Products - Control

1. Gain
    - A factor used to modify the rate adjustment based on the volume of product being applied. A higher volume of product requires a lower gain to reduce the rate of adjustment. The adjustment is exponential – a small change in the gain can produce a very large effect.

2. Integral
    - Use accumulated rate error to move to target rate quicker.

3. Max Power
    - Maximum power delivered to the motor or valve.

4. Min Power
    - The minimum power delivered to the motor or valve.

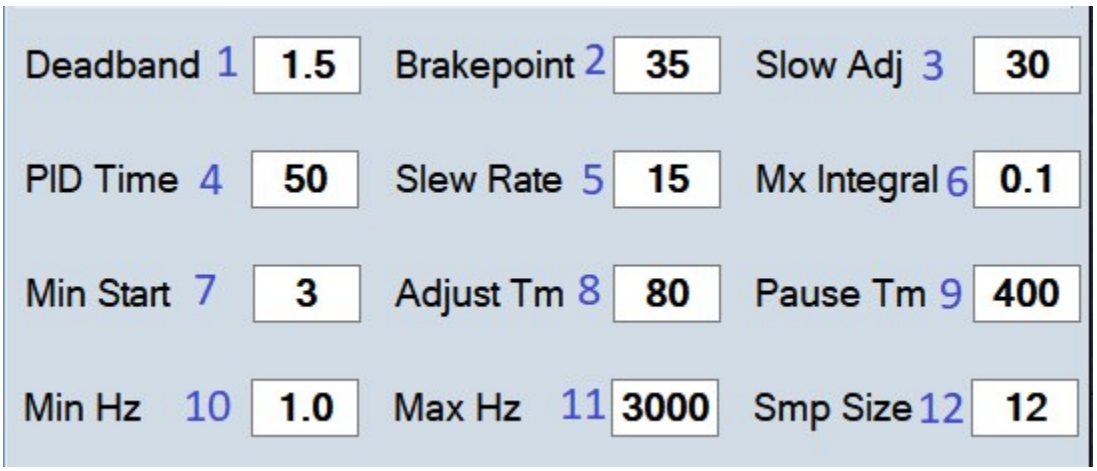
Adjustment Process:

1. Initial Setup:
    - Begin by setting the minimum power required to move the motor or valve. Set the maximum power to 100, reducing it as needed to improve control stability. Set Integral to 0.

2. Gain Adjustment:
    - Next, adjust the gain very slowly until the system overshoots the target. Then reduce the gain to stabilize flow control.

3. Integral:
    - Finally, if necessary adjust integral to get to the target rate quicker.

Optional Settings:



1. Deadband
   - Error % below which no adjustment is made.

2. BrakePoint
   - Error % where adjustment changes to slow rate.

3. Slow Adjustment
   - % of full adjustment

4. PID loop time
   - Time in milliseconds for the adjustment loop.

5. Slew Rate
   - Maximum total PWM change per PID loop.

6. Maximum Integral change
   - Maximum Integral PWM change per PID loop.

7. Minimum start % for a timed combo valve
   - % of target rate used for a faster start from 0.

8. Adjust time for a timed combo valve
    - Time in milliseconds the valve should be adjusted.

9. Pause time for a timed combo valve
    - Time in milliseconds the valve should pause adjustment.

10. Minimum flow sensor pulse Hz

11. Maximum flow sensor pulse Hz

12. Flow sensor pulse sample size
    - Number of flow pulse times used to get the median Hz reading.