

PWM Control Valve

Symptom	Correction
Control valve to slow or too fast	- Verify the setting in the monitor should be 43 for Raven Controllers.
PWM valve always over shooting or under shooting intended rate	- Verify the setting in the monitor should be 43 for Raven Controllers - Increase or Decrease the first digit between 1-9. 1 being fastest and 9 being the slowest. Explanation of the 1st digit on the valve calibration % away from target before the valve slows down 1=10%, 2=20% 3=30% and so on.
Control Valve not responding to rate changes	- Verify the setting in the monitor should be 43 for Raven Controllers. - Increase or Decrease the second digit between 1-9. 1 being the fastest and 9 being the slowest. Explanation of the 2nd digit on the valve calibration. % of deviation allowed before the valve responds 1=1% 2=2% 3=3% and so on
Rate does not change in either manual or automatic mode	- Check cables for breaks or bare wires - Verify voltage on the Flow Cables and Extensions - Refer to Maxflow VRC II Corrections

PWM Troubleshooting(Pump Only)

Keyway 12 o'clock

4 o'clock - 12V Power
8 o'clock - Ground

4 to 8 - 0 V Master Off
4 to 8 - 12V Master On

On 16 Pin Harness

Pin 3 - 12V Power
Pin 4 - Ground

3 to 4 - 12V Master on
3 to 4 - 0 V Master off

On 37 Pin Harness

Pin 15 - Ground
Pin 16 - 12V Power

15 to 16 - 0 V Master off
15 to 16 - 12V Master on

Rate controller Specific Issues

Topcon Apollo

- Controller Response must be Medium Fast
- 2 Wire Loop cap must be installed on cable