The double acting is on the left and single acting is on the right.

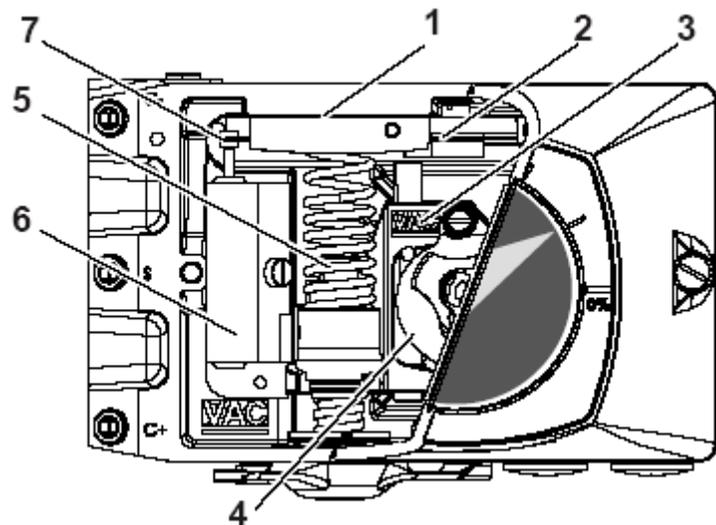


Here is a step by step procedure in getting from 4mA closed and 20mA open to 4mA open and 20mA closed.

For the positioner adjustment, we have to make two key changes:

- 1-change the actuator/positioner porting
- 2-change the cam configuration
- 3-Drive valve to open position with cam loose
- 4-Lock cam& cam nut to secure cam

1. The tubing must be reversed. C+ tube must now go to C- and C- must go to C+. So for double acting actuators you do exactly that, just reverse the tubing, for single acting, C+ would now be plugged and C- would now be piped to the actuator.
2. Remove the front cover and the indicator in order to expose the cam nut and cam-notice the cam position.
3. Loosen the cam nut and take the cam out and flip it over-literally 180 degrees. Place the cam back in the positioner making sure that it is on the opposite lobe side. (example: on a C1 cam it would go from the C1 A 90D side to the C1 B 90R side) **DO NOT TIGHTEN THE CAM NUT.**
4. a. is for double acting applications, b. is for single acting applications
 - a. **For double acting applications apply supply air to the positioner. This should move the valve open, the desired 4mA position. Now simply tighten cam nut.** Now the positioner will be working 4mA Open to 20mA close.
 - b. Since the positioner was set up originally 4mA closed we must now apply air to the actuator to get the valve to move to open. This is done by pushing up on the balance arm. The balance arm is labeled #2 in this picture. As you can see the balance arm is connected to the spool valve (#6) through connection #7. By pushing up on the balance arm we are exhausting air out of the C- port. Once the valve is open continue to hold the balance arm up and tighten the cam nut. Once the cam nut is tightened release the balance arm, the positioner is now set to operate from 4mA open to 20mA closed.



The positioner should now be operating as 4mA is open and 20mA is closed.

Note: This will not change the “fail safe” action on an actuator with springs (usually single acting application). To change the fail safe action you should contact the actuator manufacturer.