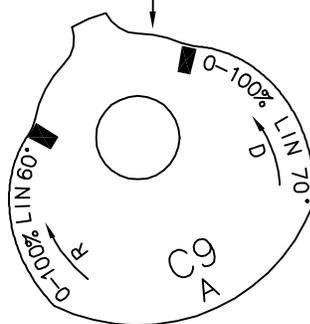


Improve Ball Valve Control with C9 Cam

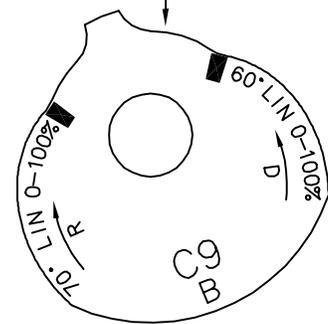
An O-port ball valve has to move some 10-15 degrees before any flow begins to occur. V-Port ball valves and some plug valves may require up to 30 degrees of rotation before flow begins. This is necessary for the valve to provide good tight shutoff and is an “acceptable” part of the design of this product.

The VAC C9 cam set on the 70 linear lobe of the cam provides an initial quick open response that provides a live zero adjust for this type of valve. When the positioner with the C9 cam is provided with loop power and a 4 mA signal, the positioner will “live load” the actuator and valve so that when you change the signal to 4.5 to 5 mA, flow is moving through the valve. With a standard linear cam, flow may not occur until you reach 6.5 to 7 mAs. This improves the reaction of the “package” and provides for a more linear control package, which significantly improves the rangeability of the product. The 4 mA shut off position will not be effected and you generally see no deadband or lull in the overall rotation of the package. Of course this cam can be used in either the V100 or V200 product line.

Zero-lift 25°.



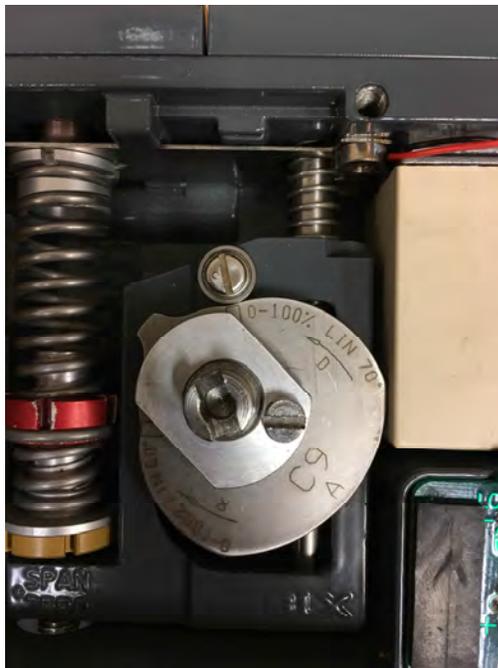
Zero-lift 35°.



Note:

For increasing input signal,
 "D" stands for Direct(CCW) rotation and
 "R" for Reverse(CW) rotation.

- 1) Determine degrees of rotation needed before flow is allowed through valve and select the cam lobe that is closest (25 and 35 degrees available) and install cam.
- 2) Stroke the valve/act to the stop/end position at 0% (4mA) input.
- 3) Loosen locking screw and cam nut
- 4) Turn the cam so that the cam bearing is just off the cam tip.
(As shown in figure to right)
- 5) Tighten cam nut by hand. Then tighten locking screw.



- 6) Use standard calibration procedures for 0% and 100%
- 7) When signal is increased to 4.5-5 mA the actuator/valve should turn until the cam bearing is in the trough (as shown in photo to left). The positioner will now have linear control from that point to 100% without the first 20-25% of control signal being wasted on turning the valve 25-35 degrees with no flow through the valve.
- 8) If the positioner does not turn the valve so that the cam bearing is in the trough at 4.5-5 mA then set your signal to 5mA then turn zero adjustment to get the cam bearing to rest in the trough of the cam.



Title: C-9 Cam set-up

Author: SK

Date: 12/20/16

Sheet: 1 of 1

Revision: