

Setting the Auto Delay

Typically, the Integrated Control Valve, while in Automatic Mode, will take several seconds to "tune" in order to reach your set throughput value upon startup. In order to avoid a large overshoot the optimal method for startup is to either start in Manual Mode and enter a remembered Manual Out value, gathered through prior runs and then switch to Automatic Mode once the tuning has occurred for several seconds, or to set the Auto Delay which accomplishes this automatically. Auto Delay is a method of preventing control overshoot. In order to set Auto Delay, a delay time and a Manual Value or position for the valve to start in (equivalent to Manual Mode), must be calculated. The value is calculated using two known set points consisting of a known valve opening and a corresponding percentage of full scale. An example would be: (30% valve opening corresponding to an output of 26% of fullscale).

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From the TOP page (Main Menu) press the ADV Button and then press the Control Modifications Button. Now press the Auto Delay Button, revealing the screen above. Selecting the Auto Delay Time will enable the Auto Output to be held constant for the indicated time period (you can select from 1/4s, 1/2s, 3/4s, 1s, 2s, 3s, 4s, or you can turn Auto Delay off). The Auto Delay indicator can be seen by looking at the Run page (pressing the Run Button from the TOP page). Red indicates that the Auto Delay is enabled and active, and gray indicates that it is not currently active. To learn more about the Run page, please see the HMI Screen Guide section of this manual.

Process Gain

To calculate a Process Gain value, ensure you are in Auto Mode. Click on the Process Gain Button and you will see the ADV.CTRL.Pg page (right) where you can enter the two points mentioned above. Please note that the Y1 and Y2 values are percentages of Control Out (found on main run screen) that are achieved at the corresponding set points X1 and X2. Once entered, the Process Gain is calculated automatically.





Note: In cases where the set point has been changed or if the feeder is run with no product and the valve opens to 100% open, upon restart, the new valve position will be calculated as mentioned above. Otherwise, the Auto Delay will retain the last known good valve position.