

AgXcel GX SERIES

Electric Fertilizer Application System



GX¹



GX²



GX³

AGXCEL DUAL PUMP GPA SPECIFICATIONS

CHART REPRESENTS MAXIMUM GPA ON 30" CENTERS @ 6 MPH

IMPLEMENT SIZE IN ROWS	8	12	16	24
GPA (MAX)	20	13	10	5

Note: Dual 5.3 GPM electric pumps can only achieve a maximum of 6.0 GPM. However pumps should not be used at their highest capacity as this will drastically reduce the life of the pumps

S/N STICKER



2106 F AVENUE
KEARNEY NE 68847

877.218.1981



GX¹



GX²



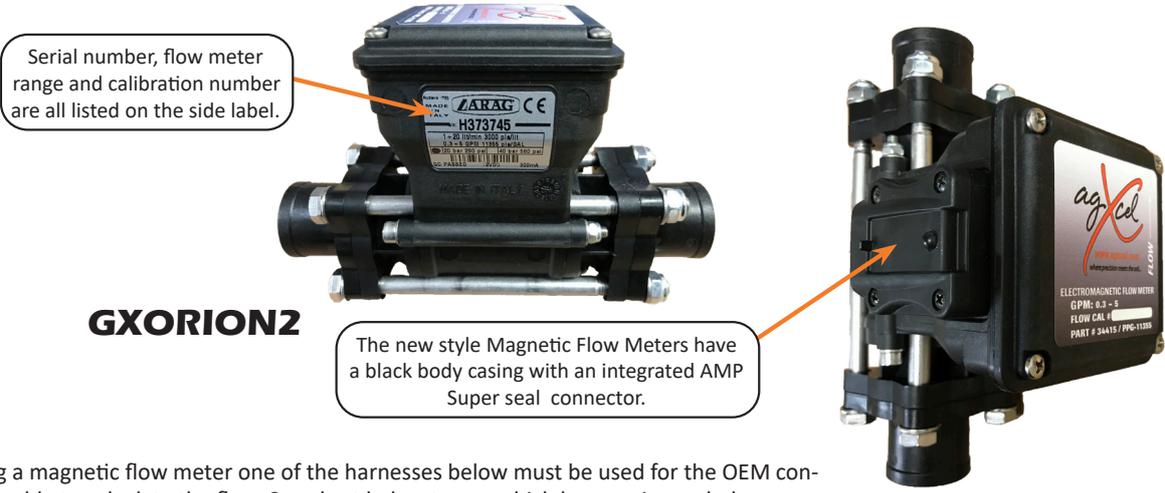
GX³



NOTE: This is only a guide! Please consult your OEM dealer for detailed instructions or troubleshooting!

AGXCEL ORION 2 FLOW METERS

The AgXcel Mag Flowmeter is a magnetic flowmeter, also technically known as an electromagnetic flowmeter. A magnetic field is applied to the metering tube, which results in a potential difference proportional to the flow velocity perpendicular to the flux lines. The physical principle at work is electromagnetic induction. The Mag meter is superior to other flow meter since there are no moving parts to replace or maintain just as when dirty or fertilizer with particles is present. Also given that the Mag meter detects the flow of ions in the liquid, it can therefore accommodate for viscosity or liquid density changes. Given the superior features of the Mag flow meter, a quick catch test is always recommended to ensure precision application.



When using a magnetic flow meter one of the harnesses below must be used for the OEM controller to be able to calculate the flow. See chart below to see which harness is needed.

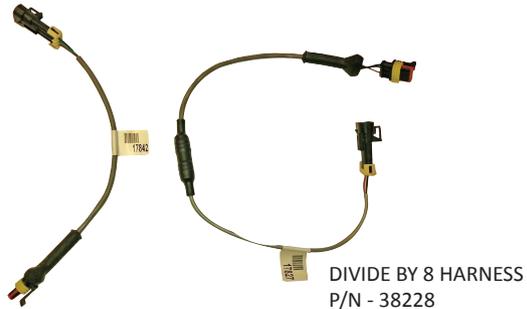
NOTE: RAVEN USES DIVIDE BY 8 HARNESS. 4400 USES REGULAR CABLE

FLOW RANGE (GPM) DIVIDE BY 8 REQUIRED	PULSES PER GALLON	JOHN DEERE GS2/GS3		AG LEADER		TRIMBLE		MICROTRAK	
		DB8 CABLE	CAL#	DB8 CABLE	CAL#	DB8 CABLE	CAL#	DB8 CABLE	CAL#
0.08 - 1.6	22710	YES	2839	NO	22710	NO	22710	NO	45420
0.13 - 2.6	22710	YES	2839	NO	22710	NO	22710	NO	45420
0.3 - 5	11355	YES	1419	NO	11355	NO	11355	NO	22710
0.6 - 13	4542	NO	4542	NO	4542	NO	4542	NO	9084
1.3 - 26	2271	NO	2271	NO	2271	NO	2271	NO	4542
2.6 - 53	1135	NO	1135	NO	1135	NO	1135	NO	2270

A controller that requires a DB8 harness is due to the fact that when inputting the flow meter cal number, some controllers can only input 4 digits. A DB8 harness will take the pulses per gallon and divide it by 8. Giving you a 4 digit cal number.

NOTE: To get the cal numbers for Micro-Trak controllers the formula is - Divide by 8, multiply by 2.

STANDARD ADAPTER HARNESS.
P/N - 53671



AGXCEL TURBINE FLOW METERS
FM750 Reg Micro-Trak Cal Number - 145 (SprayMate, Auto-X) Pulses Per Gallon - 72.50 (JD, AGL, Trimble) Pulses Per 10 Gallon - 725 (Raven)
FM750 LF Micro-Trak Cal Number - 466 (Spraymate, Auto-X) Pulses Per Gallon - 233 (JD, AGL, Trimble) Pulses Per 10 Gallon - 2330 (Raven)



AGXCEL ORION 3 FLOW METERS

GXORION3

The Orion 3 is an advanced electromagnetic flowmeter designed for precise management of liquid distribution systems on seeders. It supports multiple flowmeter connections via a CAN-Bus port, facilitating seamless integration into complex agricultural setups. This device ensures accurate monitoring and control of liquid flow, enhancing efficiency and productivity.

Diagnostic LED allows for quick identification of flow and signal issues



See parts catalog layout of kit fittings with options for inlet and outlet. Only the DN17 will need a T3 fitting for direct adaption.

Serial number, flow meter range (DN#) and calibration number are all listed on the side label.



	OFF	The flowmeter is not powered.
	GREEN FLASHER	The flowmeter is waiting to acquire an address on the CAN line to which it is connected.
	GREEN STEADY ON	Presence of STILL liquid inside the flowmeter.
	BLUE STEADY ON	The flowmeter is reading the passage of the liquid inside.
	VIOLET STEADY ON	No liquid has been detected inside the flowmeter.
	WHITE STEADY ON	Cleaning of the reading electrodes in progress.
	RED FLASHER	The error codes are indicated through blinks, which are described in the table on page 10.
	RED STEADY ON	SEVERE ERROR: contact a service center.
	ORANGE BLINKING	Device in bootloader mode for firmware upgrade.
	ORANGE STEADY ON	Device in bootloader mode.

The status indicates the operating status of the device. At startup, during the first 5 seconds, Orion 3 displays its configuration regardless of the presence of an alarm (Green LED Flashing). Each type of blinking (flashing) corresponds to signal as indicated in the table above.

GXORION3 FLOW CHART									
FLOW RANGE (GPM)	PULSES PER GALLON	JOHN DEERE GS2/GS3 2K LRCM		AG LEADER L1		TRIMBLE		AUTOX SPRAYMATE PLUS	
		DB8 CABLE	CAL#	DB8 CABLE	CAL#	DB8 CABLE	CAL#	DB8 CABLE	CAL#
.04 - 1.6 (DN3)	75708	YES	9464	YES	9464	NO	75708	YES	9464
.08 - 3.17 (DN4)	37854		4731		4731		37854		4731
.26 - 10.5 (DN7)	11356		1419		11356		11356		22710
.52 - 21 (DN10)	4245	NO	4245	NO	4245	NO	4245	NO	8490
1.45 - 58 (DN)	2063		2063		2063		2063		4126

FLOW RANGE (GPM)	PULSES PER GALLON	RAVEN RCM		AG LEADER L2		MUELLER		GX8	
		DB8 CABLE	CAL#	DB8 CABLE	CAL#	DB8 CABLE	CAL#	DB8 CABLE	CAL#
.04 - 1.6 (DN3)	75708	YES	9464	YES	9464	NO	75708	YES	9464
.08 - 3.17 (DN4)	37854		4731		4731		37854		4731
.26 - 10.5 (DN7)	11356		1419		11356		11356		22710
.52 - 21 (DN10)	4245	NO	4245	NO	4245	NO	4245	NO	8490
1.45 - 58 (DN17)	2063		2063		2063		2063		4126

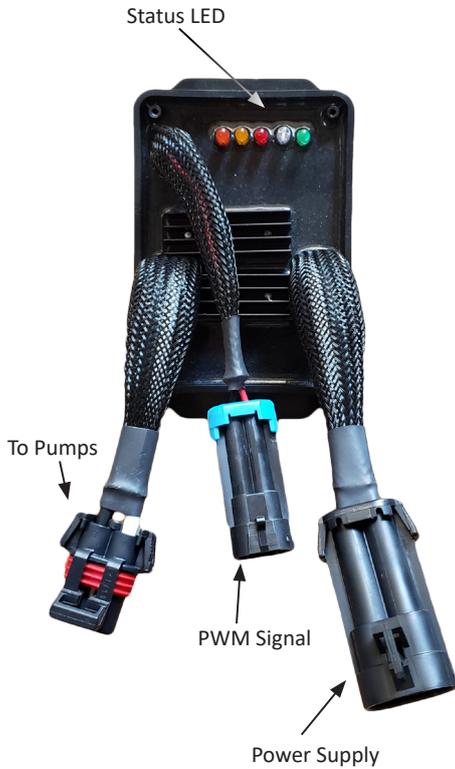
WHEN USING A ORION3 FLOW METER ONE OF THE HARNESSSES BELOW MUST BE USED FOR THE OEM CONTROLLER TO BE ABLE TO CALCULATE FLOW. SEE CHART ABOVE

GXORION3 ADAPTER HARNESS PN#13135	GXORION3 DIVIDE BY 8 (DB8) PN#13134
-----------------------------------	-------------------------------------

PWM STATUS LIGHTS

EPD LED Signals

AgXcel has 2 styles for EPD's. One of the models has three lights and the other model has five lights. Ensure that you are looking at the correct diagram to confirm the signals you are receiving.

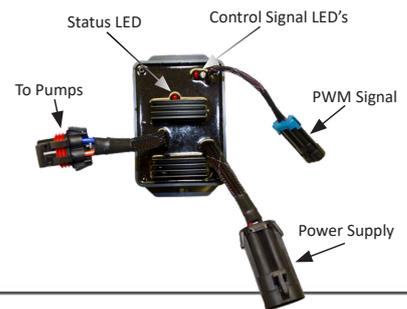


The PWM's take 12 volts for power and will send that voltage to the pumps to kick on and off. If the pumps are not turning on, then your PWM might not be getting 12 volts or your pumps might have gone bad.

The status LED on the PWM is a good indicator to determine if there's a problem with the system. It is especially helpful if you are calling in for tech support.

EPD Status Lights

	Color	Time Line	LED State	Condition	
POWER	Power (12V)	Green		Off	No power (or less then 6.8V)
	Power (12V)	Green		1hz Flash	Under Voltage (less then 10.5V)
	Power (12V)	Green		On Solid	12V supplied (power is acceptable)
PWM	PWM	Blue		Off	No PWM Signal to the Module
	PWM	Blue		1hz Flash	PWM signal present
	PWM	Blue		On Solid	Maximum Duty Cycle
TEMP	High Temp	Yellow		Off	Module within Temperature Range
	High Temp	Yellow		1hz Flash	Module Temp is elevated
	High Temp	Yellow		On Solid	Module Auto Shutdown from Temp
MOTOR CURRENT	Current	Red		Off	Normal Operation (Under Max)
	Open Circuit	Red		1hz Flash	Open Circuit Condition
	Over Current	Red		On Solid	Over Current (Output Shorted)
MOTOR RUNNING	Motor	Orange		Off	Motor is not running
	Motor	Orange		On Solid	Motor is running



LED STATUS INDICATOR CODES		EDP Status Lights
Light on steady		Unit is turned on and operating normally
Steady Flashing		Unit in HOLD. Check Run/Hold jumper or remote switch for correct operation.
1 Flash/pause		Open circuit detected. Check motor connections for open.
2 Flashes/pause		Output short circuit detected. Check motor wiring.
3 Flashes/pause		Over-current condition. Check total load.
4 Flashes/pause		Input Power fault. Check input power wiring.
5 Flashes/pause		Input frequency out of range.

NOTE: Cycle power with the controller ON/OFF switch to clear a fault code



PUMP PRIMING AND BLEEDER VALVE



A bleeder valve is included on every AgXcel system. Every row has a check valve. These valves do not let air escape from the system unless it is pressurized. 12 volt electric pumps are not good air compressors, so pumps can struggle to prime due to air trapped on the outlet side of the pump.

The bleeder valve is a small 1/4" valve that, when opened, lets air escape from the pump outlet at zero pressure. Open this valve until liquid comes out and then close the valve.

← Bleeder Valve

GX ACCESSORY - RECIRCULATION KIT

(Read Instructions Completely before Beginning Installation)

Re-circulation Regulation Valve



APPLICATIONS

1. Re-circulation flow is required for product agitation.
2. IF a low flow rate is required, that would require pump to run less than 10-20% of maximum capacity. This kit will allow the pump to turn faster, while only applying a low rate of product. This makes the pump performance more stable under these circumstances. Make sure the flow meter minimum flow is capable of metering the flow rate you wish to apply to the ground.

HOW IT WORKS

The recirculation valve diverts some pump flow before the flow meter. The application rate is still measured by the flow meter and everything that passes through the flow meter is applied to the ground. Adjust the regulation valve to set the required recirculation. This feature is standard on the GX2C. If you wish to feed back to tank optional 3/8" barb is supplied. Otherwise this feature is plugged upon shipping in case you do not wish to use it.

USE OF THIS KIT LOWERS THE MAXIMUM RATE THAT CAN BE APPLIED

Do I need recirculation flow?

Recirculation flow allows the pump to run faster than if the total pump flow was applied to the ground. This may be helpful when operating at very low rates. The GX2C will typically operate with the recirculation valve closed. The hose on the recirculation loop can be changed to allow for more or less recirculation. Too much recirculation can result in unstable flow reading on the display.

DISK ORIFICE CHART

For 30" row spacing



30" Spacing

Orifice Color (Approx Size)	PSI	Gal/Min 28-0-0	MPH						
			4.0	4.5	5.0	5.5	6.0	6.5	7.0
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
Black (35)	10	0.070	3.46	3.08	2.77	2.52	2.31	2.13	1.98
	20	0.098	4.86	4.32	3.89	3.54	3.24	2.99	2.78
	30	0.120	5.96	5.30	4.77	4.33	3.97	3.67	3.40
	40	0.139	6.88	6.11	5.50	5.00	4.58	4.23	3.93
	50	0.156	7.71	6.85	6.17	5.61	5.14	4.74	4.41
	60	0.170	8.41	7.48	6.73	6.12	5.61	5.18	4.81
Brown (41)	10	0.094	4.64	4.13	3.71	3.38	3.10	2.86	2.65
	20	0.132	6.53	5.80	5.22	4.75	4.35	4.02	3.73
	30	0.162	8.02	7.13	6.41	5.83	5.34	4.93	4.58
	40	0.187	9.24	8.22	7.39	6.72	6.16	5.69	5.28
	50	0.209	10.34	9.19	8.27	7.52	6.89	6.36	5.91
	60	0.228	11.30	10.05	9.04	8.22	7.53	6.95	6.46
Orange (46)	10	0.119	5.91	5.26	4.73	4.30	3.94	3.64	3.38
	20	0.169	8.37	7.44	6.69	6.08	5.58	5.15	4.78
	30	0.207	10.25	9.11	8.20	7.45	6.83	6.31	5.86
	40	0.239	11.83	10.51	9.46	8.60	7.88	7.28	6.76
	50	0.267	13.23	11.76	10.58	9.62	8.82	8.14	7.56
	60	0.293	14.50	12.89	11.60	10.55	9.67	8.92	8.29
Maroon (52)	10	0.149	7.36	6.54	5.89	5.35	4.91	4.53	4.21
	20	0.210	10.38	9.23	8.31	7.55	6.92	6.39	5.93
	30	0.257	12.70	11.29	10.16	9.24	8.47	7.82	7.26
	40	0.296	14.67	13.04	11.74	10.67	9.78	9.03	8.39
	50	0.332	16.43	14.60	13.14	11.95	10.95	10.11	9.39
	60	0.363	17.96	15.96	14.37	13.06	11.97	11.05	10.26
Red (63)	10	0.218	10.78	9.58	8.62	7.84	7.18	6.63	6.16
	20	0.307	15.20	13.51	12.16	11.05	10.13	9.35	8.69
	30	0.376	18.62	16.55	14.89	13.54	12.41	11.46	10.64
	40	0.435	21.51	19.12	17.21	15.64	14.34	13.24	12.29
	50	0.486	24.05	21.38	19.24	17.49	16.03	14.80	13.74
	60	0.532	26.33	23.40	21.06	19.15	17.55	16.20	15.04
Blue (80)	10	0.351	17.39	15.46	13.91	12.65	11.59	10.70	9.94
	20	0.496	24.57	21.84	19.66	17.87	16.38	15.12	14.04
	30	0.608	30.09	26.75	24.08	21.89	20.06	18.52	17.20
	40	0.702	34.74	30.88	27.79	25.26	23.16	21.38	19.85
	50	0.785	38.86	34.54	31.08	28.26	25.90	23.91	22.20
	60	0.859	42.53	37.81	34.03	30.93	28.36	26.18	24.31
Yellow (95)	10	0.506	25.06	22.27	20.05	18.22	16.70	15.42	14.32
	20	0.715	35.39	31.46	28.32	25.74	23.60	21.78	20.23
	30	0.876	43.37	38.55	34.69	31.54	28.91	26.69	24.78
	40	1.009	49.94	44.39	39.95	36.32	33.29	30.73	28.54
	50	1.133	56.07	49.84	44.86	40.78	37.38	34.51	32.04
	60	1.239	61.33	54.51	49.06	44.60	40.88	37.74	35.04
Green (110)	10	0.686	33.95	30.18	27.16	24.69	22.63	20.89	19.40
	20	0.973	48.19	42.83	38.55	35.04	32.12	29.65	27.53
	30	1.186	58.70	52.18	46.96	42.69	39.13	36.12	33.54
	40	1.372	67.90	60.35	54.32	49.38	45.27	41.78	38.80
	50	1.531	75.78	67.36	60.63	55.12	50.52	46.64	43.30
	60	1.681	83.23	73.98	66.58	60.53	55.49	51.22	47.56

AgXcel GX Electric Pump(s) Pressure recommendations (with a 4lb check valve)

- Minimum 10 PSI
- Maximum 30 PSI

AgXcel GX Pressure recommendations (with a 10lb check valve)

- Minimum 20 PSI
- Maximum 80 PSI

Chart is for 28-0-0 Fertilizer @ 70 Degree

- Heavier fertilizers (like 10-34-0) will have 5-15% less flow than chart indicates for a certain pressure
- Cold fertilizers will cause system pressure to increase at a given application rate.
- GX Electric Pump Systems will have reduced flow and increased electrical current draw due to cold fertilizer increasing operating pressure. **Use the largest orifice possible for cold weather operation.**



CALCULATOR

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



DISK ORIFICE CHART

Common Grain Drill row spacings



7.5" Spacing

Orifice Color (Approx Size)	PSI	Gal/Min	MPH						
		28-0-0	4.0	4.5	5.0	5.5	6.0	6.5	7.0
Pink (24)	10	0.033	6.5	5.8	5.2	4.7	4.3	4.0	3.7
	20	0.046	9.1	8.1	7.3	6.6	6.1	5.6	5.2
	30	0.057	11.2	10.0	9.0	8.2	7.5	6.9	6.4
	40	0.065	13.0	11.5	10.4	9.4	8.6	8.0	7.4
	50	0.073	14.5	12.9	11.6	10.6	9.7	8.9	8.3
	60	0.081	15.9	14.2	12.8	11.6	10.6	9.8	9.1
Gray (30)	10	0.050	10.0	8.9	8.0	7.3	6.7	6.1	5.7
	20	0.072	14.2	12.6	11.4	10.3	9.5	8.7	8.1
	30	0.088	17.3	15.4	13.9	12.6	11.6	10.7	9.9
	40	0.101	20.0	17.8	16.0	14.5	13.3	12.3	11.4
	50	0.112	22.3	19.8	17.8	16.2	14.8	13.7	12.7
	60	0.124	24.5	21.8	19.6	17.8	16.4	15.1	14.0
Black (35)	10	0.070	13.8	12.3	11.1	10.1	9.2	8.5	7.9
	20	0.098	19.4	17.3	15.6	14.1	13.0	12.0	11.1
	30	0.120	23.8	21.2	19.1	17.3	15.9	14.7	13.6
	40	0.139	27.5	24.5	22.0	20.0	18.3	16.9	15.7
	50	0.156	30.8	27.4	24.7	22.4	20.6	19.0	17.6
	60	0.170	33.6	29.9	26.9	24.5	22.4	20.7	19.2
Brown (41)	10	0.094	19	17	15	14	12	11	11
	20	0.132	26	23	21	19	17	16	15
	30	0.162	32	29	26	23	21	20	18
	40	0.187	37	33	30	27	25	23	21
	50	0.209	41	37	33	30	28	25	24
	60	0.228	45	40	36	33	30	28	26
Orange (46)	10	0.119	24	21	19	17	16	15	14
	20	0.169	33	30	27	24	22	21	19
	30	0.207	41	36	33	30	27	25	23
	40	0.239	47	42	38	34	32	29	27
	50	0.267	53	47	42	38	35	33	30
	60	0.293	58	52	46	42	39	36	33
Maroon (52)	10	0.149	29	26	24	21	20	18	17
	20	0.210	42	37	33	30	28	26	24
	30	0.257	51	45	41	37	34	31	29
	40	0.296	59	52	47	43	39	36	34
	50	0.332	66	58	53	48	44	40	38
	60	0.363	72	64	57	52	48	44	41
Red (63)	10	0.218	43	38	34	31	29	27	25
	20	0.307	61	54	49	44	41	37	35
	30	0.376	74	66	60	54	50	46	43
	40	0.435	86	76	69	63	57	53	49
	50	0.486	96	86	77	70	64	59	55
	60	0.532	105	94	84	77	70	65	60
Blue (80)	10	0.351	70	62	56	51	46	43	40
	20	0.496	98	87	79	71	66	60	56
	30	0.608	120	107	96	88	80	74	69
	40	0.702	139	124	111	101	93	86	79
	50	0.785	155	138	124	113	104	96	89
	60	0.859	170	151	136	124	113	105	97
Yellow (95)	10	0.506	100	89	80	73	67	62	57
	20	0.715	142	126	113	103	94	87	81
	30	0.876	173	154	139	126	116	107	99
	40	1.009	200	178	160	145	133	123	114
	50	1.133	224	199	179	163	150	138	128
	60	1.239	245	218	196	178	164	151	140

All application rates (gallons/acres) are estimates based on 0-28-0 (10.65 lbs/gallon) at 70 degrees F

10" Spacing

Orifice Color (Approx Size)	PSI	Gal/Min	MPH						
		28-0-0	4.0	4.5	5.0	5.5	6.0	6.5	7.0
Pink (24)	10	0.033	4.9	4.3	3.9	3.5	3.2	3.0	2.8
	20	0.046	6.8	6.1	5.5	5.0	4.6	4.2	3.9
	30	0.057	8.4	7.5	6.7	6.1	5.6	5.2	4.8
	40	0.065	9.7	8.6	7.8	7.1	6.5	6.0	5.6
	50	0.073	10.9	9.7	8.7	7.9	7.3	6.7	6.2
	60	0.081	12.0	10.6	9.6	8.7	8.0	7.4	6.8
Gray (30)	10	0.050	7.5	6.7	6.0	5.4	5.0	4.6	4.3
	20	0.072	10.6	9.5	8.5	7.7	7.1	6.6	6.1
	30	0.088	13.0	11.6	10.4	9.5	8.7	8.0	7.4
	40	0.101	15.0	13.3	12.0	10.9	10.0	9.2	8.6
	50	0.112	16.7	14.8	13.4	12.1	11.1	10.3	9.5
	60	0.124	18.4	16.4	14.7	13.4	12.3	11.3	10.5
Black (35)	10	0.070	10.4	9.2	8.3	7.6	6.9	6.4	5.9
	20	0.098	14.6	13.0	11.7	10.6	9.7	9.0	8.3
	30	0.120	17.9	15.9	14.3	13.0	11.9	11.0	10.2
	40	0.139	20.6	18.3	16.5	15.0	13.8	12.7	11.8
	50	0.156	23.1	20.6	18.5	16.8	15.4	14.2	13.2
	60	0.170	25.2	22.4	20.2	18.4	16.8	15.5	14.4
Brown (41)	10	0.094	14	12	11	10	9	9	8
	20	0.132	20	17	16	14	13	12	11
	30	0.162	24	21	19	17	16	15	14
	40	0.187	28	25	22	20	18	17	16
	50	0.209	31	28	25	23	21	19	18
	60	0.228	34	30	27	25	23	21	19
Orange (46)	10	0.119	18	16	14	13	12	11	10
	20	0.169	25	22	20	18	17	15	14
	30	0.207	31	27	25	22	21	19	18
	40	0.239	35	32	28	26	24	22	20
	50	0.267	40	35	32	29	26	24	23
	60	0.293	43	39	35	32	29	27	25
Maroon (52)	10	0.149	22	20	18	16	15	14	13
	20	0.210	31	28	25	23	21	19	18
	30	0.257	38	34	30	28	25	23	22
	40	0.296	44	39	35	32	29	27	25
	50	0.332	49	44	39	36	33	30	28
	60	0.363	54	48	43	39	36	33	31
Red (63)	10	0.218	32	29	26	24	22	20	18
	20	0.307	46	41	36	33	30	28	26
	30	0.376	56	50	45	41	37	34	32
	40	0.435	65	57	52	47	43	40	37
	50	0.486	72	64	58	52	48	44	41
	60	0.532	79	70	63	57	53	49	45
Blue (80)	10	0.351	52	46	42	38	35	32	30
	20	0.496	74	66	59	54	49	45	42
	30	0.608	90	80	72	66	60	56	52
	40	0.702	104	93	83	76	69	64	60
	50	0.785	117	104	93	85	78	72	67
	60	0.859	128	113	102	93	85	79	73
Yellow (95)	10	0.506	75	67	60	55	50	46	43
	20	0.715	106	94	85	77	71	65	61
	30	0.876	130	116	104	95	87	80	74
	40	1.009	150	133	120	109	100	92	86
	50	1.133	168	150	135	122	112	104	96
	60	1.239	184	164	147	134	123	113	105

All application rates (gallons/acres) are estimates based on 0-28-0 (10.65 lbs/gallon) at 70 degrees F

DISK ORIFICE CHART

Common Grain Drill row spacings

15" Spacing

Orifice Color (Approx Size)	PSI	Gal/Min 28-0-0	MPH						
			4.0	4.5	5.0	5.5	6.0	6.5	7.0
Pink (24)	10	0.033	3.2	2.9	2.6	2.4	2.2	2.0	1.9
	20	0.046	4.6	4.0	3.6	3.3	3.0	2.8	2.6
	30	0.057	5.6	5.0	4.5	4.1	3.7	3.5	3.2
	40	0.065	6.5	5.8	5.2	4.7	4.3	4.0	3.7
	50	0.073	7.3	6.5	5.8	5.3	4.8	4.5	4.2
	60	0.081	8.0	7.1	6.4	5.8	5.3	4.9	4.6
Gray (30)	10	0.050	5.0	4.4	4.0	3.6	3.3	3.1	2.9
	20	0.072	7.1	6.3	5.7	5.2	4.7	4.4	4.1
	30	0.088	8.7	7.7	6.9	6.3	5.8	5.3	5.0
	40	0.101	10.0	8.9	8.0	7.3	6.7	6.1	5.7
	50	0.112	11.1	9.9	8.9	8.1	7.4	6.8	6.4
	60	0.124	12.3	10.9	9.8	8.9	8.2	7.5	7.0
Black (35)	10	0.070	6.9	6.2	5.5	5.0	4.6	4.3	4.0
	20	0.098	9.7	8.6	7.8	7.1	6.5	6.0	5.6
	30	0.120	11.9	10.6	9.5	8.7	7.9	7.3	6.8
	40	0.139	13.8	12.2	11.0	10.0	9.2	8.5	7.9
	50	0.156	15.4	13.7	12.3	11.2	10.3	9.5	8.8
	60	0.170	16.8	15.0	13.5	12.2	11.2	10.4	9.6
Brown (41)	10	0.094	9.3	8.3	7.4	6.8	6.2	5.7	5.3
	20	0.132	13.1	11.6	10.4	9.5	8.7	8.0	7.5
	30	0.162	16.0	14.3	12.8	11.7	10.7	9.9	9.2
	40	0.187	18.5	16.4	14.8	13.4	12.3	11.4	10.6
	50	0.209	20.7	18.4	16.5	15.0	13.8	12.7	11.8
	60	0.228	22.6	20.1	18.1	16.4	15.1	13.9	12.9
Orange (46)	10	0.119	11.8	10.5	9.5	8.6	7.9	7.3	6.8
	20	0.169	16.7	14.9	13.4	12.2	11.2	10.3	9.6
	30	0.207	20.5	18.2	16.4	14.9	13.7	12.6	11.7
	40	0.239	23.7	21.0	18.9	17.2	15.8	14.6	13.5
	50	0.267	26.5	23.5	21.2	19.2	17.6	16.3	15.1
	60	0.293	29.0	25.8	23.2	21.1	19.3	17.8	16.6
Maroon (52)	10	0.149	15	13	12	11	10	9	8
	20	0.210	21	18	17	15	14	13	12
	30	0.257	25	23	20	18	17	16	15
	40	0.296	29	26	23	21	20	18	17
	50	0.332	33	29	26	24	22	20	19
	60	0.363	36	32	29	26	24	22	21
Red (63)	10	0.218	22	19	17	16	14	13	12
	20	0.307	30	27	24	22	20	19	17
	30	0.376	37	33	30	27	25	23	21
	40	0.435	43	38	34	31	29	26	25
	50	0.486	48	43	38	35	32	30	27
	60	0.532	53	47	42	38	35	32	30
Blue (80)	10	0.351	35	31	28	25	23	21	20
	20	0.496	49	44	39	36	33	30	28
	30	0.608	60	54	48	44	40	37	34
	40	0.702	69	62	56	51	46	43	40
	50	0.785	78	69	62	57	52	48	44
	60	0.859	85	76	68	62	57	52	49
Yellow (95)	10	0.506	50	45	40	36	33	31	29
	20	0.715	71	63	57	51	47	44	40
	30	0.876	87	77	69	63	58	53	50
	40	1.009	100	89	80	73	67	61	57
	50	1.133	112	100	90	82	75	69	64
	60	1.239	123	109	98	89	82	75	70
Green (110)	10	0.686	68	60	54	49	45	42	39
	20	0.973	96	86	77	70	64	59	55
	30	1.186	117	104	94	85	78	72	67
	40	1.372	136	121	109	99	91	84	78
	50	1.531	152	135	121	110	101	93	87
	60	1.681	166	148	133	121	111	102	95
White (125)	10	0.867	86	76	69	62	57	53	49
	20	1.230	122	108	97	89	81	75	70
	30	1.504	149	132	119	108	99	92	85
	40	1.735	172	153	137	125	114	106	98
	50	1.938	192	171	153	140	128	118	110
	60	2.124	210	187	168	153	140	129	120
Lime Green (156)	10	1.372	136	121	109	99	91	84	78
	20	1.947	193	171	154	140	128	119	110
	30	2.381	236	209	189	171	157	145	135
	40	2.752	272	242	218	198	182	168	156
	50	3.071	304	270	243	221	203	187	174
	60	3.363	333	296	266	242	222	205	190

All application rates (gallons/acre) are estimates based on 0-28-0 (10.65 lbs/gallon) at 70 degrees F.

20" Spacing

Orifice Color (Approx Size)	PSI	Gal/Min 28-0-0	MPH						
			4.0	4.5	5.0	5.5	6.0	6.5	7.0
Pink (24)	10	0.033	2.4	2.2	1.9	1.8	1.6	1.5	1.4
	20	0.046	3.4	3.0	2.7	2.5	2.3	2.1	2.0
	30	0.057	4.2	3.7	3.4	3.1	2.8	2.6	2.4
	40	0.065	4.9	4.3	3.9	3.5	3.2	3.0	2.8
	50	0.073	5.5	4.8	4.4	4.0	3.6	3.4	3.1
	60	0.081	6.0	5.3	4.8	4.3	4.0	3.7	3.4
Gray (30)	10	0.050	3.7	3.3	3.0	2.7	2.5	2.3	2.1
	20	0.072	5.3	4.7	4.3	3.9	3.5	3.3	3.0
	30	0.088	6.5	5.8	5.2	4.7	4.3	4.0	3.7
	40	0.101	7.5	6.7	6.0	5.4	5.0	4.6	4.3
	50	0.112	8.3	7.4	6.7	6.1	5.6	5.1	4.8
	60	0.124	9.2	8.2	7.4	6.7	6.1	5.7	5.3
Black (35)	10	0.070	5.2	4.6	4.2	3.8	3.5	3.2	3.0
	20	0.098	7.3	6.5	5.8	5.3	4.9	4.5	4.2
	30	0.120	8.9	7.9	7.1	6.5	6.0	5.5	5.1
	40	0.139	10.3	9.2	8.3	7.5	6.9	6.3	5.9
	50	0.156	11.6	10.3	9.3	8.4	7.7	7.1	6.6
	60	0.170	12.6	11.2	10.1	9.2	8.4	7.8	7.2
Brown (41)	10	0.094	7.0	6.2	5.6	5.1	4.6	4.3	4.0
	20	0.132	9.8	8.7	7.8	7.1	6.5	6.0	5.6
	30	0.162	12.0	10.7	9.6	8.7	8.0	7.4	6.9
	40	0.187	13.9	12.3	11.1	10.1	9.2	8.5	7.9
	50	0.209	15.5	13.8	12.4	11.3	10.3	9.5	8.9
	60	0.228	17.0	15.1	13.6	12.3	11.3	10.4	9.7
Orange (46)	10	0.119	8.9	7.9	7.1	6.5	5.9	5.5	5.1
	20	0.169	12.6	11.2	10.0	9.1	8.4	7.7	7.2
	30	0.207	15.4	13.7	12.3	11.2	10.3	9.5	8.8
	40	0.239	17.7	15.8	14.2	12.9	11.8	10.9	10.1
	50	0.267	19.8	17.6	15.9	14.4	13.2	12.2	11.3
	60	0.293	21.7	19.3	17.4	15.8	14.5	13.4	12.4
Maroon (52)	10	0.149	11	10	9	8	7	7	6
	20	0.210	16	14	12	11	10	10	9
	30	0.257	19	17	15	14	13	12	11
	40	0.296	22	20	18	16	15	14	13
	50	0.332	25	22	20	18	16	15	14
	60	0.363	27	24	22	20	18	17	15
Red (63)	10	0.218	16	14	13	12	11	10	9
	20	0.307	23	20	18	17	15	14	13
	30	0.376	28	25	22	20	19	17	16
	40	0.435	32	29	26	23	22	20	18
	50	0.486	36	32	29	26	24	22	21
	60	0.532	39	35	32	29	26	24	23
Blue (80)	10	0.351	26	23	21	19	17	16	15
	20	0.496	37	33	29	27	25	23	21
	30	0.608	45	40	36	33	30	28	26
	40	0.702	52	46	42	38	35	32	30
	50	0.785	58	52	47	42	39	36	33
	60	0.859	64	57	51	46	43	39	36
Yellow (95)	10	0.506	38	33	30	27	25	23	21
	20	0.715	53	47	42	39	35	33	30
	30	0.876	65	58	52	47	43	40	37
	40	1.009	75	67	60	54	50	46	43
	50	1.133	84	75	67	61	56	52	48
	60	1.239	92	82	74	67	61	57	53
Green (110)	10	0.686	51	45	41	37	34	31	29
	20	0.973	72	64	58	53	48	44	41
	30	1.186	88	78	70	64	59	54	50
	40	1.372	102	91	81	74	68	63	58
	50	1.531	114	101	91	83	76	70	65
	60	1.681	125	111	100	91	83	77	71
White (125)	10	0.867	64	57	52	47	43	40	37
	20	1.230	91	81	73	66	61	56	52
	30	1.504	112	99	89	81	74	69	64
	40	1.735	129	114	103	94	86	79	74
	50	1.938	144	128	115	105	96	89	82
	60	2.124	158	140	126	115	105	97	90
Lime Green (156)	10	1.372	102	91	81	74	68	63	58
	20	1.947	145	128	116	105	96	89	83
	30	2.381	177	157	141	129	118	109	101
	40	2.752	204	182	163	149	136	126	117
	50	3.071	228	203	182	166	152	140	130
	60	3.363	250	222	200	182	166	154	143

All application rates (gallons/acre) are estimates based on 0-28-0 (10.65 lbs/gallon) at 70 degrees F.



DISK ORIFICE CHART



**2106 F AVENUE
KEARNEY NE 68847**

877.218.1981

22" Spacing	Orifice Color (Approx Size)	PSI	Gal/Min		MPH						
			28-0-0		4.0	4.5	5.0	5.5	6.0	6.5	7.0
Pink (24)	10	0.033	2.2	2.0	1.8	1.6	1.5	1.4	1.3		
	20	0.046	3.1	2.8	2.5	2.3	2.1	1.9	1.8		
	30	0.057	3.8	3.4	3.1	2.8	2.5	2.4	2.2		
	40	0.065	4.4	3.9	3.5	3.2	2.9	2.7	2.5		
	50	0.073	5.0	4.4	4.0	3.6	3.3	3.1	2.8		
	60	0.081	5.4	4.8	4.3	4.0	3.6	3.3	3.1		
Gray (30)	10	0.050	3.4	3.0	2.7	2.5	2.3	2.1	1.9		
	20	0.072	4.8	4.3	3.9	3.5	3.2	3.0	2.8		
	30	0.088	5.9	5.3	4.7	4.3	3.9	3.6	3.4		
	40	0.101	6.8	6.1	5.4	5.0	4.5	4.2	3.9		
	50	0.112	7.6	6.7	6.1	5.5	5.1	4.7	4.3		
	60	0.124	8.4	7.4	6.7	6.1	5.6	5.1	4.8		
Black (35)	10	0.070	4.7	4.2	3.8	3.4	3.1	2.9	2.7		
	20	0.098	6.6	5.9	5.3	4.8	4.4	4.1	3.8		
	30	0.120	8.1	7.2	6.5	5.9	5.4	5.0	4.6		
	40	0.139	9.4	8.3	7.5	6.8	6.3	5.8	5.4		
	50	0.156	10.5	9.3	8.4	7.6	7.0	6.5	6.0		
	60	0.170	11.5	10.2	9.2	8.3	7.6	7.1	6.6		
Brown (41)	10	0.094	6.3	5.6	5.1	4.6	4.2	3.9	3.6		
	20	0.132	8.9	7.9	7.1	6.5	5.9	5.5	5.1		
	30	0.162	10.9	9.7	8.7	8.0	7.3	6.7	6.2		
	40	0.187	12.6	11.2	10.1	9.2	8.4	7.8	7.2		
	50	0.209	14.1	12.5	11.3	10.3	9.4	8.7	8.1		
	60	0.228	15.4	13.7	12.3	11.2	10.3	9.5	8.8		
Orange (46)	10	0.119	8.1	7.2	6.5	5.9	5.4	5.0	4.6		
	20	0.169	11.4	10.1	9.1	8.3	7.6	7.0	6.5		
	30	0.207	14.0	12.4	11.2	10.2	9.3	8.6	8.0		
	40	0.239	16.1	14.3	12.9	11.7	10.8	9.9	9.2		
	50	0.267	18.0	16.0	14.4	13.1	12.0	11.1	10.3		
	60	0.293	19.8	17.6	15.8	14.4	13.2	12.2	11.3		
Maroon (52)	10	0.149	10	9	8	7	7	6	6		
	20	0.210	14	13	11	10	9	9	8		
	30	0.257	17	15	14	13	12	11	10		
	40	0.296	20	18	16	15	13	12	11		
	50	0.332	22	20	18	16	15	14	13		
	60	0.363	24	22	20	18	16	15	14		
Red (63)	10	0.218	15	13	12	11	10	9	8		
	20	0.307	21	18	17	15	14	13	12		
	30	0.376	25	23	20	18	17	16	15		
	40	0.435	29	26	23	21	20	18	17		
	50	0.486	33	29	26	24	22	20	19		
	60	0.532	36	32	29	26	24	22	21		
Blue (80)	10	0.351	24	21	19	17	16	15	14		
	20	0.496	34	30	27	24	22	21	19		
	30	0.608	41	36	33	30	27	25	23		
	40	0.702	47	42	38	34	32	29	27		
	50	0.785	53	47	42	39	35	33	30		
	60	0.859	58	52	46	42	39	36	33		
Yellow (95)	10	0.506	34	30	27	25	23	21	20		
	20	0.715	48	43	39	35	32	30	28		
	30	0.876	59	53	47	43	39	36	34		
	40	1.009	68	61	54	50	45	42	39		
	50	1.133	76	68	61	56	51	47	44		
	60	1.239	84	74	67	61	56	51	48		
Green (110)	10	0.686	46	41	37	34	31	28	26		
	20	0.973	66	58	53	48	44	40	38		
	30	1.186	80	71	64	58	53	49	46		
	40	1.372	93	82	74	67	62	57	53		
	50	1.531	103	92	83	75	69	64	59		
	60	1.681	113	101	91	83	76	70	65		
White (125)	10	0.867	59	52	47	43	39	36	33		
	20	1.230	83	74	66	60	55	51	47		
	30	1.504	102	90	81	74	68	62	58		
	40	1.735	117	104	94	85	78	72	67		
	50	1.938	131	116	105	95	87	81	75		
	60	2.124	143	127	115	104	96	88	82		
Lime Green (156)	10	1.372	93	82	74	67	62	57	53		
	20	1.947	131	117	105	96	88	81	75		
	30	2.381	161	143	129	117	107	99	92		
	40	2.752	186	165	149	135	124	114	106		
	50	3.071	207	184	166	151	138	128	118		
	60	3.363	227	202	182	165	151	140	130		

All application rates (gallons/acres) are estimates based on 0-28-0 (10.65 lbs/gallon) at 70 degrees F.

36" Spacing	Orifice Color (Approx Size)	PSI	Gal/Min		MPH						
			28-0-0		4.0	4.5	5.0	5.5	6.0	6.5	7.0
Pink (24)	10	0.033	1.4	1.2	1.1	1.0	0.9	0.8	0.8		
	20	0.046	1.9	1.7	1.5	1.4	1.3	1.2	1.1		
	30	0.057	2.3	2.1	1.9	1.7	1.6	1.4	1.3		
	40	0.065	2.7	2.4	2.2	2.0	1.8	1.7	1.5		
	50	0.073	3.0	2.7	2.4	2.2	2.0	1.9	1.7		
	60	0.081	3.3	3.0	2.7	2.4	2.2	2.0	1.9		
Gray (30)	10	0.050	2.1	1.8	1.7	1.5	1.4	1.3	1.2		
	20	0.072	3.0	2.6	2.4	2.2	2.0	1.8	1.7		
	30	0.088	3.6	3.2	2.9	2.6	2.4	2.2	2.1		
	40	0.101	4.2	3.7	3.3	3.0	2.8	2.6	2.4		
	50	0.112	4.6	4.1	3.7	3.4	3.1	2.9	2.6		
	60	0.124	5.1	4.5	4.1	3.7	3.4	3.1	2.9		
Black (35)	10	0.070	2.9	2.6	2.3	2.1	1.9	1.8	1.6		
	20	0.098	4.1	3.6	3.2	2.9	2.7	2.5	2.3		
	30	0.120	5.0	4.4	4.0	3.6	3.3	3.1	2.8		
	40	0.139	5.7	5.1	4.6	4.2	3.8	3.5	3.3		
	50	0.156	6.4	5.7	5.1	4.7	4.3	4.0	3.7		
	60	0.170	7.0	6.2	5.6	5.1	4.7	4.3	4.0		
Brown (41)	10	0.094	3.9	3.4	3.1	2.8	2.6	2.4	2.2		
	20	0.132	5.4	4.8	4.4	4.0	3.6	3.3	3.1		
	30	0.162	6.7	5.9	5.3	4.9	4.5	4.1	3.8		
	40	0.187	7.7	6.8	6.2	5.6	5.1	4.7	4.4		
	50	0.209	8.6	7.7	6.9	6.3	5.7	5.3	4.9		
	60	0.228	9.4	8.4	7.5	6.8	6.3	5.8	5.4		
Orange (46)	10	0.119	4.9	4.4	3.9	3.6	3.3	3.0	2.8		
	20	0.169	7.0	6.2	5.6	5.1	4.6	4.3	4.0		
	30	0.207	8.5	7.6	6.8	6.2	5.7	5.3	4.9		
	40	0.239	9.9	8.8	7.9	7.2	6.6	6.1	5.6		
	50	0.267	11.0	9.8	8.8	8.0	7.3	6.8	6.3		
	60	0.293	12.1	10.7	9.7	8.8	8.1	7.4	6.9		
Maroon (52)	10	0.149	6	5	5	4	4	4	4		
	20	0.210	9	8	7	6	6	5	5		
	30	0.257	11	9	8	8	7	7	6		
	40	0.296	12	11	10	9	8	8	7		
	50	0.332	14	12	11	10	9	8	8		
	60	0.363	15	13	12	11	10	9	9		
Red (63)	10	0.218	9	8	7	7	6	6	5		
	20	0.307	13	11	10	9	8	8	7		
	30	0.376	16	14	12	11	10	10	9		
	40	0.435	18	16	14	13	12	11	10		
	50	0.486	20	18	16	15	13	12	11		
	60	0.532	22	20	18	16	15	14	13		
Blue (80)	10	0.351	14	13	12	11	10	9	8		
	20	0.496	20	18	16	15	14	13	12		
	30	0.608	25	22	20	18	17	15	14		
	40	0.702	29	26	23	21	19	18	17		
	50	0.785	32	29	26	24	22	20	19		
	60	0.859	35	32	28	26	24	22	20		
Yellow (95)	10	0.506	21	19	17	15	14	13	12		
	20	0.715	29	26	24	21	20	18	17		
	30	0.876	36	32	29	26	24	22	21		
	40	1.009	42	37	33	30	28	26	24		
	50	1.133	47	42	37	34	31	29	27		
	60	1.239	51	45	41	37	34	31	29		
Green (110)	10	0.686	28	25	23	21	19	17	16		
	20	0.973	40	36	32	29	27	25	23		
	30	1.186	49	43	39	36	33	30	28		
	40	1.372	57	50	45	41	38	35	32		
	50	1.531	63	56	51	46	42	39	36		
	60	1.681	69	62	55	50	46	43	40		
White (125)	10	0.867	36	32	29	26	24	22	20		
	20	1.230	51	45	41	37	34	31	29		
	30	1.504	62	55	50	45	41	38	35		
	40	1.735	72	64	57	52	48	44	41		
	50	1.938	80	71	64	58	53				

Limited Warranty on AgXcel Agricultural Pumps & Accessories

AgXcel agricultural products are warranted to be free of defects in material and workmanship under normal use for the time periods listed below, with proof of purchase.

- Pumps: one (1) year to the original purchaser from the date of manufacture, or one (1) year of use. This limited warranty will not exceed two (2) years, in any event.
- Accessories: ninety (90) days of use.

This limited warranty covers manufacturing defects or workmanship; that may develop under normal use and service in a manner up to the directions and usage recommended by the manufacturer.

Warranty does not apply to misuse or when pump or accessory is altered or used in excess of recommended speeds, pressures, temperatures, or handling fluids not suitable for pump or accessory material construction. Warranty does not apply to normal wear (such as but not limited to: seals/packings, valves, plungers and sealing o-rings), freight damage, freezing damage or damage caused by parts or accessories not supplied by AgXcel. All warranty considerations are governed by AgXcel's written return policy.

Liability of manufacturer for warranty is limited to repair or replacement of parts only at the option of the manufacturer when such products are found to be of original defect or workmanship at the time it was shipped from factory. This warranty is in lieu of all other warranties, expressed or implied, including any warranty of merchantability and of any and all other obligations or liabilities on the part of the manufacturers or equipment.

AgXcel's obligation under this limited warranty policy is limited to the repair or replacement of the product. All returns will be tested per Agxcel's factory criteria. Products found not defective (under the terms of this limited warranty) are subject to charges paid by the returnee for the testing and packaging of "tested good" non-warranty returns. No credit or labor allowances will be given for products returned as defective. Warranty replacement will be shipped on a freight allowed basis. Agxcel reserves the right to choose the method of transportation.

This limited warranty is in lieu of all other warranties, expressed or implied, and no other person is authorized to give any other warranty or assume obligation or liability on Agxcel's behalf. AgXcel shall not be liable for any labor, damage or other expense, nor shall AgXcel be liable for any indirect, incidental or consequential damages of any kind incurred by the reason of the use or sale of any defective product. This limited warranty covers agricultural products distributed within the United States of America. Other world market areas should consult with the actual distributor for any deviation from this document.

Precision Liquid Fertilizer Solutions



877-218-1981
www.agxcel.com

where precision meets the soil...



www.agxcel.com

info@agxcel.com