CONFIGURING SYSTEM PRESSURE GUIDE

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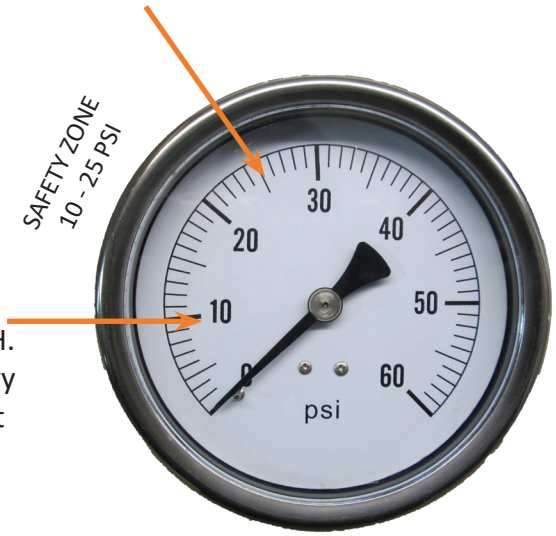
IMPORTANT: It is critical on a AgXcel GX electric pump system that you ***CONFIGURE AND MANAGE*** system pressure to run between 10 psi minimum and 25 psi maximum.

The AgXcel 5.3 GPM pump is rated at 17 amps / 70 PSI so it is far capable of running at a high pressure. Many users feel that running at a higher pressure will ensure that liquid is flowing and applying correctly in their application which in turn will minimize tube plugging.



The AgXcel pump, even though its rated at 70 PSI, it is not a good practice to run at a pressure higher than 25 as this will wear the pump out quicker. A good example would be like running your vehicle in 2nd gear at 50 MPH. The vehicle will definitely do this but will not last you very long as the components of the engine will keep constant heat and break down much faster than if you were to allow the vehicle to shift so as to run at a lower RPM.

AgXcel pumps average 4.5 years of life from these electric pumps so please take the following measures to ensure a long lasting life from the AgXcel electric pumps. Additionally, the AgXcel system is designed with a 2-5 lbs check valve that is installed on every row to prevent system bleeding. Each check valve requires the appropriate PSI to open the check valve to allow the liquid to flow. As an example, if your system has 4 lbs check valves installed on a 12 row planter, the system will require more than 4 lbs to open up the check valves. The 4 lbs rating is given for that individual device, therefore the system will require approximately 20% more line pressure to open up all 12 rows uniformly. Additionally, many check valves are designed with internal stain-less steel springs that are rated for each lbs rating. However there are at times irregularities in these springs and the system pressure must accommodate for this. This is another reason for performing a catch test on every row.

Use the AgXcel Orifice Rate Charts that were supplied with your kit. If you cannot find the charts you can down load them from our website or try our Free calculator app available for download on your Apple or Android smart phone.

a) Find your implement width
b) Find the speed that you will be averaging when seeding
c) Find the rate in GPA that you will be placing
d) Find a PSI rating that keeps you within the 10-25 PSI rage
e) Check the Orifice Color and install into the system line

CALCULATOR
Our easy to use, orifice and metering tube calculator is available FREE now on the App Store.

For Example:
5 MPH
3 GPA
Set your pressure to 23

Orifice Color (Approx Size)	PSI	Gal/Min 28-0-0	MPH 4.0	4.5	5.0	5.5	6.0	6	
Pink (24)	10	0.033	1.62	1.44	1.30	1.18	1.08	1.00	0.93
	20	0.046	2.28	2.02	1.82	1.66	1.52	1.40	1.30
	30	0.057	2.80	2.49	2.24	2.04	1.87	1.73	1.60
	40	0.065	3.24	2.88	2.59	2.36	2.16	1.99	1.85
	50	0.073	3.64	3.23	2.91	2.64	2.42	2.24	2.08
	60	0.081	3.99	3.54	3.19	2.90	2.66	2.45	2.28
Gray (30)	10	0.050	2.50	2.22	2.00	1.82	1.66	1.54	1.43
	20	0.072	3.55	3.15	2.84	2.58	2.37	2.18	2.03
	30	0.088	4.34	3.85	3.47	3.15	2.89	2.67	2.48
	40	0.101	4.99	4.44	4.00	3.63	3.33	3.07	2.85
	50	0.112	5.56	4.95	4.45	4.05	3.71	3.42	3.18
	60	0.124	6.13	5.45	4.91	4.46	4.09	3.77	3.50

The AgXcel GX Electric System when using an Auto Rate system including but not limited to the AgXcel AutoX Compact, GS3, AgLeader, Raven, Trimble, Topcon will maintain the system pressure for you. HOWEVER, pressure must still be monitored to ensure that it does not fall below or above recommendations. This may happen when a users speed requirements change and goes from 4.5 MPH to 5.5 MPH. This will increase the system pressure and will require the user to possibly change the size of the orifice to bring the system pressure down if it has exceeded the minimum recommendation of 25 PSI.

TROUBLE SHOOTING TIPS:

- **Pressure is above 25 PSI** - Change orifice size to a larger orifice
- **Pressure is below 10 PSI** - Change orifice size to a smaller orifice
- **System runs at about 26-27 PSI consistently do I have to change my orifice?** No this pressure will do fine but changing the orifice will allow the pumps and the PWM controller to run much cooler. However, making this a common practice will wear on the pumps and electronics so it is recommended to change the orifice at the earliest convenience.
- **System will run at about 20 PSI and through out the day the pressure drops gradually** - This is typically a sign of the liquids viscosity changing. As the temperature of the liquid warms up the liquid begins to"thin" it begins to flow much easier. This is a common occurrence and has not bearing on the GPA when using an Auto Rate System. If using a Manual Rate System then it is recommended to perform a catch test to ensure you are applying the correct GPM. This catch test on a Manual Rate Controller system should be performed at least 3 times a day.
- **System runs at about 20 PSI and then rises throughout the day** - This could be a sign of filters beginning to draw residue and requires cleaning. Check filters and clean out screens thoroughly.