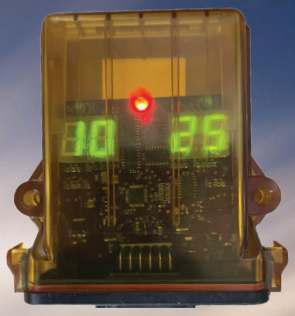
GX 30i VRT
Swath and Non-Swath
Variable Rate Technology

agxcel
2106 F AVENUE
KEARNEY NE 68847
877.218.1981

VARIABLE RATE TECHNOLOGY (SWATH & NON SWATH) INSTALLATION GUIDE



NON-SWATH

SWATH

REV.08302021.v2

www.agxcel.com info@agxcel.com

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INTRODUCTION TO THE GX30

The AgXcel GX30i VRT design is based off of the ability to control system pressure when used in the application of liquid fertilizer in agriculture variable rate scenarios. In the AG space, AgXcel provides a high volume liquid fertilizer application system named the GX5. The GX5 is a diaphragm pump driven by the tractors hydraulics and is capable of rates ranging from 3 GPM to 70 GPM with 4 different diaphragm pump setups. Many controllers on the market today (JD GS2/3, Trimble, Raven, Ag Leader, MicroTrak) can manage the AgXcel GX5 solution for Auto Rate and VRT where the rate is automatically controlled when the speed of the tractor increases or decreases, or the rate is increased or decreased due to prescription application mapping.

However, the problem with VRT today is that many producers (farmers) want to reach broader ranges of application with one solution and one pass through the field. For example, a producer may want to apply in his field, liquid fertilizer with an application range of 12 GPA up to 50 GPA using a prescription based application. The problem is that system orifices that allow this broad of a range do not exist without creating too high of system pressure on the high end versus too low of pressure on the low range side. So when a liquid application system is required to apply 12 GPA at 20 PSI everything works fine, however, when the system needs to apply 50 GPA the system pressure will spike much higher than the system components can maintain and the 50 GPA is not achievable.

The AgXcel GX30i Variable Rate Technology addresses this problem by using dual micro control valves to manage system pressure and variable rates. The following guide will walk you through the details required to install, setup and manage this system.

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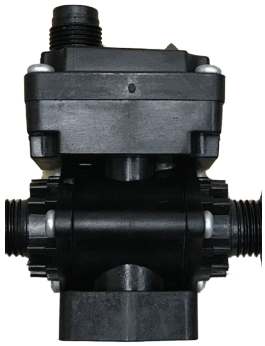
The GX30i Valve provides instantaneous on/off control eliminating misapplications and waste. Utilizing a robust, quarter-turn electric ball valve that is highly reliable as compared to solenoid and plungers valves. The GX30i valve continuously utilizes an extremely low amount of power and provides a high flow capacity in a compact valve design.

- Easy to install, compact size and weight allow retrofitting to upgrade existing systems.
- Instantaneous on-off control with 12-volt actuation eliminates misapplication and waste
- Eliminates the need for pressure check valves and section control manifold
- Lighted valves to see signal received and valves are working
- Two actuation mode options:
  - - Simple 3-wire, 12 volt on/off actuation
  - - Operate as an individually addressed valve on a CAN bus/ISO system
- Innovative locking collar mechanism allows for easy adjustments to valve orientation on the nozzle body.



THINGS TO CONSIDER:

1. The GX30i bracket may be installed in front of the tool bar or to the back of the tool bar. The Dual Universal Mounting Bracket gives you the flexibility to mount the valves in many different configurations. Just ensure that row trash or stocks do not hit the GX30i Valve.
2. The GX30i Valve may be connected to a variety of Row Delivery devices to deliver the product the way you want. There are three different sizes of connection kits. Based on the rates you are trying to achieve the correct kit will be configured with your system.
3. This system has the ability to work with different (and variable) fertilizer products and the ability to apply at an extremely wide range of rates. The only variance is ensuring that the proper tubing or hose size is installed for the proper GPA per row that is being applied. As a rule of volume AgXcel uses the following data --

GPA	Hose Size	Clamping Method
1 - 10 GPA	1/4” Tubing	Quick Connect Couplers
11 GPA - 90 GPA	3/8” Hose	Stainless Steel Hose Clamps
90 GPA and higher	3/8” Hose or 1/2” Hose	Stainless Steel Hose Clamps

The are three different plumbing kit sizes. The appropriate kit will be based on your desired GPA. These plumbing kits will contain everything you need to mount the GX30i to a tool bar frame.

These instructions will show you how to assemble the valves and mounting brackets as well as give you some ideas of how and where to mount them. Installation may vary on your tool-bar as some tool-bars are busier than others. With the Dual Universal Mounting Bracket and the GX30i Valves rotating top you will have some flexibility as to how you mount them.

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Locate on the planter (or implement) where the brackets will be mounted. Determine if the bracket will be mounted in the front or rear of the implement.

Once all the brackets are mounted, begin to plumb all GX30i Valves.

All plumbing will come from a floating ball manifold with each line being split to allow for a High volume range valve and a low volume range valve to be incorporated. Once the valves are plumbed they will be re-integrated into one line and connected to a row applicator (ie. stainless steel tube).

GX30i VRT MODULE w/swath		GX30i VRT MODULE non-swath
 Fig. 1-3		 Fig. 1-4.
 Fig. 1-1		 Fig. 1-1

SUGGESTED INSTALL STARTING POINT

Locate and Layout all the GX30I VRT components:

- GX30i Valves and Universal Dual mounting brackets. We will pre-assemble valves to the mounting bracket prior to ship. Simply locate the "L" bolt and hardware packet for mounting the bracket to the tool bar. (sample 1 row valve -see Fig. 1-1)

- The row to row GX30i valve harnesses usually are 3.2ft with the exception of valve to valve distance over folds. These will be labeled specifically for easy identification. (black end is "in" signal and the grey end is "out" signal)

Depending on which version you purchased:
- GX30i VRT Module (with swath) - Fig 1-3
- GX30i VRT Module (non swath) - Fig 1-4

- GX30i Harnesses for high/low or channels are labeled for easy installation. These harnesses will send the proper signal from the module to the rows.

- The appropriate fittings/adapters to split/re-integrate the plumbing line to each valve is included in your GX30 manifold kit per row.

All units are tested in house prior to shipping to verify signal strength and integration calibrations.

During installation be sure you are consistent on what valves you have designated as high vs. low. Either all valves across the top are high and lower valve are low. Inconsistent harnessing will cause the system to not work properly.

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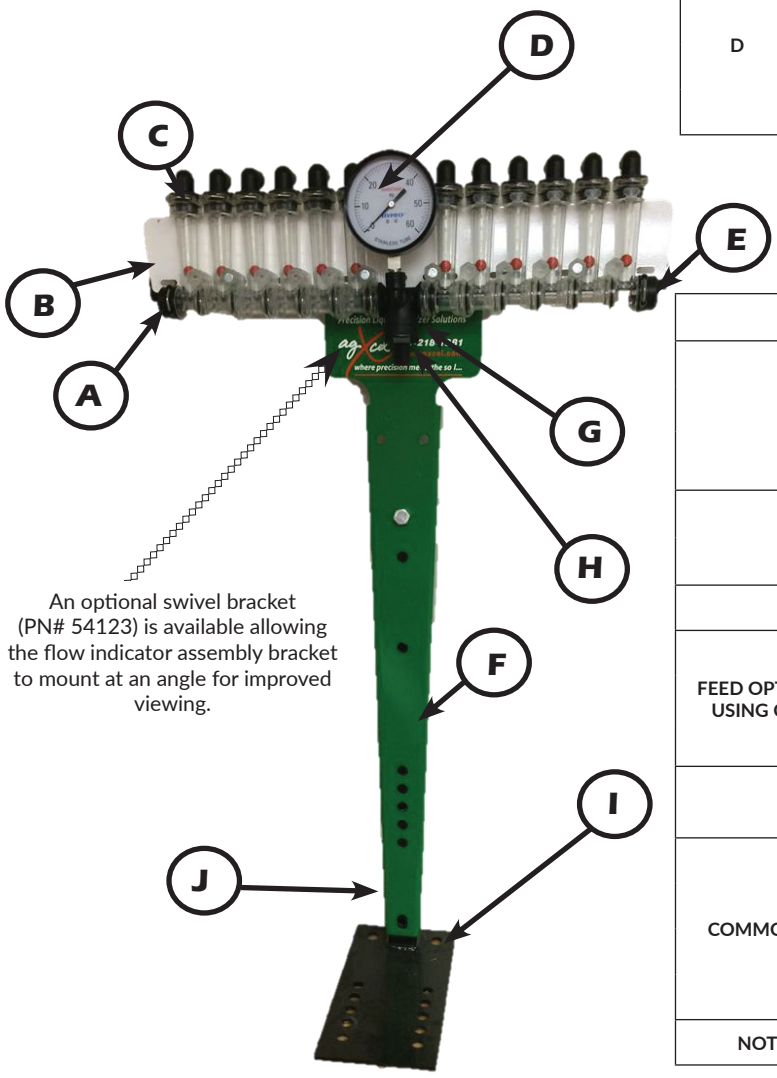
The GX30i VRT manifold will usually be either 3/8" QC or 3/8" barb due to the range of volume going through the system. Below are most of our floating ball manifold components. Every system is designed custom to each individual target rates. Combinations can be endless. However these two pages represent our most common replacement parts. If you do not see the component used in your kit, please contact our sales team for assistance. (For actual valve bodies please see pg. 8)

SIGHT COLUMN BRACKETS		
PN#		DESCRIPTION
A	406	UP TO 6R WHT BACKDROP
	414	UP TO 8R WHT BACKDROP
	20106	UP TO 12R WHT BACKDROP
B	18082	MOUNTING BRACKET FOR PN#406
	18088	MOUNTING BRACKET FOR PN#414
	18083	MOUNTING BRACKET FOR PN#20106
SIGHT COLUMN HARDWARE KIT - PN#38324 One kit is used for mounting up to 12R onto a GX1 chassis (tomahawk) bracket.		



An optional swivel bracket (PN# 54123) is available allowing the flow indicator assembly bracket to mount at an angle for improved viewing.

C		25709	1/4" PTC TOP
		18033	3/8" BARB TOP
		17655	3/8" PTC TOP
		370	8mm (5/16")PTC TOP (Special order)
		25701	1/2" BARB TOP (Special order)
D	*ONLY ONE GAUGE OPTION INCLUDED IN KIT	33812	160 PSI GAUGE
		33816	60 PSI GAUGE
		53769	60 PSI REMOTE GAUGE KIT
		53770	160 PSI REMOTE GAUGE KIT

E	18039	COLUMN END CAP & CLIP
F	38260	GX1 CHASSIS (TOMAHAWK ONLY)
	54123	GXSWIVEL KIT (NO TOMAHAWK)
	428	GXCHASSIS SWIVEL KIT (COMPLETE)
G	18037	CENTER FEED
	32239	3/4" HOSE SHANK INLET
H	52142	1/4" GAUGE ELBOW
FEED OPTIONS IF NOT USING CENTER TEE	18034	3/4" HOSE SHANK - ELBOW
	18032	3/4" HOSE SHANK
	25682	LOCK U-CLIP
I	53961	GX1 MOUNT AVAILABLE TO RAISE OR MANOEUVRE A CROWDED TOOLBAR
COMMON UBOLT(S)	53578	GXUBOLT 7 X 8 1/2" (CASE/JD)
	20329	GXUBOLT 5 X 7 X 1/2"
	17585	GXUBOLT 5 X 8 X 1/2" (KINZIE)
	38446	GXUBOLT 7 X 5 X1/2"
NOT SHOWN	356	1/2" BOLT KIT

SIGHT COLUMNS		
PN#		DESCRIPTION
STANDARD FLOW	55153	Wilger Standard Flow Column Only
	20985	Wilger Standard Flow Column W/balls, clip, retainer (No Top)
	37637	Wilger Std Flow Complete Column(s) 4 pack w/ End cap, clips & 3/8 barb Tops
	37724	Wilger Std Flow Complete Column(s) - 4 pack w/End cap, clips & 3/8QC Tops
BALL SELECTION FOR 30" ROWS - STD FLOW		
3-6 GPA	18077	Green Plastic* Ball
3-10 GPA	18078	Red Plastic* Ball
10-20 GPA	18079	Maroon Glass Ball
13-70 GPA	18080	Stainless Steel Ball
*These balls may float to the top with heavier fertilizers, such as 10-34-0. Use Maroon glass in this case.		

SIGHT COLUMNS		
PN#		DESCRIPTION
LOW FLOW	25689	Wilger Low Flow Column Only
	25687	Wilger Low Flow Column W/balls, clip, retainer (No Top)
	37617	Wilger Low Flow Complete Column(s) - 4 pack w/ End cap, clips & 1/4QC Tops
	37723	Wilger Low Flow Complete Column(s) - 4 pack w/End cap, clips & 3/8QC Tops
BALL SELECTION FOR 30" ROWS		
1-3 GPA	18077	Green Plastic* Ball
2-4 GPA	18078	Red Plastic* Ball
3-6 GPA	18079	Maroon Glass Ball
5-10 GPA	18080	Stainless Steel Ball
*These balls may float to the top with heavier fertilizers, such as 10-34-0. Use Maroon glass in this case.		

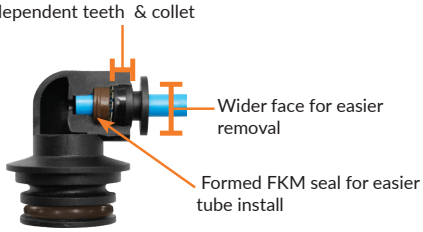
MISC COMPONENTS	
PN#	DESCRIPTION
25682	LOCK U-CLIP
25685	ORANGE PLASTIC BALL
428	GXCHASSIS SWIVEL KIT (Complete)
54123	GXSWIVEL KIT (No Tomahawk)
54839	GXEXTENDER BRACKET
PLUMBING	
308	3/4" BLACK HOSE (Use #12 CLAMPS - PN#19646)
19920	1/4" BLACK TUBING
54121	3/8" BLACK TUBING
17614	3/8" BLACK HOSE (Use #6 CLAMPS - PN#17649)

Externally, the low flow column can be identified by "Low Flow" imprinted into one side of the column. All the same fittings work with either the low flow or standard flow columns

METERING TUBES		
PN#	DESCRIPTION	
38233		GX6MT - PINK
38241		GX6MT - YELLOW
38237		GX6MT - GREY
38242		GX6MT - NAVY BLUE
38243		GX6MT - BROWN
38250		GX6MT - SKY BLUE
38251		GX6MT - GREEN
38245		GX6MT - PURPLE
38246		GX6MT - ORANGE
38247		GX6MT - RED
38248		GX6MT - BLACK

NEW

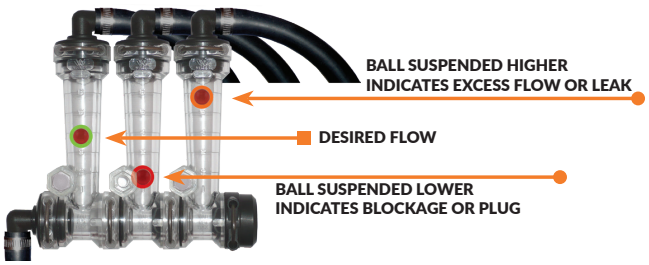
The 1/4" Push-in tube outlets have received a full redesign for heavier duty sealing and easier release.



** This redesign also applies to the radial lock caps on check valves **

agXcel CALCULATOR

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



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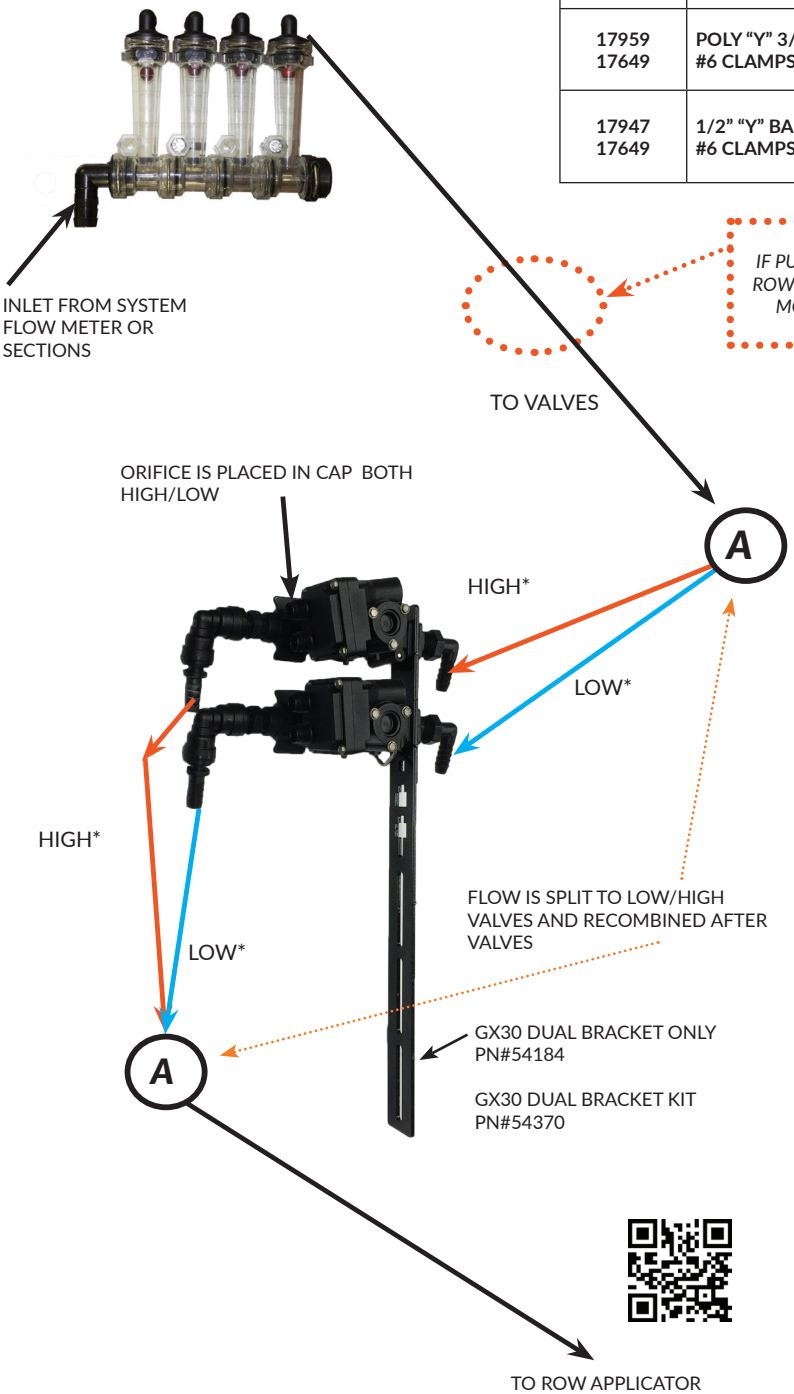
There are a variety of configurations for the GX30i valves. However, the most common will be 3/8" QC with 3/8" tubing or 3/8" barb with 3/8" hose. When the GX30i is used in conjunction with a floating ball manifold the line out of the wilger tops will be split prior to reaching the dual valves and properly re-integrated after the valves. (see illustration)

VALVE COMPONENTS FITTINGS DEPEND ON ROW PLUMBING			
PN#	DESCRIPTION		
54010* 54011	1/4" QC STEM ADAPTER (QTY 2 PER ROW) (*ONLY IF USING WITH METERING TUBES) 3/8"QC DIVIDER (QTY 2 PER ROW)	3/8" PTC	A
17959 17649	POLY "Y" 3/8" HB (QTY 2 PER ROW) #6 CLAMPS (QTY 10 PER ROW)	3/8" HOSE	
17947 17649	1/2" "Y" BARB #6 CLAMPS (QTY 10 PER ROW)	1/2" HOSE	



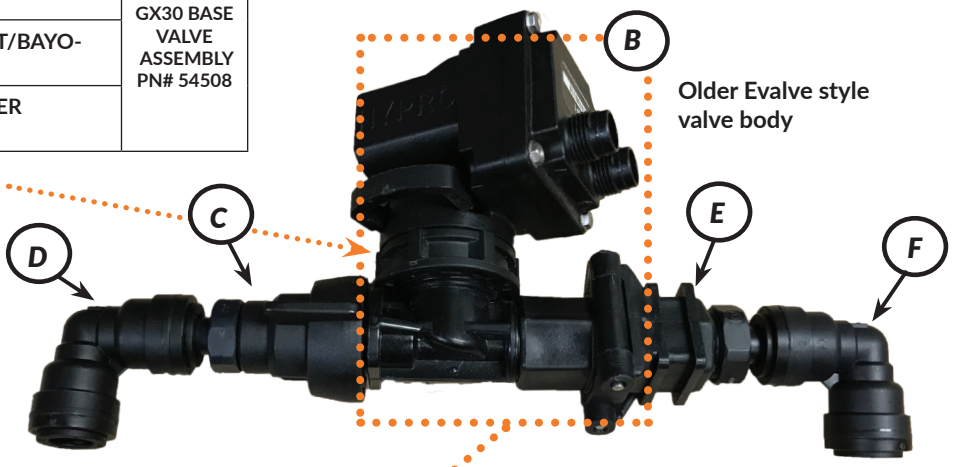
ORIFICES		
PN#		DESCRIPTION
SPECIAL ORDER	17975	DC-BLANK
	18203	30-DC010 GREY LF
	19967	30-DC014 - ROYAL BLUE LF
	17591	30-DC018 TERRACOTA
	54523	30-DC020 BLACK LF
	17964	30 DC 023 PINK
	17965	30-DC028 GREY
	17966	30-DC015 - BLACK
	17967	30-DC-02 BROWN
	17968	30-DC-03 ORANGE
	53501	30-DC-035 MAROON
	17969	30-DC-04 RED
	17970	30-DC-05 BLUE
	17971	30-DC-06 YELLOW
	17972	30-DC-07 EMERALD GREEN
	17973	30-DC-08 WHITE
	17974	30-DC-10 LIME (IMPERIAL) GREEN
	19962	30-DC-12 ROYAL BLUE

The GX30i Valve provides instantaneous on/off control eliminating misapplications and waste. Utilizing a robust, quarter-turn electric ball valve that is highly reliable as compared to solenoid and plungers valves. The GX30i valve continuously utilizes an extremely low amount of power and provides a high flow capacity in a compact valve design. The newer version has a lighted indicator for valve diagnostic.

GX30 VALVE OLDER BODY ASSEMBLY		B
PN#	DESCRIPTION	
54333	GX30PROSTOP - EVALVE (VALVE ONLY)	COMPLETE GX30 BASE VALVE ASSEMBLY PN# 54508
54379	PRO STOP BODY 1/4" MNPT/BAYONET	
26453	COMBO CLIP MALE ADAPTER 1/4" THREAD	

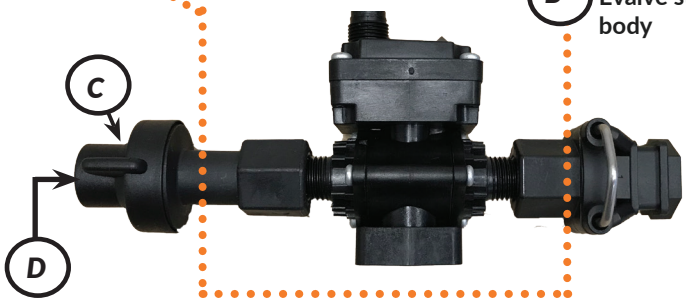
NOTE: The top of the valve can spin to any desired direction simply by pulling out the locking pin slightly, lift the head of the valve, and face desired direction.

This is the base assembly of every GX30iVRT Valve body per row. The only changes will be the inlet/outlet components depending on how the rows are plumbed or using metering tubes instead of orifices



Older Evalve style valve body

GX30 VALVE NEWER KZ BODY ASSEMBLY		B
PN#	DESCRIPTION	
56098	GX30PROSTOP - KZ LIGHTED EVALVE (VALVE ONLY)	COMPLETE GX30 BASE VALVE ASSEMBLY PN# 56646
26310	COMPACT BODY 1/4" F NPT	
26453	COMBO CLIP MALE ADAPTER 1/4" THREAD	



New KZ lighted Evalve style body

ITEMS D & F for the **NEW** style bodies are the same as the old depending on plumbing and if using metering tubes instead of orifices. See GX6MT option for metering tubes.

OUTLET VALVE COMPONENTS FITTINGS DEPEND ON ROW PLUMBING			
PN#	DESCRIPTION		
35660	QUICK ATTACH CAP W/GASKET	OLD STYLE	C
26001	RADIAL 1/4" NPTF CAP BLACK	NEW STYLE	
54457	SWIVEL FITTING 90D X 3/8" QC	3/8QC	D
54457 20808	SWIVEL FITTING 90D X 3/8" QC 3/8" STEM X 3/8" BARB (USE #6 CLAMPS PN#17649)	3/8HB	
54456	SWIVEL FITTING 90D 1/4"QC	1/4QC	
54522 20347 20354	3/8" STEM X 1/4" NTPF 3/8" UNION X 1/2" QC 1/2" STEM X 1/2" BARB (USE #6 CLAMPS PN#17649)	1/2HB	
260	QC1 - 1/4 QC TO 1/4 MNPT 90°	GX6MT	
20024	1/4 STEM TO 1/4 QC 90 DE-		
168	QC9 - 1/4 QC TO 1/4 FNPT		

INLET VALVE COMPONENTS FITTINGS DEPEND ON ROW PLUMBING			
PN#	DESCRIPTION		
26427	COMBO CLIP F X 3/8" NPTF ADAPTER	ALL	E
54458	SWIVEL FITTING 90D X 3/8" QC	3/8QC	F
54458 20808	SWIVEL FITTING 90D X 3/8" QC 3/8" STEM X 3/8" BARB (USE #6 CLAMPS PN#17649)	3/8HB	
54028 54591	3/8" UNION 1/4" QC ELBOW 3/8" STEM X 3/8" BARB	1/4QC	
54591 20347 20354	3/8" STEM X 3/8" NTPF 3/8" UNION X 1/2" QC 1/2" STEM X 1/2" BARB (USE #6 CLAMPS PN#17649)	1/2HB	

GX 30i VRT
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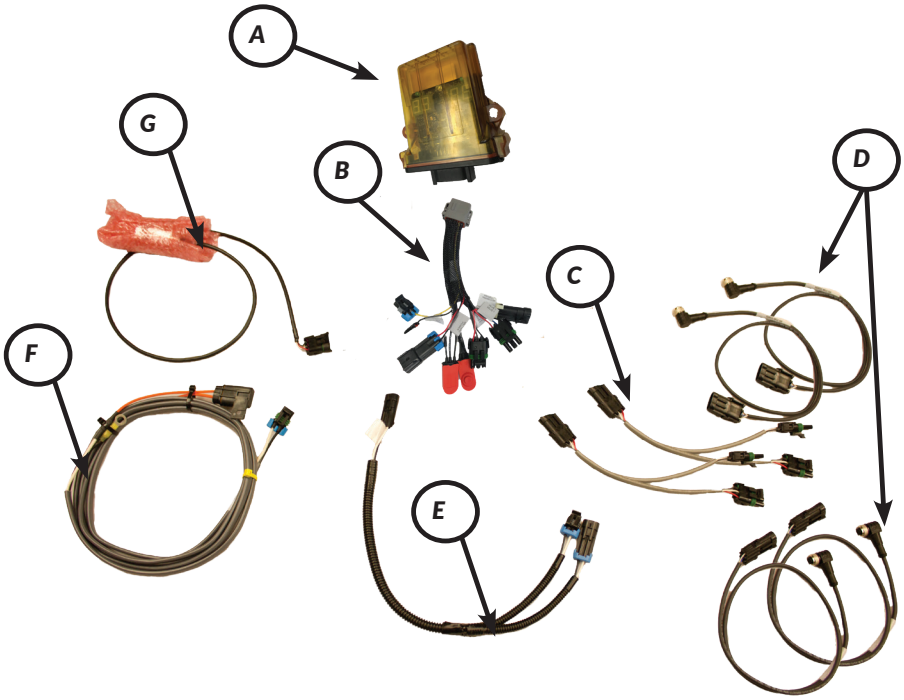
The GX30iLite Module is an intelligent pressure monitoring system. Set your high and low pressure thresholds by simply adjusting the two screws as illustrated below. This should be while testing the system with water so as not to waste fertilizer. Set "HIGH" will adjust how high your pressure can go before the next set of valves will open. Setting the "LOW" threshold will adjust how low your pressure can go before it switches back to the first valve.

The GX30i VRT Module can be mounted on the tool-bar of the implement using the mounting holes provided on the module itself. Another method would be to use a small amount of Velcro attached to the back of the module.

All underlying circuity has been sealed to protect it from debris and weather.



NOTE: The pressure thresholds are factory set so no adjustment should be needed, however, if you must adjust use caution when adjusting, the heads are made of plastic and may be stripped out. We recommend using a small flathead or phillips head screwdriver.

VRT - (NON-Swath) MODULE KIT

GX30iLite - up to 24 ROWS - 1 product - 1 section = KIT PN# 54679

INCLUDES:

- 1 - PRESSURE TRANSDUCER W/HARNESS
- 1 - GX30 MODULE
- 1 - MODULE MAIN HARNESS
- 2 - Y SPLIT HARNESSES (LOW & HIGH)
- 2 LOW THRESHOLD - 3PIN/M12 HARNESSES
- 2 HIGH THRESHOLD - 3PIN/M12 HARNESSES
- 1 - 15FT BATTERY CABLE
- 1 - PWM Y HARNESS
-

** Does NOT include manifold, channel extensions, transducer extensions or valve extensions **

PN#	DESCRIPTION	** Does NOT include manifold, channel extensions, transducer extensions or valve extensions **
54376	GX30iLITE MODULE	A
54482	GX30iLITE MAIN HARNESS	B
54678	Y SPLIT HARNESS	C
54406	3PIN / M12 HARNESS (LOW AND HIGH)	D
54512	GX30iPWM Y HARNESS	E
17944	15FT BATTERY CABLE 30AMP	F
54391	PRESSURE TRANSDUCER KIT	G

PN#	SIZE	
55077	3.2 FT	CHANNEL EXTENSIONS
55085	6.5FT	
55078	9FT	
55079	13FT	
55080	19FT	
55081	29FT	
55082	39FT	
55083	49FT	
55084	59FT	

NOTE: Channel extensions ***CAN NOT*** be substituted for valve to valve extensions.

PN#	SIZE	
54406	3FT	VALVE TO VALVE EXTENSIONS (OVER FOLDS)
54408	6.5FT	
54410	9.8FT	
54412	13FT	
54414	19FT	
54416	29FT	
54418	39FT	

NOTE: Valve to valve extensions ***CAN NOT*** be substituted for channel extensions.

Light Status:

Green LED for Valve Set 1 – On when Valve set 1 (Low-Threshold Valves) is turned on
Green LED for Valve Set 2 – On when Valve set 2 (High-Threshold Valves) is turned on
Red LED for Status – Steady blinking when receiving 12V and no signal, Solid when receiving signal from PWM, Fast Rapid blinking when in set up mode.

Number Display:

Low Pressure Display – Number represents the PSI needed to close high-threshold valves and open low-threshold valves. Also used to close low-threshold valves when both low-threshold and high-threshold valves are open.
High Pressure Display – Number represents the PSI needed to open the high-threshold valves when valves are closed. Also used to open both low-threshold valves and high-threshold valves when only the high-threshold valves are opened.

Example: Low-threshold set to 15 PSI – High-threshold set to 25 PSI
When pump first kicks on and GX30 Lite module receives PWM signal, valve set 1 is opened. When PSI reaches 25 PSI due to applying more product or speeding up, valve set 1 will close and valve set 2 will open. At this point the pressure will drop down due to the bigger sized orifice or metering tubes that is placed for valve set 2. If more product is being applied or the speed increases, if the PSI hit 25 again then valve set 1 will open along with valve set 2. If PSI drops down to 10 PSI, then it will close valve set 2.

Set Up Mode:

The GX30 Lite Set Up mode is activated when both low and high-threshold red buttons are pressed and held for 5 seconds. The red LED light will start the rapidly blinking fast letting the user know they are in set up mode.
Setting Low-Threshold PSI Value – While in set up mode, press the red button that is labeled "Low Pressure" to increase the value. This number will only go as high as what the high-pressure value is set to. Once it hits that value, it will revert to 0. If button is held, it will increase faster.
Setting High-Threshold PSI Value – While in set up mode, press the red button that is labeled "High Pressure" to increase the value. This number will only go up to 99 and will revert down to a value higher than what is low-threshold PSI is set to. If button is held, it will increase faster.

Exiting out of Set Up Mode – By not pressing anything for 15 seconds will revert to normal operations. The red LED will now blink steadily.

Accessing Special Set Up Mode:

The Gx30i Lite has a Special Set Up Mode to adjust the PWM threshold value. When both red buttons are pressed for 10 seconds you will be in the special set up mode. You will notice the Low-Pressure Display have a value of 5. In this mode, pressing the Low Pressure and High-Pressure red buttons will decrease and increase the value displayed on the High Pressure. This value will set the sensitivity of the valves opening. The default value is set to 40. If you find that the valves are slow to open when the pump system kicks on, then you will need to increase this value. If you find that the valves are not opening at all or are flickering on and off, then the value is set too high and will need to be lowered.
Exiting out of Special Set Up Mode – By not pressing anything for 15 seconds will revert to normal operations. The red LED will now blink steadily.

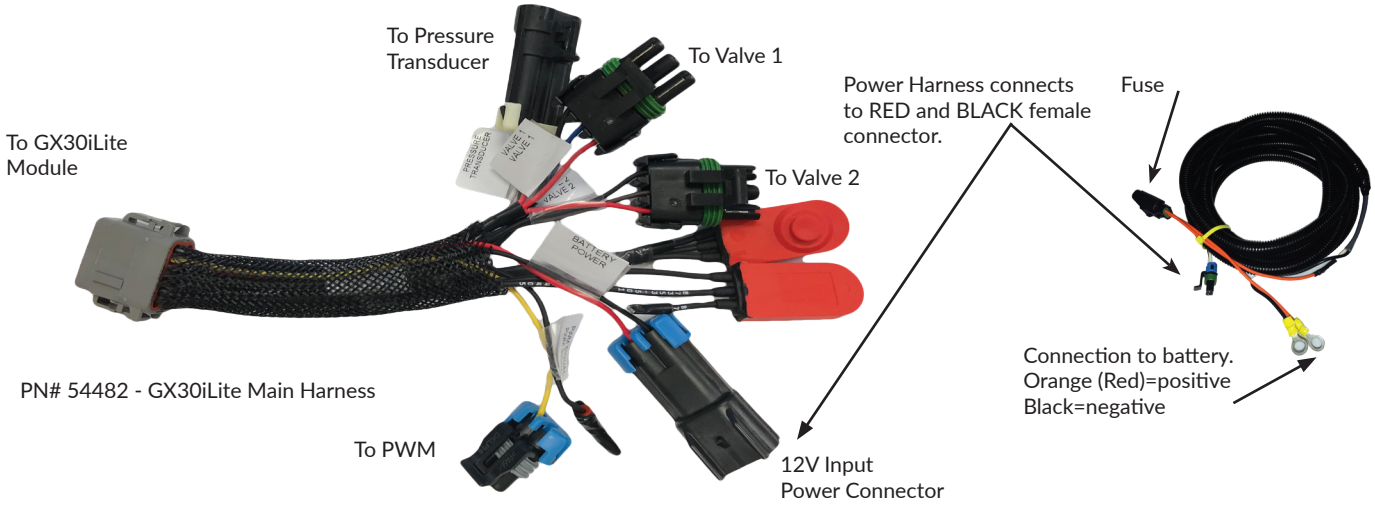
Opening Valves Manually:

Opening the GX30 valves manually can help troubleshoot voltage issues to the valves. This method will provide instant voltage to the valves to open them up.

Opening Low Valves – Get to the Set-Up Mode by pressing and holding both low and high-threshold red buttons for 5 seconds. Set the low threshold to 0 and set the high threshold to 99. Once values are set you will see the green led for Valve Set 1 turn on. At this point your low-threshold valves should be opened.

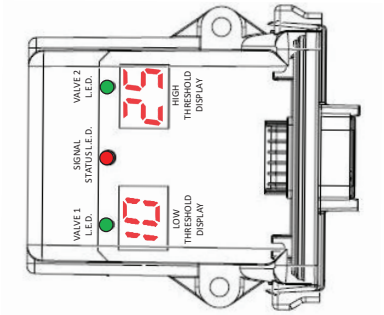
Opening High Valves – Get to the Set-Up Mode by pressing and holding both low and high-threshold red buttons for 5 seconds. Set the low threshold to 1 and set the high threshold to 99. Once values are set you will see the green led for Valve Set 2 turn on. At this point your high-threshold valves should be opened.

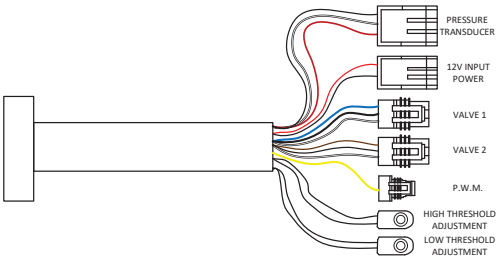
Opening Both Low and High Valves – Get to the Set-Up Mode by pressing and holding both low and high-threshold red buttons for 5 seconds. Set the low threshold to 2 and set the high threshold to 99. Once values are set you will see the green led for Valve Set 1 and Valve Set 2 turn on. At this point your low and high threshold valves should be opened.



GX30iLite VRT - (Non-Swath) MAIN CHANNEL HARNESS

(For harness schematic see pg.39)





Dual body MCV

- *A 3 system orifice setup with our Dual Body micro valve set-up allows for a much broader range of application both at higher rates and at lower rates*
- *2 orifice sizes are selected, one for the lower and one for the upper range*
- *The 3rd orifice is created by allowing both micro valves to open which combines the lower and upper range into a dual application ratio, allowing for a much broader range*
- *AgXcel also uses our GX6 micro tubing technology to size the application range with 11 different sizes, for solutions that are viscous or have a high particle content.*
- *The micro valve controls the flow on each row and creates an instant "shut off" point therefore preventing system pressure loss when the liquid system goes into hold mode.*
- *Systems today use check valves to prevent system "drain out" when the system goes into hold. System pressure will drop down to the check valve pressure setting. So if you have 8lb check valves, system pressure will drop down to approximately 8 psi if not lower.*
- *With the micro valves system, pressure is maintained when the valve is shut.*
- *This pressure maintaining feature results in a quicker application start when the system goes back into start mode. The liquid system does not have to build pressure back to its delivering rate which in turn causes start points not to have fertilizer placement until enough pressure is in the system to open up the check valves.*
- *Lower GPA rates are also achieved at lower PSI ratings. Since there is no longer a check valve that has to open after system pressure is built, with the micro valves they are either flowing or not flowing. This means, even if system pressure reduces down to 2PSI, liquid will still be flowing at the appropriate rate since no pressure is required to open a rated check valve.*
- *The dual micro valves now serve as the liquid systems "sectional valves" therefore there no longer is the need to run exhaustive amounts of ¾" feed hose throughout the implement.*
- *Implementing the dual micro valves on each row allows for a more responsive application when the system goes from hold position to run.*

SEE IT IN ACTION!

Visit our website for more info or watch the GX30IVRT video on our YouTube channel search AgXcel!

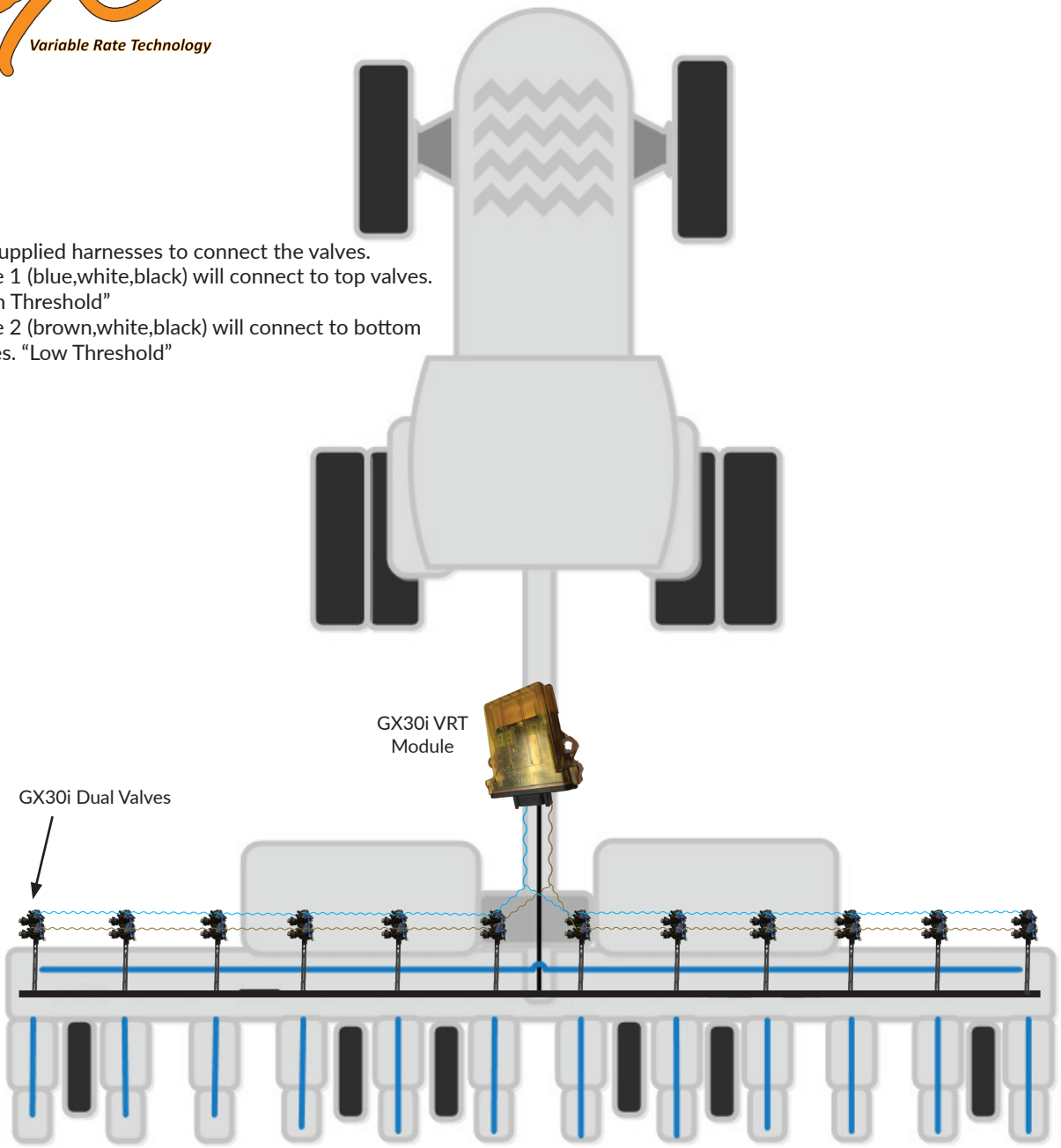
*** IMPORTANT: GX30 System battery cable must be connected directly to the battery. Any alteration will void warranty***

INFORMATION ONLY

GX 30i VRT
Non-Swath
Variable Rate Technology

Use the supplied harnesses to connect the valves.

- Valve 1 (blue,white,black) will connect to top valves. “High Threshold”
- Valve 2 (brown,white,black) will connect to bottom valves. “Low Threshold”



*** IMPORTANT: GX30 System battery cable must be connected directly to the battery. Any alteration will void warranty****

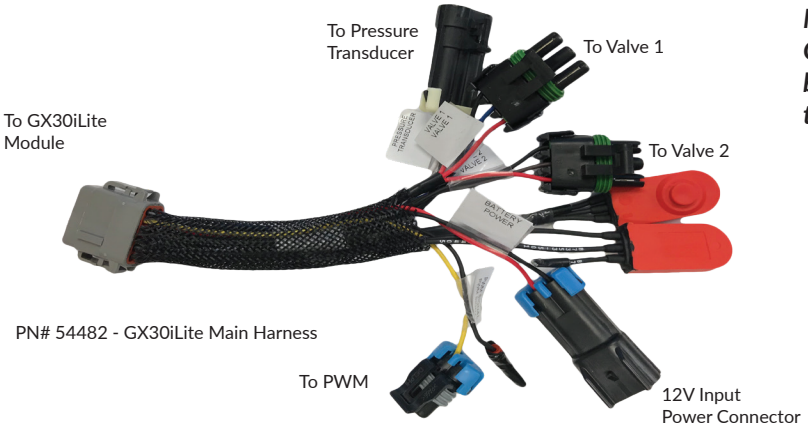
INFORMATION ONLY

GX 30i VRT
Non-Swath
Variable Rate Technology

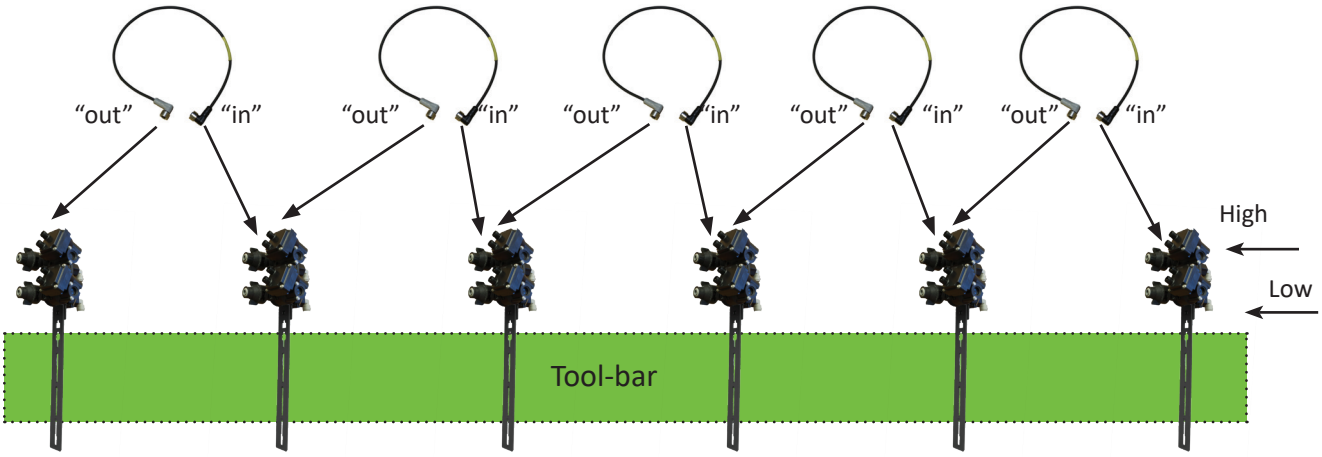
Harness Configuration

The GX30i VRT module may be utilized to handle a simple setup like the example 6 row shown below. Using the GX30i Harness you will connect or "daisy chain" the top valves to each other, then the bottom to each other. The harness has two colored ends, black and gray. Each valve has two ports, "IN" and "OUT".

- On the VRT Module locate the connector "To Valve 1". Connect this to the "IN" port on the first valve on the top row of valves.
- Using another harness, connect the gray end to the "OUT" port on the first valve. Connect the black end of the harness to the "IN" port of the next valve.
- Continue the "daisy chain" to the last valve on the top row. - NOTE - the last valve on the top row you will not need to connect anything to the "OUT" port.
- For the bottom row of valves you will use the "To Valve 2" connection on the VRT Module.
- Repeat the "daisy chain" steps for the bottom row of valves.



NOTE: Some valves will have the words IN and OUT. Others may have arrows underneath the ports. The black and gray ends of the harness will only fit into their designated ports.



IMPORTANT:
Be sure that the first valve connected is consistent throughout setup. This will determine your "High or Low Threshold". For instance, all top valves would represent the "High Threshold" and all bottom valves would represent the "Low Threshold". The "High Threshold" will use the largest orifice provided with your system, based upon calculations provided at time of order.

Inconsistent harnessing will cause the system to not work properly.

GX 30i VRT Swath
Variable Rate Technology

At AgXcel we believe in the importance of Responsible Nutrient Management which requires the placement of vital nutrients to the soil at the appropriate location and at the appropriate rate. Limiting technology solutions should not be a barrier to appropriate nutrient replacement.

The AgXcel GX30i is an intelligent decision making microprocessor that manages and controls system pressure in a Variable Rate application environment. This patent pending solution was designed and developed by AgXcel to allow for the application of liquid fertilizer in an expansive range. Its dual valve management configuration is controlled by a central microprocessor intelligent module to manage system pressure within a specified range. Today's liquid system application rates are limited by the size of each orifice on each row in which higher rates dramatically increase system pressure and lower rates significantly drop system pressure. Many prescription based applications require application rates that span anywhere from 20GPA-40GPA at any given moment. A single size orifice cannot sustain this broad range of application which in turn minimizes the application range, therefore requiring the user to settle for a lesser range of application.

The AgXcel GX30iVRT addresses this issue with the ability to broaden this range by implementing a 3 stage orifice range system. Exhaustive testing at Agxcel has established the critical benefits of a 3 option orifice system.

VRT - (Swath) MODULE KIT

GX30iVRT - up to 32 ROWS - 1 product = KIT PN#54894
GX30iVRT - up to 16 ROWS - 2 product = KIT PN#54338

INCLUDES:

- PRESSURE TRANSDUCER(S)
- CONSOLE
- CONSOLE HARNESS
- CONSOLE SUCTION MOUNT
- MODULE/HUB CONTROL CENTER
- MODULE/CONSOLE HARNESS(BLK)
- SECTION HARNESS(BLUE)
- ROW HARNESS(GRY)
- MODULE/HUB BRACKET.

** Does NOT include manifold, channel extensions, transducer extensions or valve extensions **

** Does NOT include manifold, channel extensions, transducer extensions or valve extensions **

PN#	DESCRIPTION	
54854	MODHUB HARNESS_GX30iVRT	A
54856	CONSOLEHARNESS_GX30iVRT	B
54855	CONSOLE(ONLY)_GX30iVRT	C
54858	GRYCONN M12 PINS_GX30iVRT (UP TO QTY =3)	D
54857	LINCAN_GRYCONN_GX30iVRT	E
54859	SECTIONCONN_GX30iVRT	F
54853	MODULEHUB(ONLY)_GX30iVRT	G
54860	TRANSDUCER_GX30iVRT (UP TO QTY = 2 - DEPENDING ON KIT)	H
54567	GX30ISUCTIONMOUNTKIT (NOT SHOWN)	

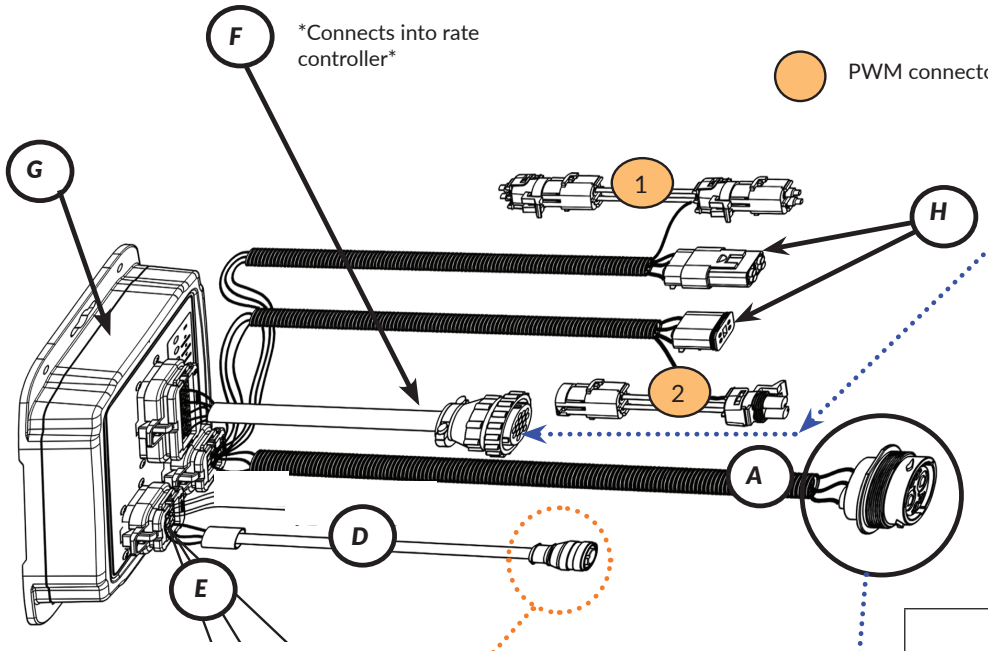
** GX30iVRT micro controller extender required in order to expand the GX30iVRT another 32 rows for a single product solution or 16 rows for a two solution setup = PN#54892**

GX30 Cab Display

The AgXcel GX30iVRT intelligent module has an array of intelligence built into the system and designed to manage various pressure points seamlessly. With is ability to control each valve independently swath control is improved by allowing instant flow when the system returns to the flow position. With the ability to manage each row independently and up to 12 sections the GX30iVRT has been developed for expandability for future swath features and row management.

PN#	SIZE	
54406	3FT	VALVE TO VALVE EXTENSIONS (OVER FOLDS)
54408	6.5FT	
54410	9.8FT	
54412	13FT	
54414	19FT	
54416	29FT	
54418	39FT	

NOTE: Valve to valve extensions ***CAN NOT*** be substituted for channel extensions.



PN#	SIZE	
54097	16pin10FT	INTEGRATION EXTENSION
54099	16pin30FT	
54102	16pin50FT	

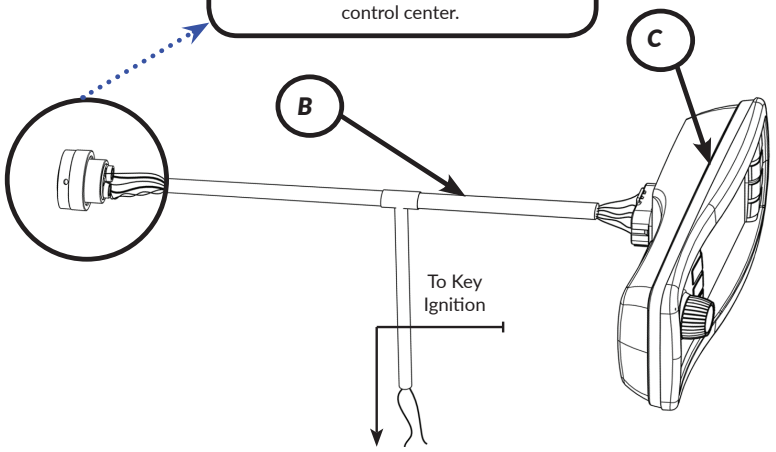
LINCAN GREY CHANNELS
(Up to qty. 4)
May require extensions

Each channel (up to 4) will address row banks.
(Up to 8 rows = 1 Channel OR bank of 16 micro valves)
** Connects to valves**

MISC HARNESSES		
PN#	DESCRIPTION	
55046	TRANSDUCER 10FT EXT	
55048	TRANSDUCER 20FT EXT	
55050	PWRJUMP_EXT10	
55051	PWRJUMP_EXT20	
55052	PWRJUMP_EXT30	
55053	PWRJUMP_EXT40	
PN#	SIZE	CAB CONSOLE EXTENSION
55040	10FT	
55039	20FT	
THESE ARE ROUND PIN EXTENSIONS		

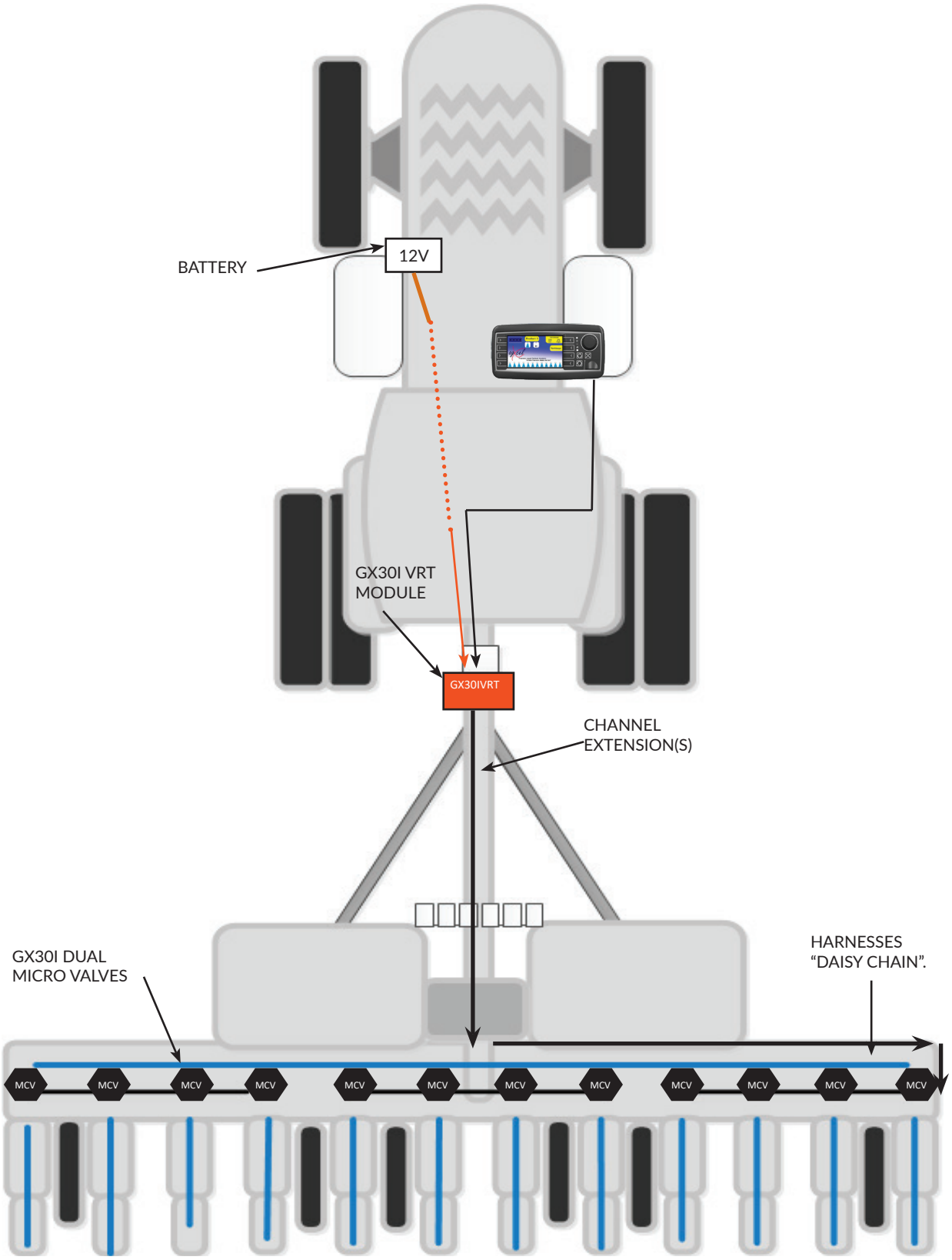
PN#	SIZE	
55077	3.2 FT	CHANNEL EXTENSIONS
55085	6.5FT	
55078	9FT	
55079	13FT	
55080	19FT	
55081	29FT	
55082	39FT	
55083	49FT	
55084	59FT	
NOTE: Channel extensions ***CAN NOT*** be substituted for valve to valve extensions.		

Mounts in cab. extension may be required depending on location of GX30 Module hub control center.



*** IMPORTANT: GX30 System battery cable must be connected directly to the battery. Any alteration will void warranty****

INFORMATION ONLY



*** IMPORTANT: GX30 System battery cable must be connected directly to the battery. Any alteration will void warranty***

INFORMATION ONLY

4 Row, Single Product

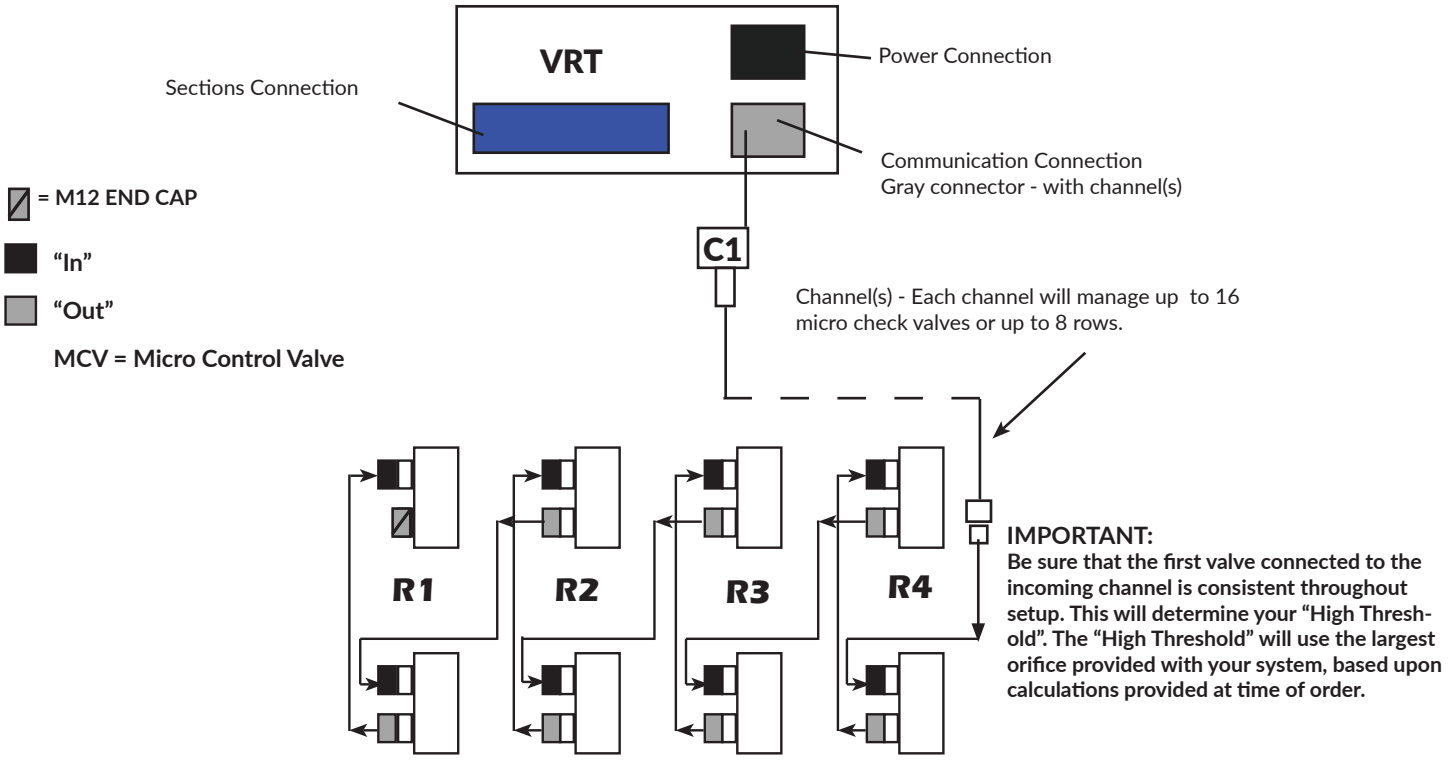
The GX30iVRT contains four channels allowing up to a total of 16 micro control valves (MCV) per channel (or 8 rows per channel). Harnessing together each MCV has to be done in a specific order to allow self addressing to the correct row.

The following steps will help you set up a 4 row implement for variable rates and swath:

1. From the VRT module's gray channel port, run the first M12 channel harness to the 4th row of your implement (Looking at the Implement from behind, the left side will begin the row count as your first row). Depending upon the implement and/or placement of the VRT module you may have been provided a channel extension harness to reach the 4th row MCV valve.
2. Attach the channel connector into the "in" port on the first MCV on the 4th row.
3. Next use a M12 harness cable to connect the first valve to the second valve, on the 4th row. *see note*
4. From the second valve on the 4th row, connect a M12 harness cable in the "out" position going into the "in" connector of the first valve on the 3rd row.
5. Next use a M12 harness cable to connect the first valve to the second valve, on the 3rd row. Use the gray ("out") tip to connect the first valve into the second valve located on the 3rd row.
6. From the second valve on the 3rd row, connect a M12 harness cable in the "out" position going into the "in" connector on the 2nd row.
7. Repeat this "daisy chaining" process to link all the valves.
8. On the last "out" port on the 1st row, place an end cap as you will not need to harness anything from this port.

NOTE: IF THE IMPLEMENT HAS ANY FOLDS, AN EXTENSION M12 CABLE WILL BE PLACED TO CONNECT THE MICRO CONTROL VALVES AT THE FOLD INSTEAD OF THE STANDARD 3 FOOT M12 CABLE.

Caution: *Be sure to leave enough leeway in the cabling to accommodate folds, pivots or bends in the tool bar.*



*NOTE: The black("in") and gray("out") ends of the harness will only fit into their designated ports.

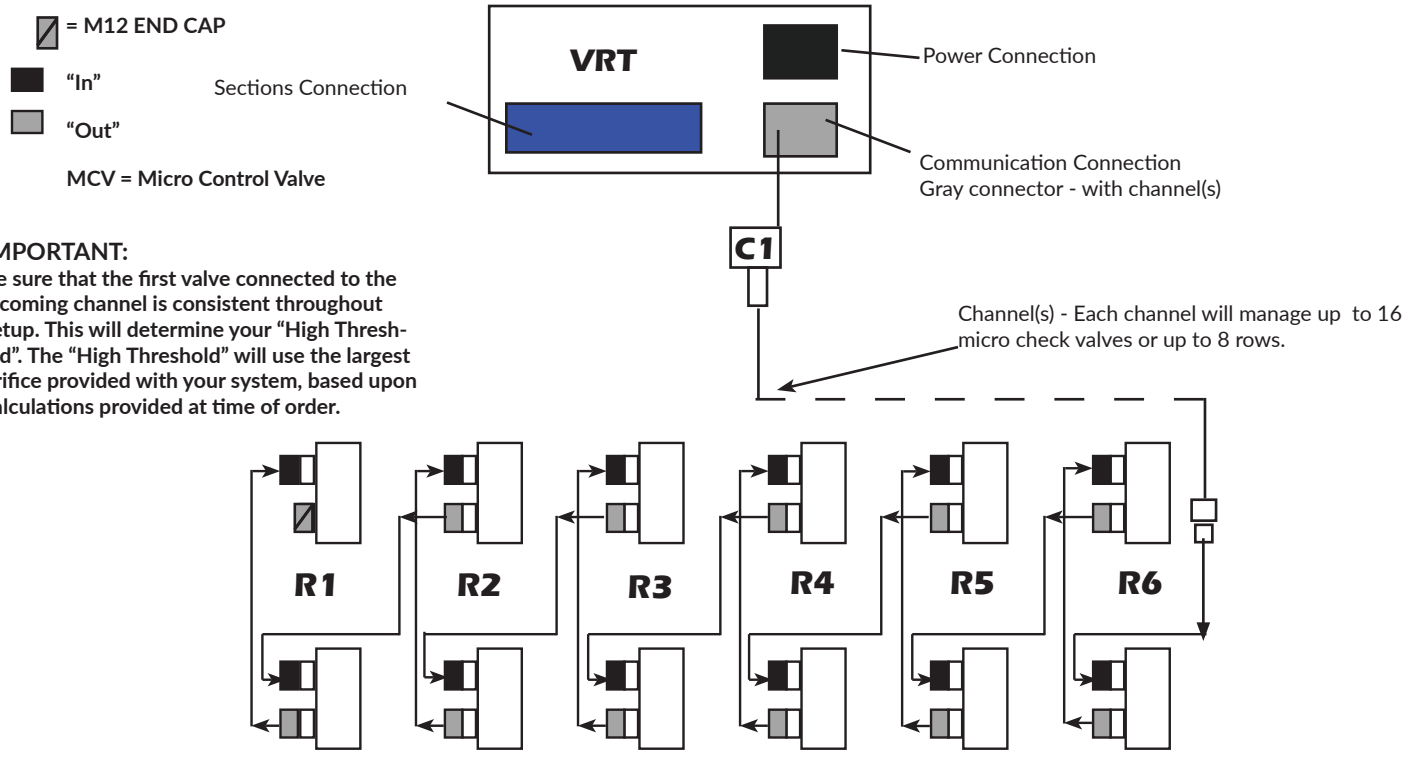
6 Row, Single Product

The GX30iVRT contains four channels allowing up to a total of 16 micro control valves (MCV) per channel (or 8 rows per channel). Harnessing together each MCV has to be done in a specific order to allow self addressing to the correct row. The following steps will help you set up a 6 row implement for variable rates and swath:

1. From the VRT module's gray channel port, run the first M12 channel harness to the 6th row of your implement (Looking at the Implement from behind, the left side will begin the row count as your first row). Depending upon the implement and/or placement of the VRT module you may have been provided a channel extension harness to reach the 6th row MCV valve.
2. Attach the channel connector into the "in" port on the first MCV on the 6th row.
3. Next use a M12 harness cable to connect the first valve to the second valve, on the 6th row. *see note*
4. From the second valve on the 6th row, connect a M12 harness cable in the "out" position going into the "in" connector of the first valve on the 5th row.
5. Next use a M12 harness cable to connect the first valve to the second valve, on the 5th row. Use the gray ("out") tip to connect the first valve into the second valve located on the 5th row.
6. From the second valve on the 5th row, connect a M12 harness cable in the "out" position going into the "in" connector on the 4th row.
7. Repeat this "daisy chaining" process to link all the valves.
8. On the last "out" port on the 1st row, place an end cap as you will not need to harness anything from this port.

NOTE: IF THE IMPLEMENT HAS ANY FOLDS, AN EXTENSION M12 CABLE WILL BE PLACED TO CONNECT THE MICRO CONTROL VALVES AT THE FOLD INSTEAD OF THE STANDARD 3 FOOT M12 CABLE.

Caution: *Be sure to leave enough leeway in the cabling to accommodate folds, pivots or bends in the tool bar.*



IMPORTANT:
Be sure that the first valve connected to the incoming channel is consistent throughout setup. This will determine your "High Threshold". The "High Threshold" will use the largest orifice provided with your system, based upon calculations provided at time of order.

*NOTE: The black("in") and gray("out") ends of the harness will only fit into their designated ports.

8 Row, Single Product

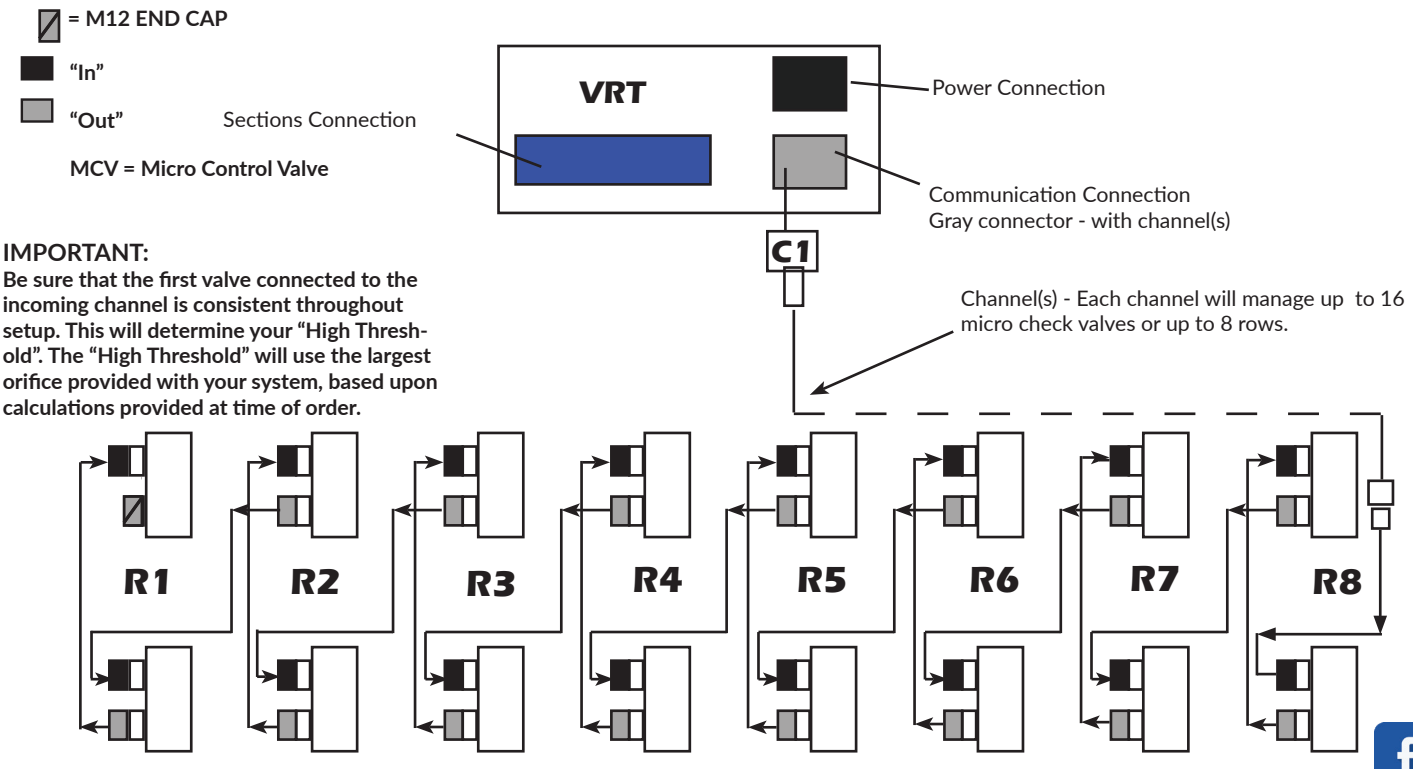
The GX30iVRT contains four channels allowing up to a total of 16 micro control valves (MCV) per channel (or 8 rows per channel). Harnessing together each MCV has to be done in a specific order to allow self addressing to the correct row.

The following steps will help you set up a 8 row implement for variable rates and swath:

1. From the VRT module's gray channel port, run the first M12 channel harness to the 8th row of your implement (Looking at the Implement from behind, the left side will begin the row count as your first row). Depending upon the implement and/or placement of the VRT module you may have been provided a channel extension harness to reach the 8th row MCV valve.
2. Attach the channel connector into the "in" port on the first MCV on the 8th row.
3. Next use a M12 harness cable to connect the first valve to the second valve, on the 8th row. *see note*
4. From the second valve on the 8th row, connect a M12 harness cable in the "out" position going into the "in" connector of the first valve on the 7th row.
5. Next use a M12 harness cable to connect the first valve to the second valve, on the 7th row. Use the gray ("out") tip to connect the first valve into the second valve located on the 7th row.
6. From the second valve on the 7th row, connect a M12 harness cable in the "out" position going into the "in" connector on the 6th row.
7. Repeat this "daisy chaining" process to link all the valves.
8. On the last "out" port on the 1st row, place an end cap as you will not need to harness anything from this port.

NOTE: IF THE IMPLEMENT HAS ANY FOLDS, AN EXTENSION M12 CABLE WILL BE PLACED TO CONNECT THE MICRO CONTROL VALVES AT THE FOLD INSTEAD OF THE STANDARD 3 FOOT M12 CABLE.

Caution: *Be sure to leave enough leeway in the cabling to accommodate folds, pivots or bends in the tool bar.*



IMPORTANT:
Be sure that the first valve connected to the incoming channel is consistent throughout setup. This will determine your "High Threshold". The "High Threshold" will use the largest orifice provided with your system, based upon calculations provided at time of order.

*NOTE: The black("in") and gray("out") ends of the harness will only fit into their designated ports.

12 Row, Single Product

The GX30iVRT contains four channels allowing up to a total of 16 micro control valves (MCV) per channel (or 8 rows per channel). Harnessing together each MCV has to be done in a specific order to allow self addressing to the correct row. The following steps will help you set up a 12 row implement for variable rates and swath:

For a 12 row implement, follow steps 1 - 8 on page 19 for an 8 row implement. After following the steps, please refer to the below steps for the remaining rows.

YOU ARE NOW COMPLETE WITH THE VRT'S CHANNEL 1 LINE. THE STEPS BELOW ARE FOR THE VRT'S CHANNEL 2 LINE FOR ROWS 9-12

1. From the VRT module's gray channel port, run the second M12 channel harness to the 12th row of your implement (Looking at the Implement from behind, the left side will begin the row count as your first row). Depending upon the implement and/or placement of the VRT module you may have been provided a channel extension harness to reach the 12th row MCV valve.
2. Attach the channel connector into the "in" port on the first MCV on the 12th row.
3. Next use a M12 harness cable to connect the first valve to the second valve, on the 12th row. *see note*
4. From the second valve on the 12th row, connect a M12 harness cable in the "out" position going into the "in" connector of the first valve on the 11th row.
5. Next use a M12 harness cable to connect the first valve to the second valve, on the 11th row. Use the gray ("out") tip to connect the first valve into the second valve located on the 11th row.
6. From the second valve on the 11th row, connect a M12 harness cable in the "out" position going into the "in" connector on the 10th row.
7. Repeat this "daisy chaining" process to link all the valves.
8. On the last "out" port on the 9th row, place an end cap as you will not need to harness anything from this port.

NOTE: IF THE IMPLEMENT HAS ANY FOLDS, AN EXTENSION M12 CABLE WILL BE PLACED TO CONNECT THE MICRO CONTROL VALVES AT THE FOLD INSTEAD OF THE STANDARD 3 FOOT M12 CABLE.

Caution: *Be sure to leave enough leeway in the cabling to accommodate folds, pivots or bends in the tool bar.*

IMPORTANT:
Be sure that the first valve connected to the incoming channel is consistent throughout setup. This will determine your "High Threshold". The "High Threshold" will use the largest orifice provided with your system, based upon calculations provided at time of order.

***** IMPORTANT: GX30 System battery cable must be connected directly to the battery. Any alteration will void warranty*****

INFORMATION ONLY

12 Row, Single Product

NOTE: IF THE IMPLEMENT HAS ANY FOLDS, AN EXTENSION M12 CABLE WILL BE PLACED TO CONNECT THE MICRO CONTROL VALVES AT THE FOLD INSTEAD OF THE STANDARD 3 FOOT M12 CABLE.

GX30i

CHANNEL(S) 1 (C1)
CHANNEL(S) 2 (C2)
12 ROW LAYOUT
SINGLE SOLUTION

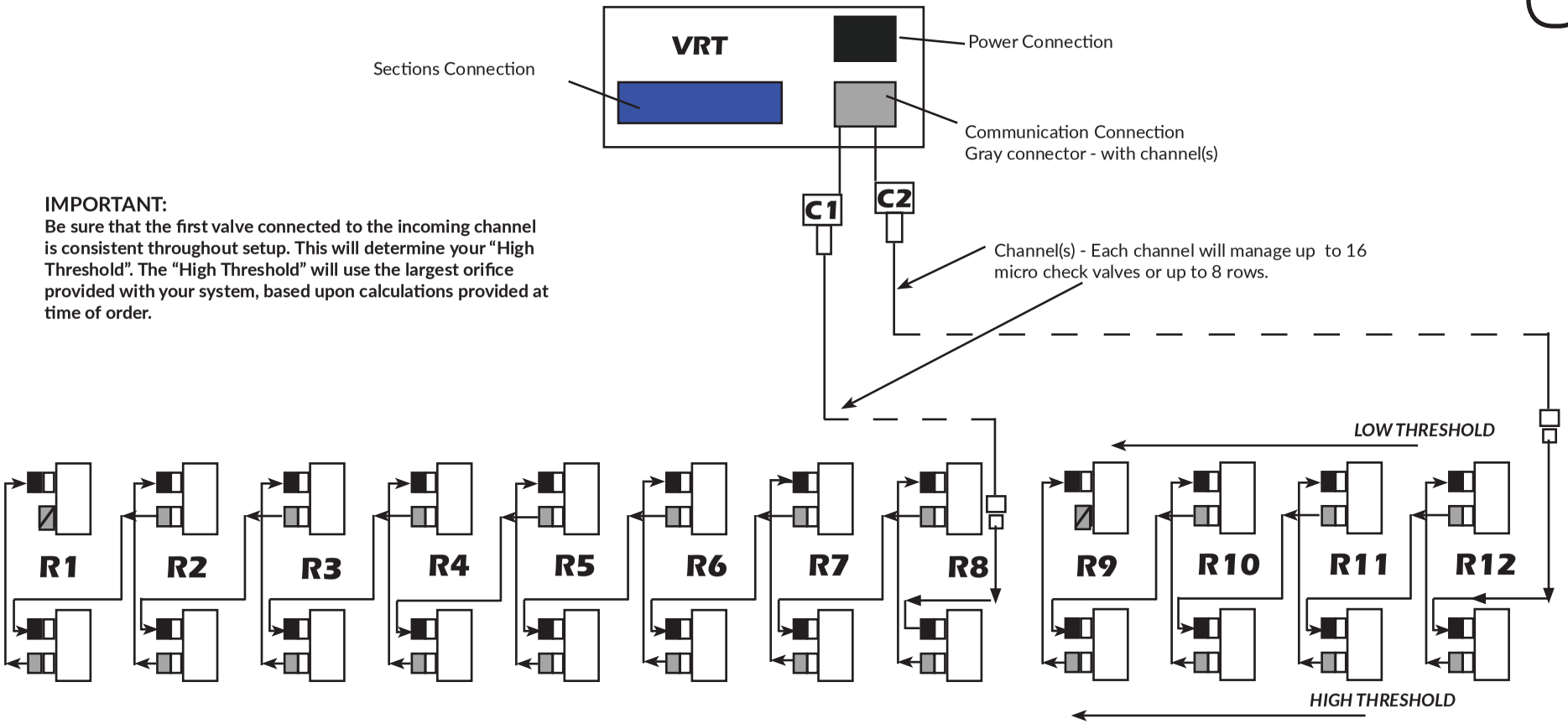
= M12 END CAP

"In"

"Out"

MCV = Micro Control Valve

*NOTE: The black("in") and gray("out") ends of the harness will only fit into their designated ports.



IMPORTANT:
Be sure that the first valve connected to the incoming channel is consistent throughout setup. This will determine your "High Threshold". The "High Threshold" will use the largest orifice provided with your system, based upon calculations provided at time of order.

16 Row, Single Product

The GX30iVRT contains four channels allowing up to a total of 16 micro control valves (MCV) per channel (or 8 rows per channel). Harnessing together each MCV has to be done in a specific order to allow self addressing to the correct row. The following steps will help you set up a 16 row implement for variable rates and swath:

For a 16 row implement, follow steps 1 - 8 on page 19 for an 8 row implement. After following the steps, please refer to the below steps for the remaining rows.

YOU ARE NOW COMPLETE WITH THE VRT'S CHANNEL 1 LINE. THE STEPS BELOW ARE FOR THE VRT'S CHANNEL 2 LINE FOR ROWS 9-16

1. From the VRT module's gray channel port, run the second M12 channel harness to the 16th row of your imple-ment (Looking at the Implement from behind, the left side will begin the row count as your first row). Depending upon the implement and/or placement of the VRT module you may have been provided a channel extension harness to reach the 16th row MCV valve.
2. Attach the channel connector into the "in" port on the first MCV on the 16th row.
3. Next use a M12 harness cable to connect the first valve to the second valve, on the 16th row. *see note*
4. From the second valve on the 16th row, connect a M12 harness cable in the "out" position going into the "in" connector of the first valve on the 15th row.
5. Next use a M12 harness cable to connect the first valve to the second valve, on the 15th row. Use the gray ("out") tip to connect the first valve into the second valve located on the 15th row.
6. From the second valve on the 15th row, connect a M12 harness cable in the "out" position going into the "in" connector on the 14th row.
7. Repeat this "daisy chaining" process to link all the valves.
8. On the last "out" port on the 9th row, place an end cap as you will not need to harness anything from this port.

NOTE: IF THE IMPLEMENT HAS ANY FOLDS, AN EXTENSION M12 CABLE WILL BE PLACED TO CONNECT THE MICRO CONTROL VALVES AT THE FOLD INSTEAD OF THE STANDARD 3 FOOT M12 CABLE.

Caution: *Be sure to leave enough leeway in the cabling to accommodate folds, pivots or bends in the tool bar.*

IMPORTANT:
Be sure that the first valve connected to the incoming channel is consistent throughout setup. This will determine your "High Threshold". This will factor in particularly when there are more than 1 channel.
The "High Threshold" will use the largest orifice provided with your system, based upon calculations provided at time of order.

*** IMPORTANT: GX30 System battery cable must be connected directly to the battery. Any alteration will void warranty****

INFORMATION ONLY

16 Row, Single Product

NOTE: IF THE IMPLEMENT HAS ANY FOLDS, AN EXTENSION M12 CABLE WILL BE PLACED TO CONNECT THE MICRO CONTROL VALVES AT THE FOLD INSTEAD OF THE STANDARD 3 FOOT M12 CABLE.

GX30i

CHANNEL(S) 1 (C1)
CHANNEL(S) 2 (C2)
16 ROW LAYOUT
SINGLE SOLUTION

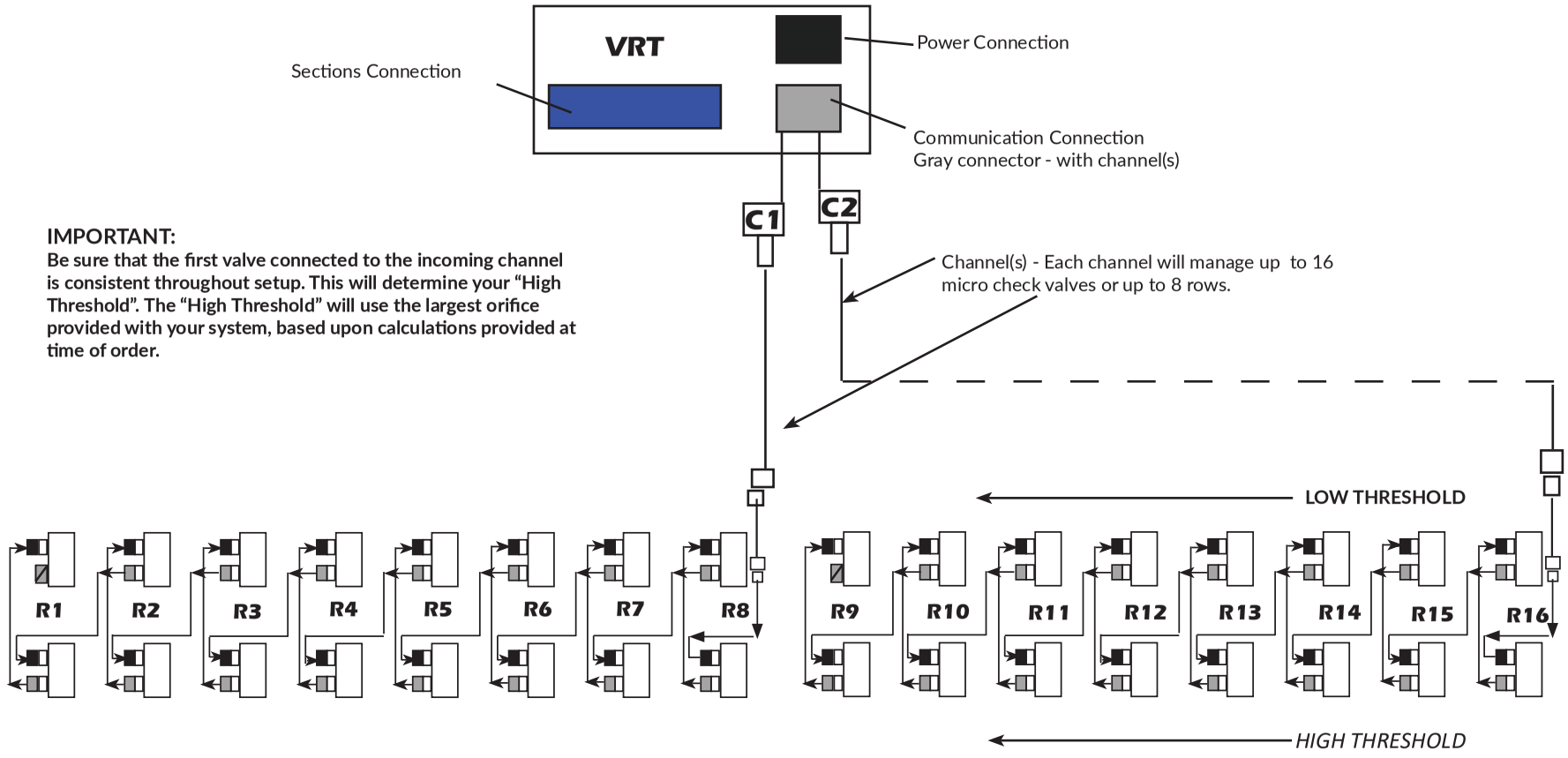
= M12 END CAP

"In"

"Out"

MCV = Micro Control Valve

*NOTE: The black("in") and gray("out") ends of the harness will only fit into their designated ports.



IMPORTANT:
Be sure that the first valve connected to the incoming channel is consistent throughout setup. This will determine your "High Threshold". The "High Threshold" will use the largest orifice provided with your system, based upon calculations provided at time of order.

24 Row, Single Product

For a 24 row implement, follow steps 1 - 8 on page 19 for an 8 row implement. After following the steps, please refer to page 22 and follow steps 1- 8 for a 16 row implement. When completed follow the below steps:

YOU ARE NOW COMPLETE WITH THE VRT'S CHANNEL 1 & 2. THE STEPS BELOW ARE FOR THE VRT'S CHANNEL 3 LINE FOR ROWS 17-24:

1. From the VRT module's gray channel port, run the second M12 channel harness to the 24th row of your implement (Looking at the Implement from behind, the left side will begin the row count as your first row). Depending upon the implement and/or placement of the VRT module you may have been provided a channel extension harness to reach the 24th row MCV valve.
2. Attach the channel connector into the "in" port on the first MCV on the 24th row.
3. Next use a M12 harness cable to connect the first valve to the second valve, on the 24th row. *see note*
4. From the second valve on the 24th row, connect a M12 harness cable in the "out" position going into the "in" connector of the first valve on the 23rd row.
5. Next use a M12 harness cable to connect the first valve to the second valve, on the 23rd row. Use the gray ("out") tip to connect the first valve into the second valve located on the 23rd row.
6. From the second valve on the 23rd row, connect a M12 harness cable in the "out" position going into the "in" connector on the 22nd row.
7. Repeat this "daisy chaining" process to link all the valves.
8. On the last "out" port on the 17th row, place an end cap as you will not need to harness anything from this port.

NOTE: IF THE IMPLEMENT HAS ANY FOLDS, AN EXTENSION M12 CABLE WILL BE PLACED TO CONNECT THE MICRO CONTROL VALVES AT THE FOLD INSTEAD OF THE STANDARD 3 FOOT M12 CABLE.

Caution: *Be sure to leave enough leeway in the cabling to accommodate folds, pivots or bends in the tool bar.*

IMPORTANT:
Be sure that the first valve connected to the incoming channel is consistent throughout setup. This will determine your "High Threshold". This will factor in particularly when there are more than 1 channel.
The "High Threshold" will use the largest orifice provided with your system, based upon calculations provided at time of order.

*** IMPORTANT: GX30 System battery cable must be connected directly to the battery. Any alteration will void warranty****

INFORMATION ONLY

24 Row, Single Product

NOTE: IF THE IMPLEMENT HAS ANY FOLDS, AN EXTENSION M12 CABLE WILL BE PLACED TO CONNECT THE MICRO CONTROL VALVES AT THE FOLD INSTEAD OF THE STANDARD 3 FOOT M12 CABLE.

GX30i

CHANNEL(S) 1 (C1)
CHANNEL(S) 2 (C2)
CHANNEL(S) 3 (C3)
24 ROW LAYOUT
SINGLE SOLUTION

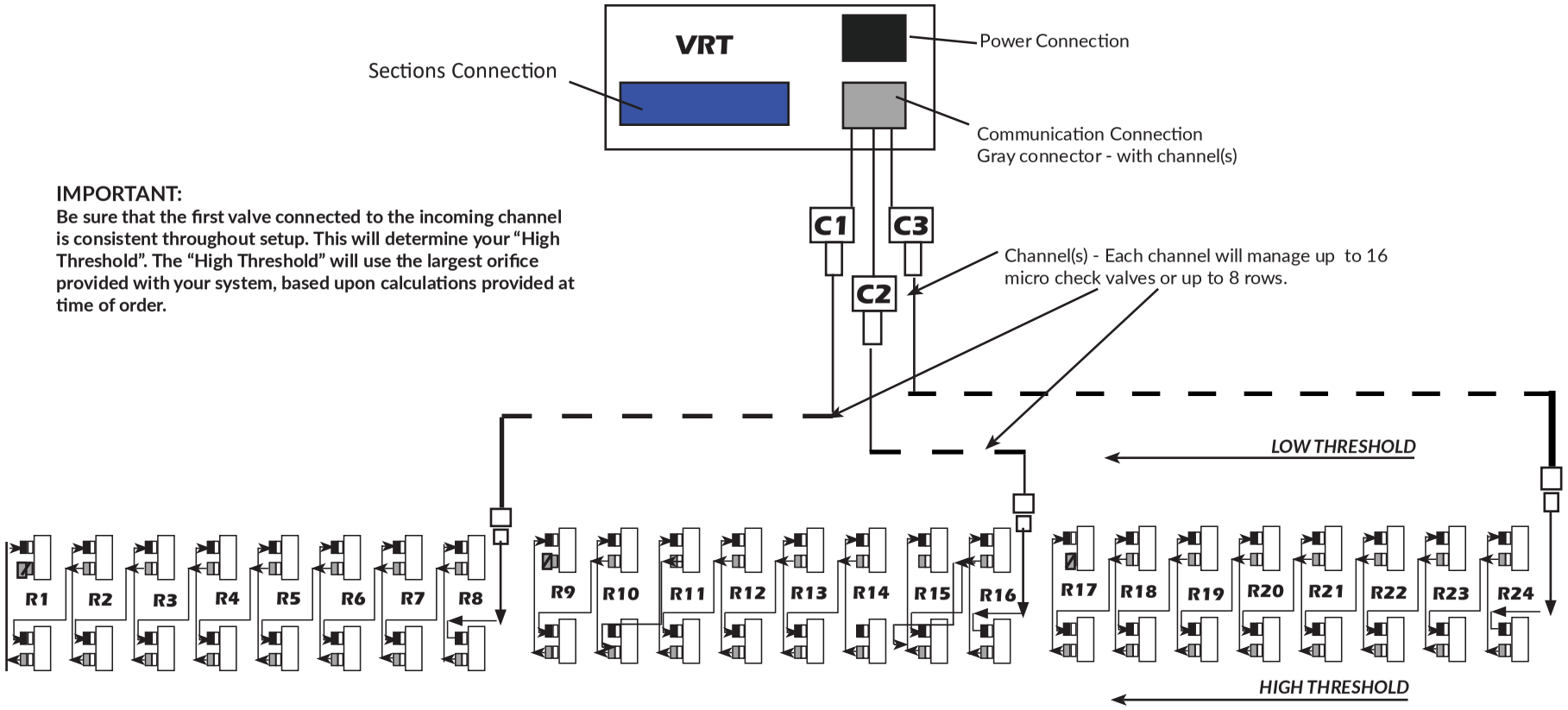
= M12 END CAP

"In"

"Out"

MCV = Micro Control Valve

*NOTE: The black("in") and gray("out") ends of the harness will only fit into their designated ports.



IMPORTANT:
Be sure that the first valve connected to the incoming channel is consistent throughout setup. This will determine your "High Threshold". The "High Threshold" will use the largest orifice provided with your system, based upon calculations provided at time of order.

32 Row, Single Product

For a 32 row implement, follow steps 1 - 8 on page 19 for an 8 row implement. After following the steps, please refer to page 22 and follow steps 1-8 for a 16 row implement. Then refer to page 24 and follow steps 1-8 for a 24 row implement. When all steps are completed then follow the steps below:

YOU ARE NOW COMPLETE WITH THE VRT'S CHANNEL 1, 2, AND 3. THE STEPS BELOW ARE FOR THE VRT'S CHANNEL 4 LINE FOR ROWS 25-32:

1. From the VRT module's gray channel port, run the second M12 channel harness to the 32nd row of your implement (Looking at the Implement from behind, the left side will begin the row count as your first row). Depending upon the implement and/or placement of the VRT module you may have been provided a channel extension harness to reach the 32nd row MCV valve.
2. Attach the channel connector into the "in" port on the first MCV on the 32nd row.
3. Next use a M12 harness cable to connect the first valve to the second valve, on the 32nd row. *see note*
4. From the second valve on the 32nd row, connect a M12 harness cable in the "out" position going into the "in" connector of the first valve on the 31st row.
5. Next use a M12 harness cable to connect the first valve to the second valve, on the 31st row. Use the gray ("out") tip to connect the first valve into the second valve located on the 31st row.
6. From the second valve on the 31st row, connect a M12 harness cable in the "out" position going into the "in" connector on the 30th row.
7. Repeat this "daisy chaining" process to link all the valves.
8. On the last "out" port on the 25th row, place an end cap as you will not need to harness anything from this port.

NOTE: IF THE IMPLEMENT HAS ANY FOLDS, AN EXTENSION M12 CABLE WILL BE PLACED TO CONNECT THE MICRO CONTROL VALVES AT THE FOLD INSTEAD OF THE STANDARD 3 FOOT M12 CABLE.

Caution: *Be sure to leave enough leeway in the cabling to accommodate folds, pivots or bends in the tool bar.*

IMPORTANT:
Be sure that the first valve connected to the incoming channel is consistent throughout setup. This will determine your "High Threshold". This will factor in particularly when there are more than 1 channel.
The "High Threshold" will use the largest orifice provided with your system, based upon calculations provided at time of order.

*** IMPORTANT: GX30 System battery cable must be connected directly to the battery. Any alteration will void warranty****

INFORMATION ONLY

32 Row, Single Product

NOTE: IF THE IMPLEMENT HAS ANY FOLDS, AN EXTENSION M12 CABLE WILL BE PLACED TO CONNECT THE MICRO CONTROL VALVES AT THE FOLD INSTEAD OF THE STANDARD 3 FOOT M12 CABLE.

GX30i

CHANNEL(S) 1 (C1)
CHANNEL(S) 2 (C2)
CHANNEL(S) 3 (C3)
CHANNEL(S) 4 (C4)
32 ROW LAYOUT
SINGLE SOLUTION

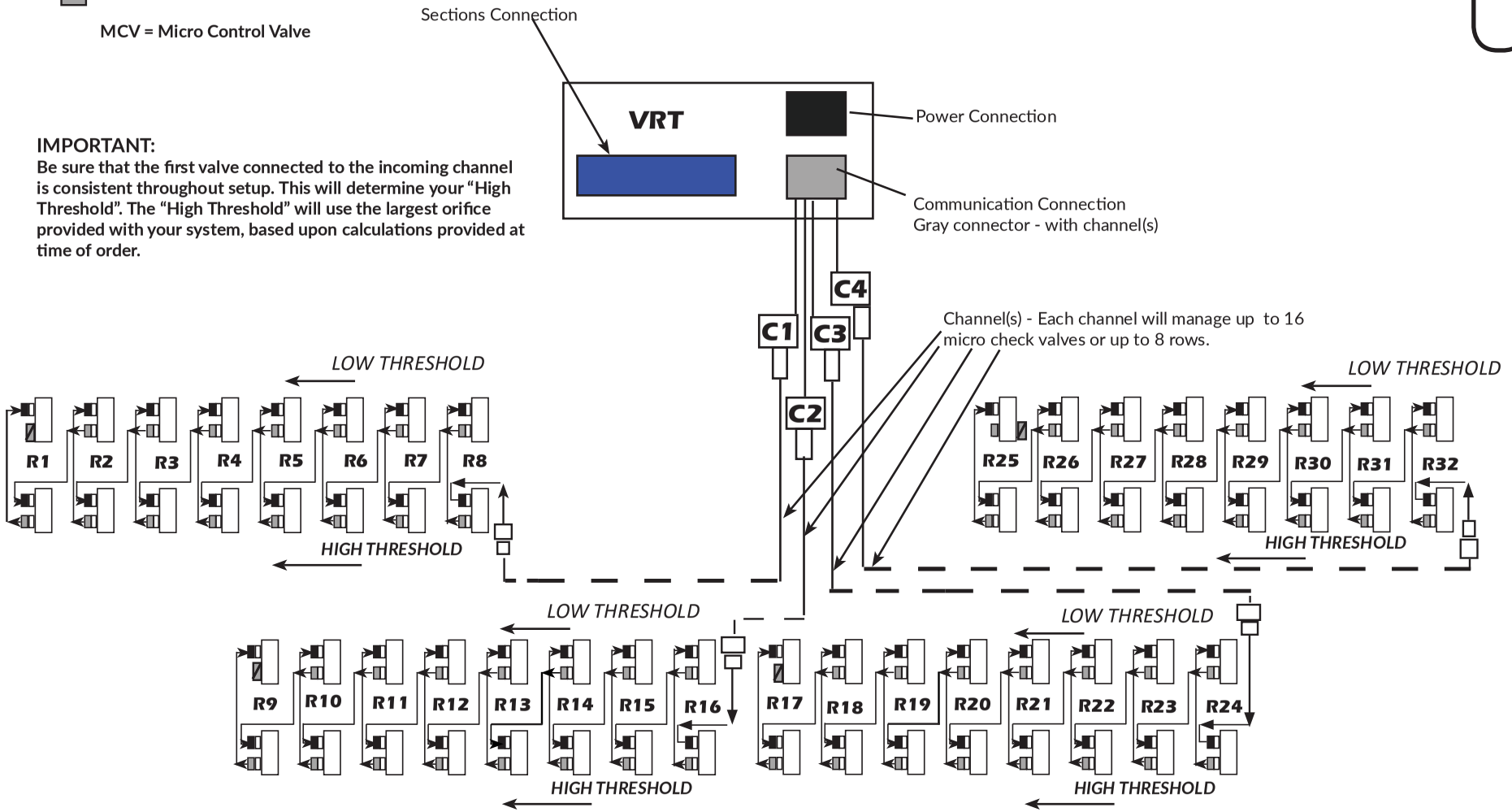
= M12 END CAP

"In"

"Out"

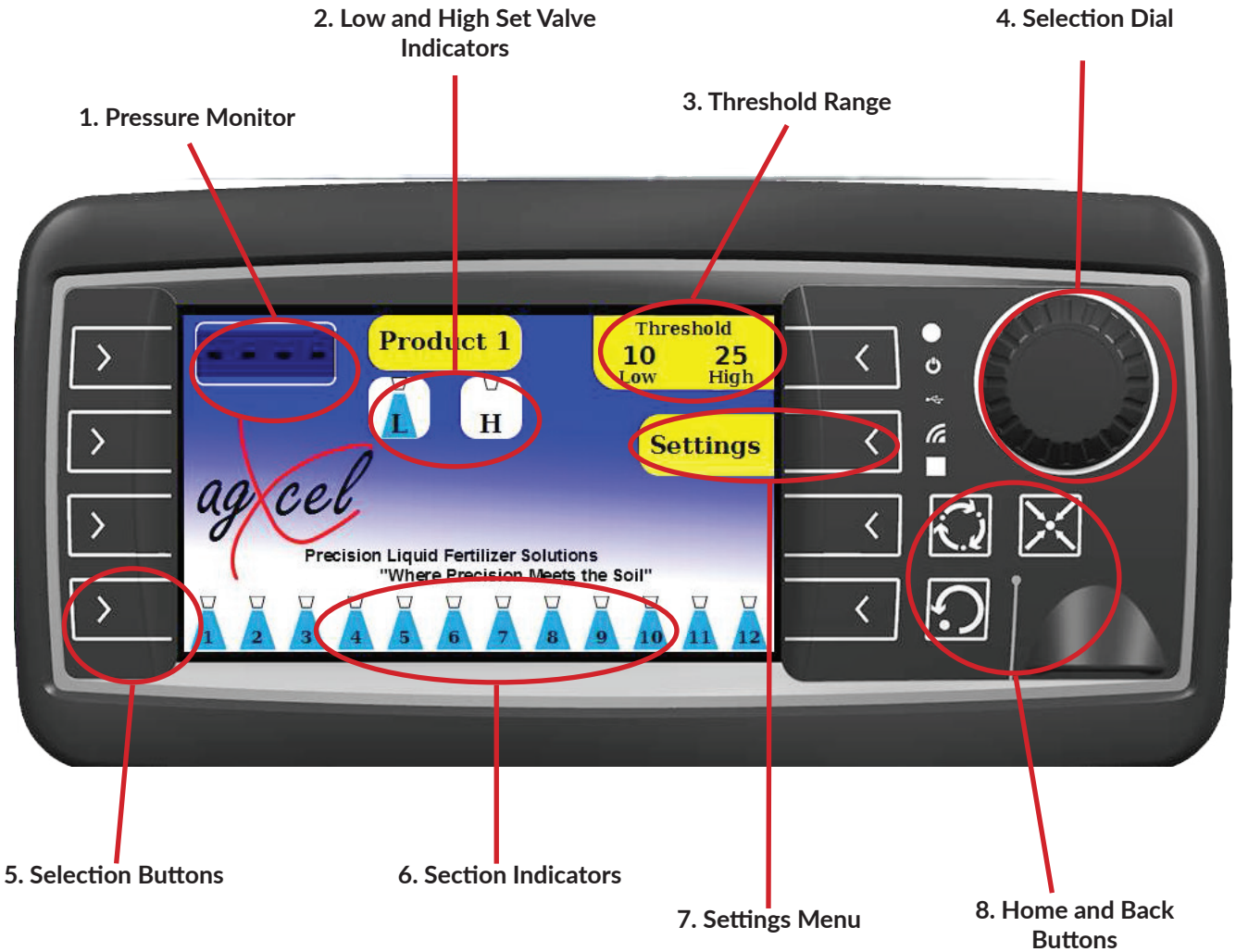
MCV = Micro Control Valve

*NOTE: The black("in") and gray("out") ends of the harness will only fit into their designated ports.



IMPORTANT:
Be sure that the first valve connected to the incoming channel is consistent throughout setup. This will determine your "High Threshold". The "High Threshold" will use the largest orifice provided with your system, based upon calculations provided at time of order.

This guide will take you step by step on how to set up your GX30iVRT rather you are using a single product, dual product or want to set up swathing.



1. Pressure Monitor - This number is the pressure being displayed on the pressure gauge

2. Low and High Set Valve Indicators - These Indicators will visually display when either the low set, high set or both sets of micro control valves are opened or closed.

3. Threshold Range - This is the range of your pressure thresholds. Once the pressure hits the threshold limit, it will open up the corresponding set that the threshold is assigned too. (Pressing the arrow button will allow the user to adjust the thresholds)

4. Selection Dial - This dial is for use of selecting sections of the GX30iVRT and changing values for those options.

5. Selection Buttons - These arrow buttons corresponds to the selection on the screen. Pressing them will choose that selection.

6. Section Indicators - Once configured, The GX30iVRT will display the amount of sections you have set up and visually show if the section is opened or closed.

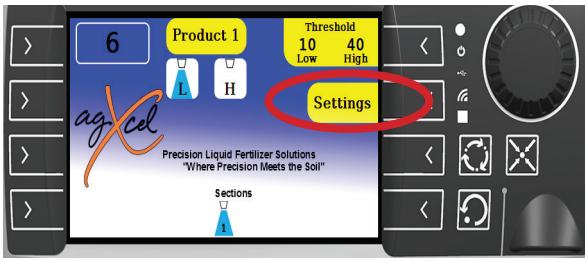
7. Settings Menu - Pressing the selection button for settings will take the user to the settings screen where the user set up the controller for single product, dual product, swath, self addressing, and manual overrides.

8. Home and Back Buttons - The home button will allow the user to go to the home screen from any screen and the back button will allow the user to go to the previous screen if needed to.

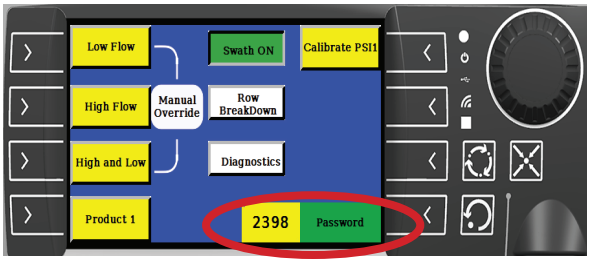
Single Product

Please follow the following steps to set up your GX30iVRT for single product use. If dual products are going to be used please go to page 17.

Step 1 - Press the arrow button corresponding to the settings.

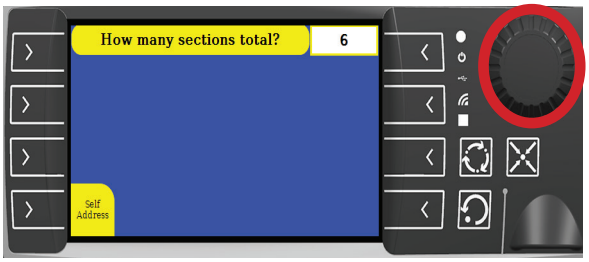


Step 2 - Once on the setting's page, press the arrow that corresponds to the password area. Password is 1981.

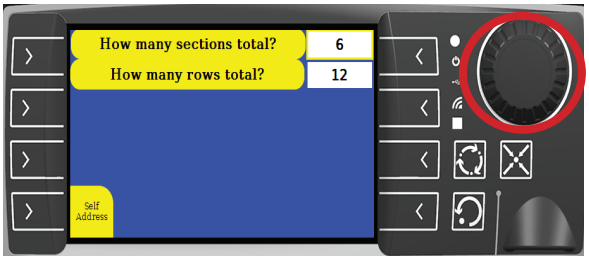


Step 3 - The GX30iVRT will ask if you are doing dual product. Press the arrow button for no to set up for single product use.

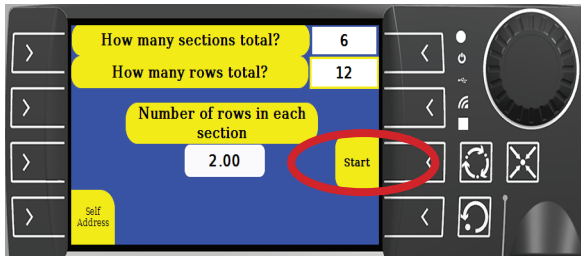
Step 4 - It will ask you how many total sections you will be doing. To adjust this value, press the dial in and turn for the correct amount of sections you want to do. Press in the dial to accept the value. Press the dial in once more to go to the next step.



Step 5 - Next the VRT will ask you how many total rows your implement has. To adjust this value, press the dial in and turn for the correct amount of rows you have. Press in the dial to accept the value. Press the dial in once more to go to the next step.



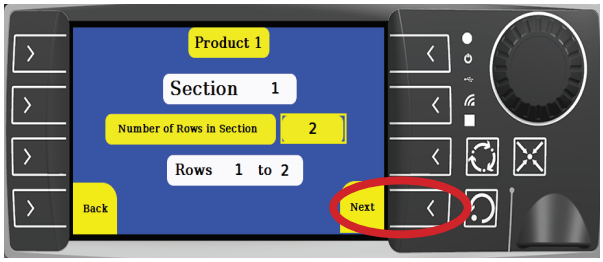
Step 6 - You can assign how many rows per section you plan on using. To adjust this value, press the dial in and turn for the correct amount of rows per section you want to run. Press in the dial to accept the value. When finished press the arrow button that corresponds to the start.



Single Product

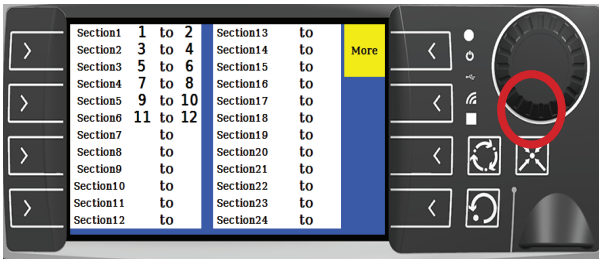
Step 7 - The GX30iVRT will have you go through system ID assigning steps for each rows per section. Press the arrow button that corresponds to next to assign the rows per each section.

**Note - If pressing the next button too fast, this can cause the ID assigning to sometimes skip a section.*



Step 8 - After you assign the rows for each section, you will see a section overview page. Check and ensure that all the sections and rows are presented on the screen. If they are then press the home button to go to the main screen.

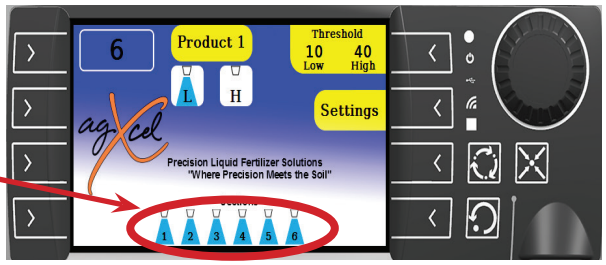
**Note - If not all sections are showing up on the overview page, press the home button to go back to the main screen and restart at step 1 of this guide.*



Step 9 - Once completed and you are at the GX30iVRT's main page, you will see the sections you have assigned at the bottom of the screen.

**Note -* Sections are closed

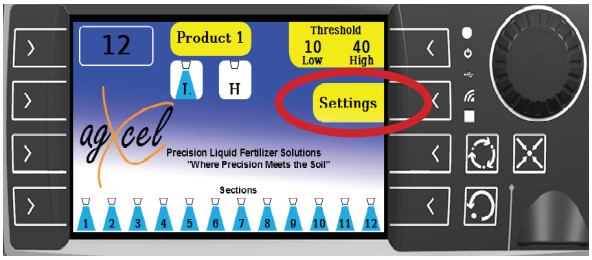
Sections are opened



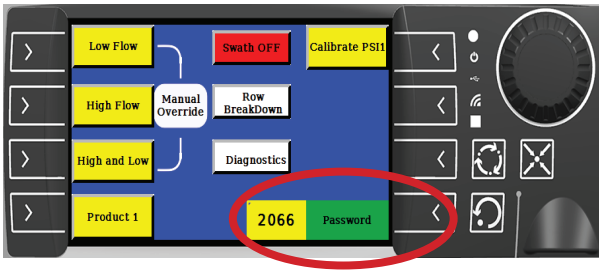
GX30iVRT CONTROLLER SETUP - DUAL PRODUCT

If the user is applying dual products, they can set it up to have two separate set of sections with two separate sets of thresholds for both products that being applied.

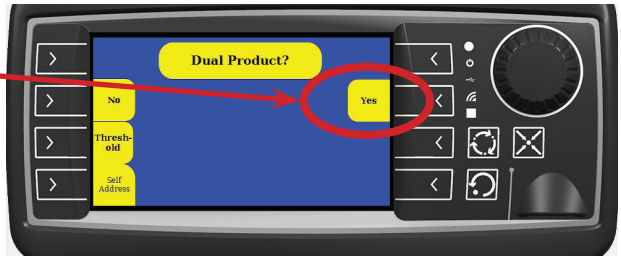
Step 1 - From the main screen, press the arrow button to go into the settings page.



Step 2 - Press the arrow button that corresponds to password. Password is 1981.



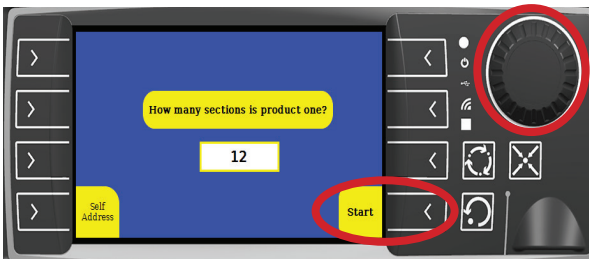
Step 3 - When asked if you are going to use dual product, press yes.



Dual Product

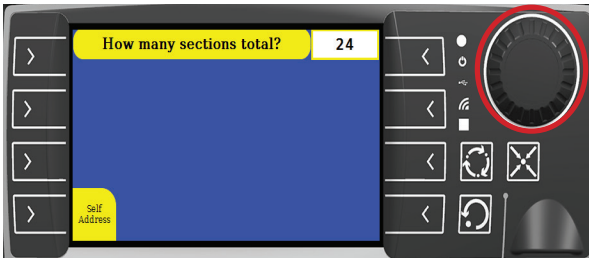
Step 4 - Press in the dial to edit the value of how many sections you want product one to be. Press in the dial to confirm amount then press start.

**Example - If your implement is 24 rows and want 12 sections to apply product one, then you would input 12 which will leave the other 12 rows for product two.*

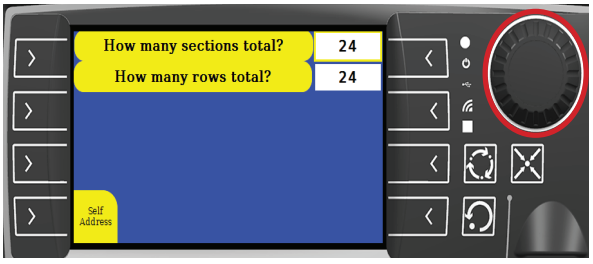


Step 5 - You will now need to input the total amount of sections for both products. Press in the dial to change value. Press in again to accept.

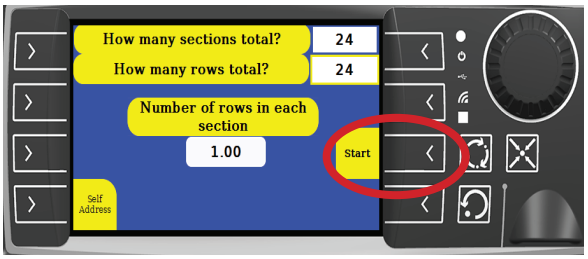
**Example - If you wanted 12 sections for each of the two products for a 24 row implement, then you would enter 24 total sections.*



Step 6 - Next you will need to enter the total amount of rows of your implement. Press in the dial to change value. Press in again to accept.

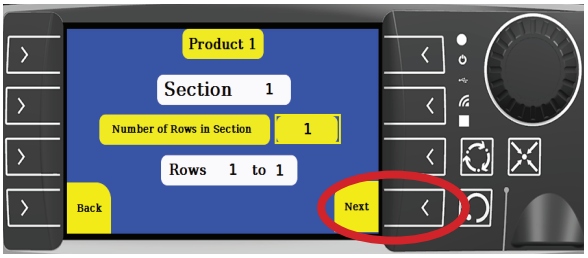


Step 7 - Ensure the amount of rows per section is correct. Press the arrow button corresponding to start to go to the next step.

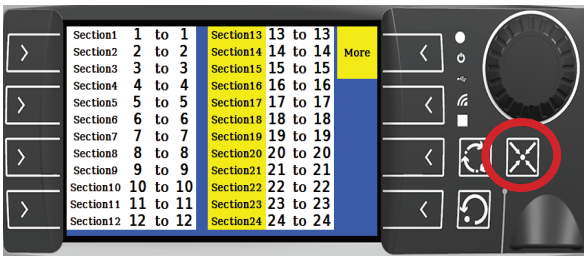


Step 8 - Next you need to assign the rows to the sections. Press the arrow button that corresponds to next. You will need to assign for all sections that you have entered. If you need to change the value of rows in each section, press in the dial and turn it to the amount you want to set it at.

**Note - If pressing the next button too fast, this can cause the ID assigning to sometimes skip a section.*



Step 9 - Ensure the amount of rows per section is correct. If correct, press the home button on the GX30iVRT.

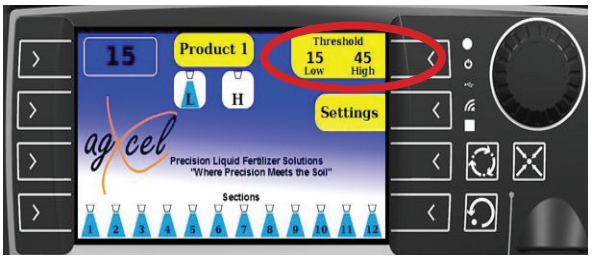


Thresholds

Setting up thresholds will decide the pressure limit for the Gx30iVRT to open and close the low set, high set, or both of the micro control valves.

Step 1 - Press the arrow button corresponding to the threshold.

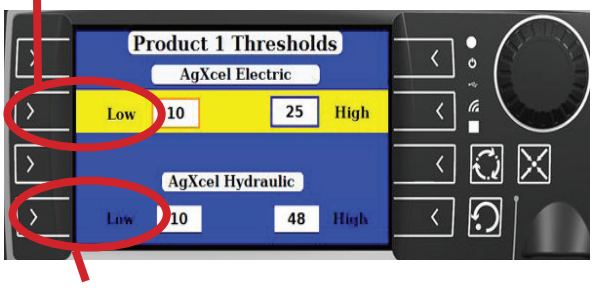
**Note - If you are doing dual product, both selections will be visible on the home screen, allowing you to press the arrow button to the product to edit the threshold value.*



Step 2 - Press the arrow button corresponding to the type of system you are using, electric or hydraulic.

**Note - The selected system will be highlighted in yellow.*

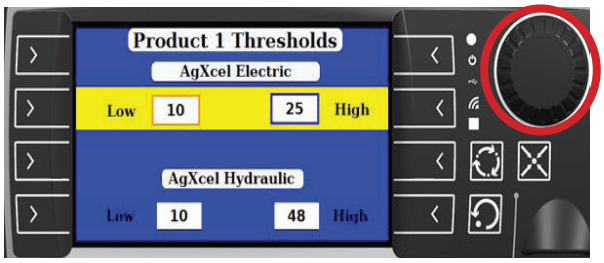
Electric



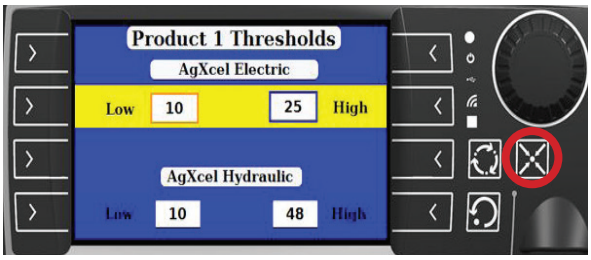
Hydraulic

Step 3 - Once the system is selected, turn the dial to the low or high threshold section you want to adjust. When the desired area is highlighted, press the dial in to change the value of the threshold. Turn the dial to the desired threshold and press in the dial to accept changes.

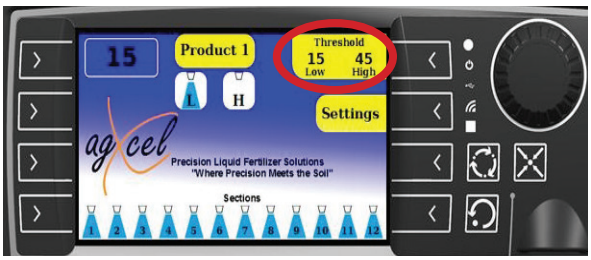
**Note - The electric system thresholds will have a lower range than the hydraulic system thresholds.*



Step 4 - After all threshold values are inputed, press the home button to return to the GX30iVrt's home screen.



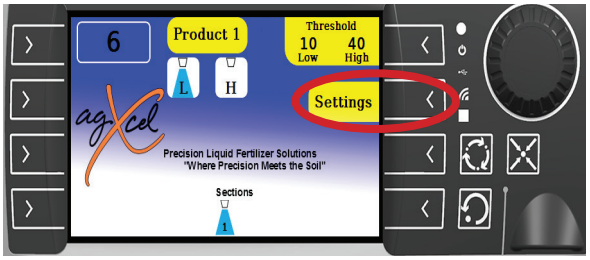
Step 5 - Once at the home screen, check the values of the low and high thresholds in the top right corner of the screen to ensure it is correct.



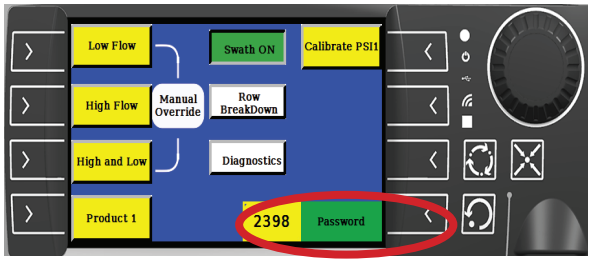
Swath

Setting up swath control will allow the GX30iVRT to communicate with your liquid rate controller to turn off and on sections you have set up when needed to.

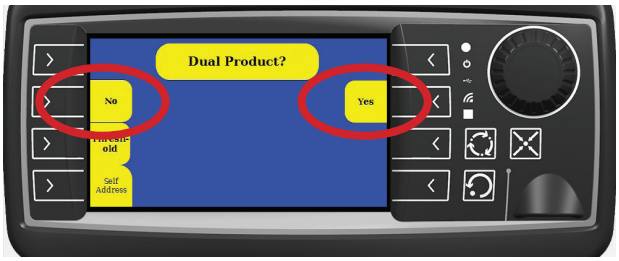
Step 1 - Press the arrow button corresponding to the settings.



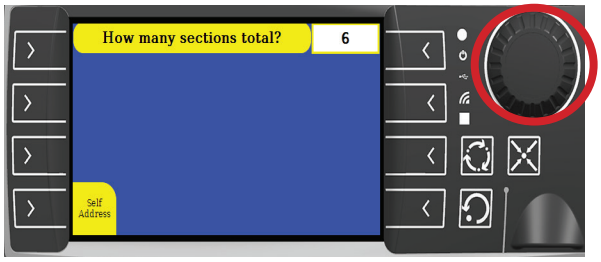
Step 2 - Once on the setting's page, press the arrow that corresponds to the password area. Password is 1981.



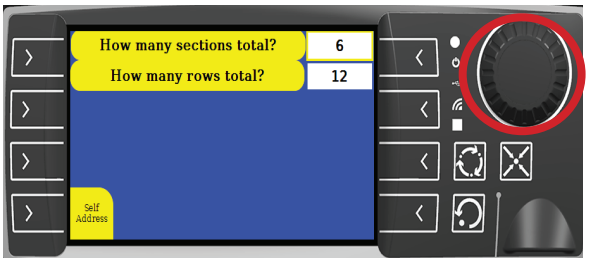
Step 3 - The GX30iVRT will ask if you are doing dual product. Press the arrow button for yes if you are doing dual product, if not then press no.



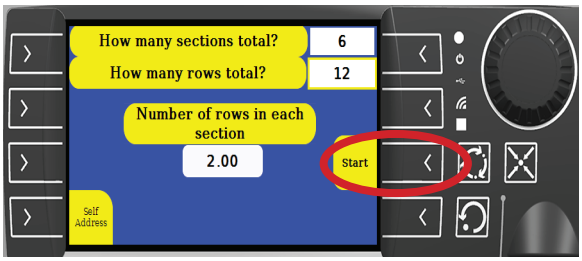
Step 4 - It will ask you how many total sections you will be doing. To adjust this value, press the dial in and turn for the correct amount of sections you want to do. Press in the dial to accept the value. Press the dial in once more to go to the next step.



Step 5 - Next the VRT will ask you how many total rows your implement has. To adjust this value, press the dial in and turn for the correct amount of rows you have. Press in the dial to accept the value. Press the dial in once more to go to the next step.

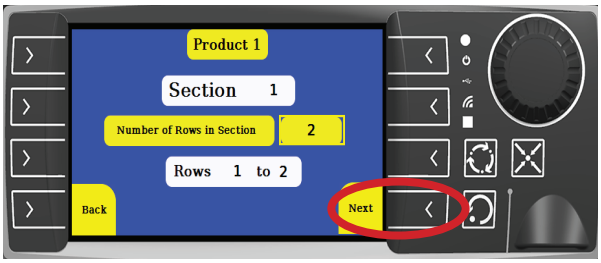


Step 6 - You can assign how many rows per section you plan on using. To adjust this value, press the dial in and turn for the correct amount of rows per section you want to run. Press in the dial to accept the value. When finished press the arrow button that corresponds to the start.



Step 7 - The GX30iVRT will have you go through system ID assigning steps for each rows per section. Press the arrow button that corresponds to next to assign the rows per each section.

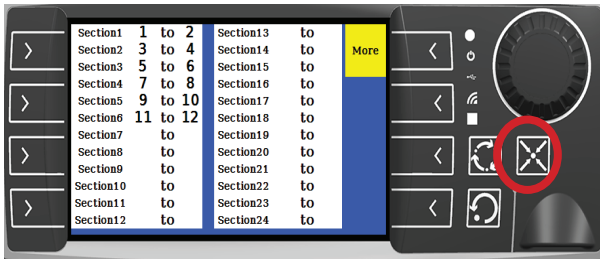
Note - If pressing the next button too fast, this can cause the ID assigning to sometimes skip a section.



Swath

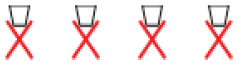
Step 8 - After you assign the rows for each section, you will see a section overview page. Check and ensure that all the sections and rows are presented on the screen. If they are then press the home button to go to the main screen.

**Note - If not all sections are showing up on the overview page, press the home button to go back to the main screen and restart at step 1 of this guide.*

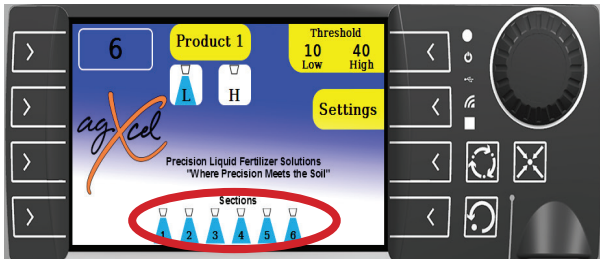


Step 9 - Once completed and you are at the GX-30iVRT's main page, you will see the sections you have assigned at the bottom of the screen.

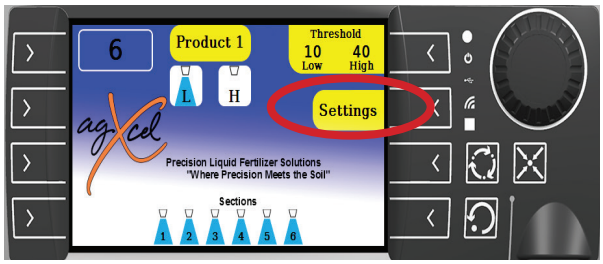
Note -* **Sections are closed



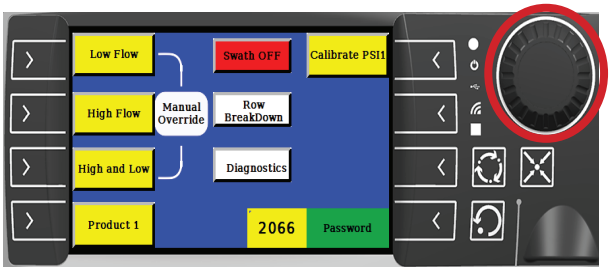
Sections are opened



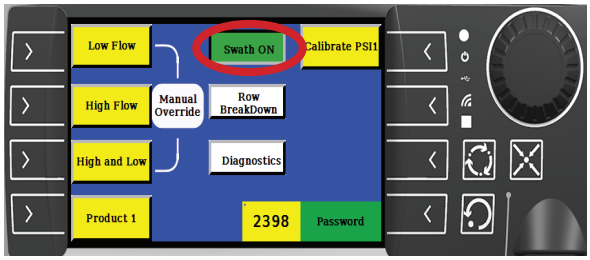
Step 10 - From the main screen, go back to the settings screen by pressing the arrow button that is corresponding with settings.



Step 11 - Turn the dial until you see a yellow box highlighting "Swath Off". This means swath is currently off.



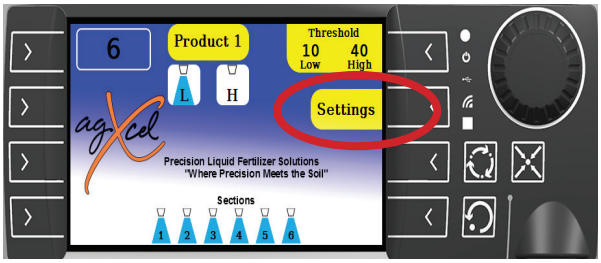
Step 12 - Once "Swath Off" is highlighted, press in the dial. When you see "Swath On" then you have successfully turned on swath. Press the home button to return to the main screen.



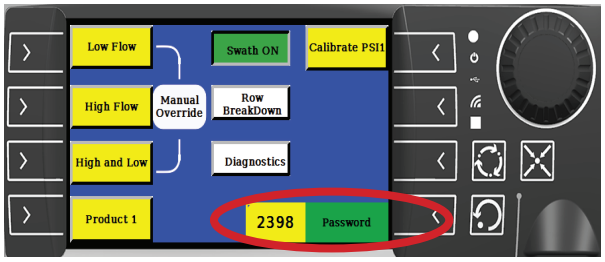
Self-Address

Self addressing would allow the user to have the micro control valves (MCV) self assign their proper ID's. In some cases the micro control valve can lose its assigned ID so going through the self address process will assign the micro control valves their proper ID.

Step 1 - From the main screen, press the arrow button to go into the settings page.

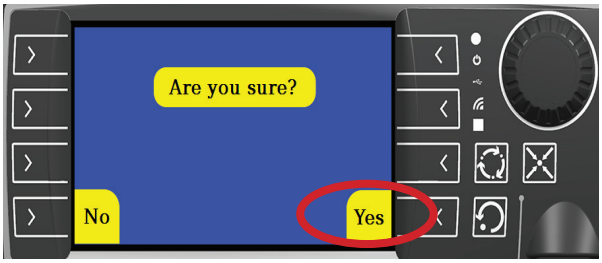


Step 2 - When in the settings menu, press the arrow button that corresponds to password. Password is 1981.



Step 3 - It will bring you to a screen where it asks about dual products. On the bottom left of the screen you will see a selection for self address. Press the arrow button for self address.

Step 4 - The Gx30i VRT will ask you if you still want to continue with the self addressing. Press the arrow button for yes.

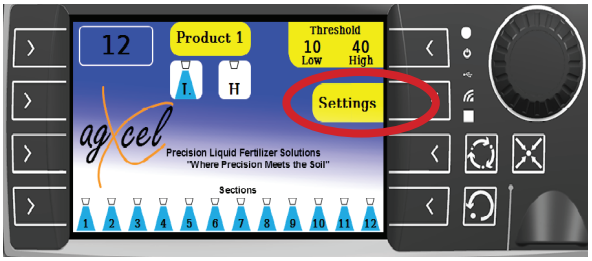


Step 5 - After pressing yes, it will self address each micro control valve and bring you back to the previous screen. Press the home button to return to the main screen.

Manual Override

When needing to apply the same rate for all rows or for testing purposes, the user will be able to open and close the micro check valves using the GX30iVRT's manual override on the settings screen.

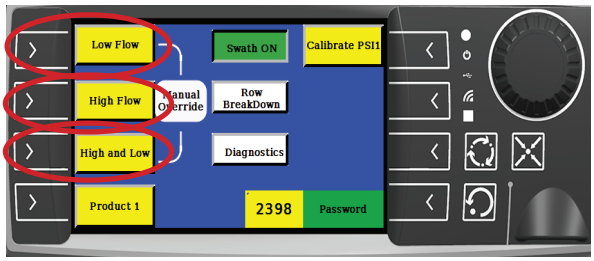
Step 1 - From the main screen, press the arrow button to go into the settings page.



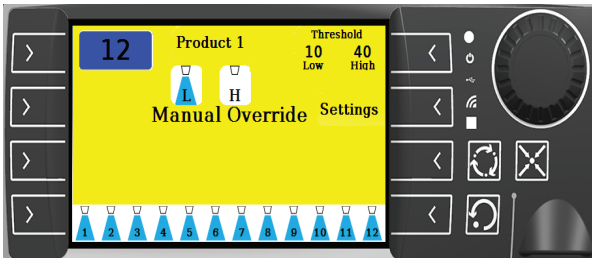
Step 2 - You will be able to open the low flow set, high flow set, or both sets of micro control valves by pressing the corresponding selection.

Override Disabled

Override Enabled



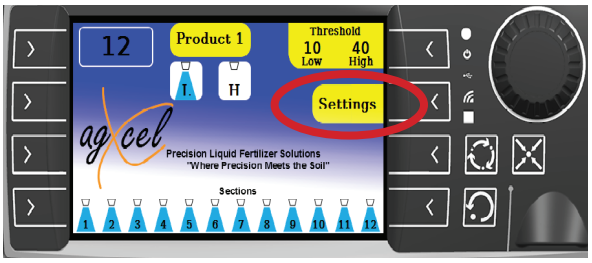
Step 3 - Press the home button to return to the home screen



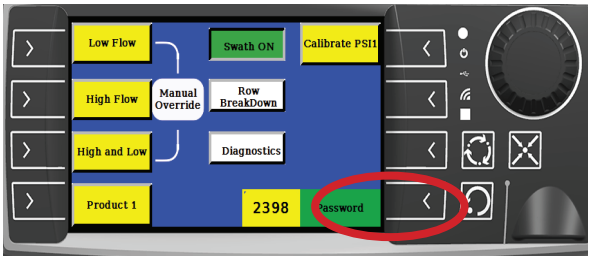
Voltage Threshold

Some rate controllers leave voltage on the PWM line that the GX30iVRT IS CONNECTED TO. This can result to the micro control valves to stay open when there is no application being applied. Setting the GX30Ivrt's voltage threshold to the correct value can eliminate the voltage quicker.

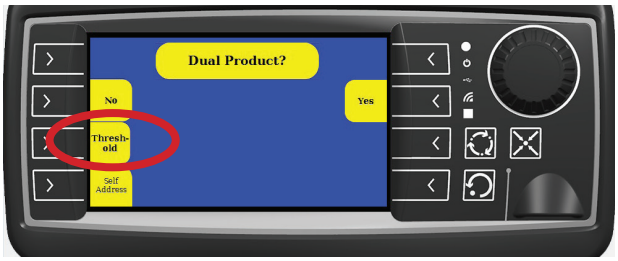
Step 1 – From the main screen, press the arrow button to go the settings page.



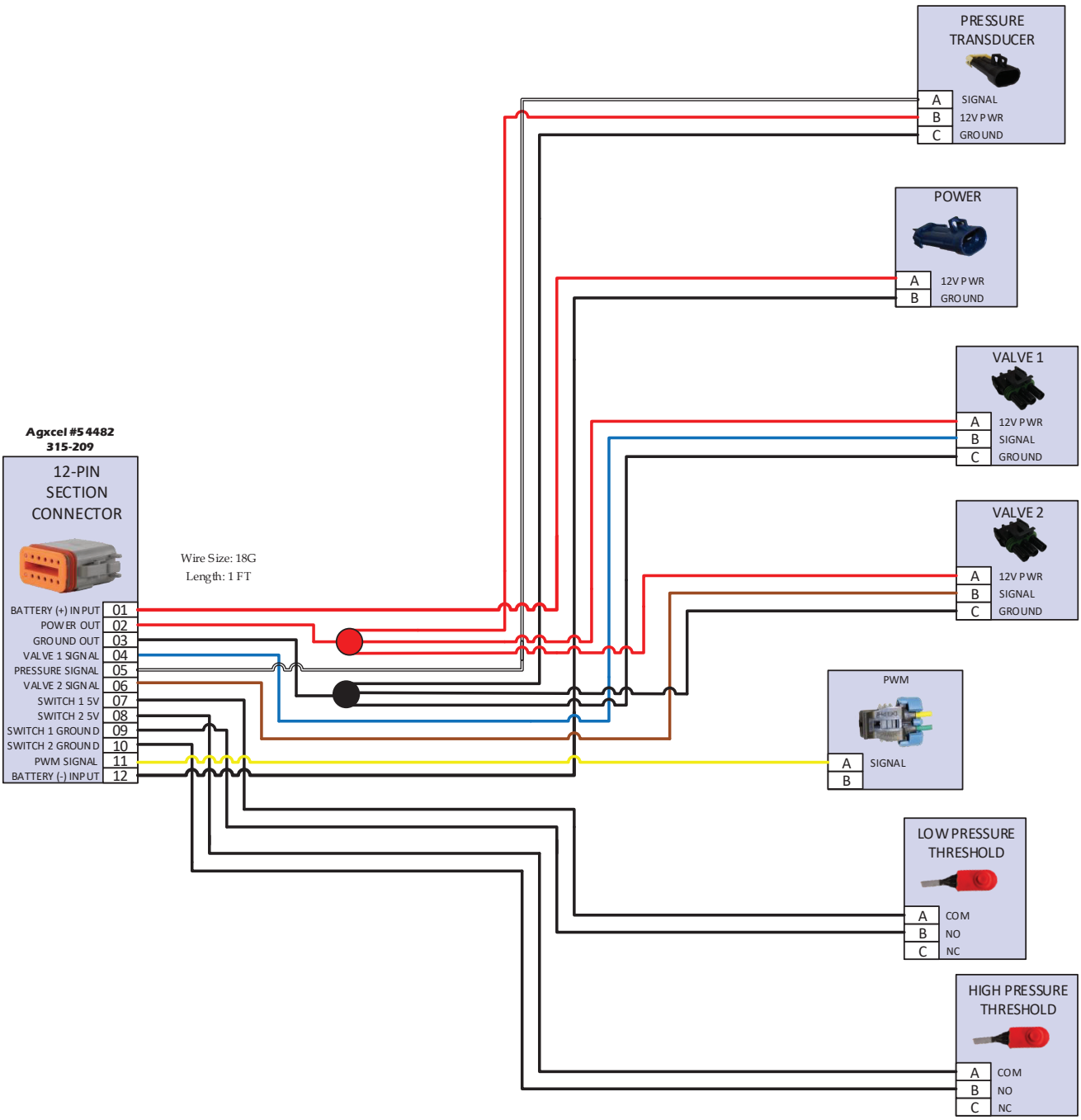
Step 2 - When in the Settings screen, press the arrow button that corresponds to password. Password is 1981.

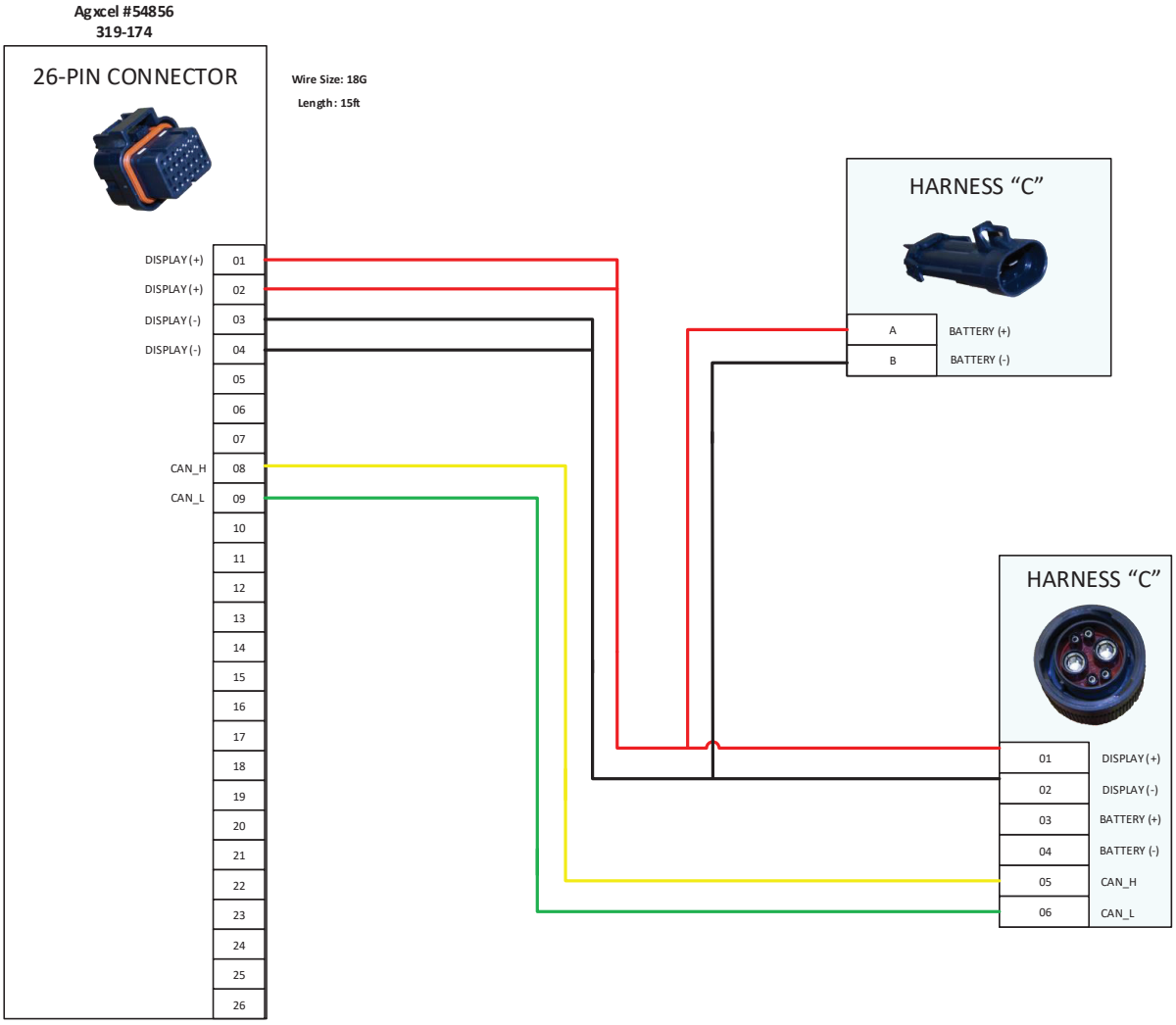


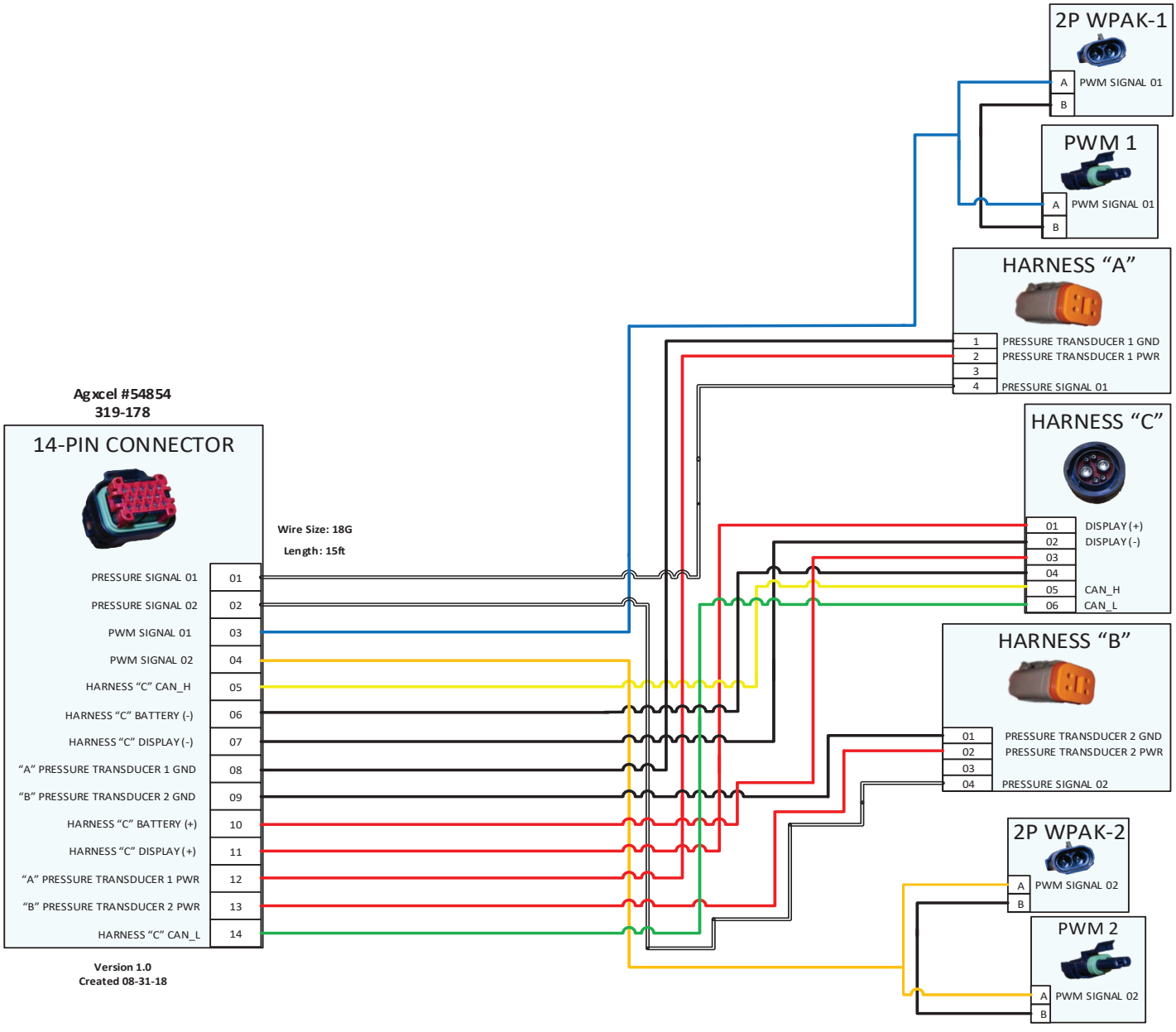
Step 3 - It will bring you to a screen where it asks about dual products. On the left side of the screen, you will see a selection for "Threshold". Press the arrow button corresponding to "Threshold".

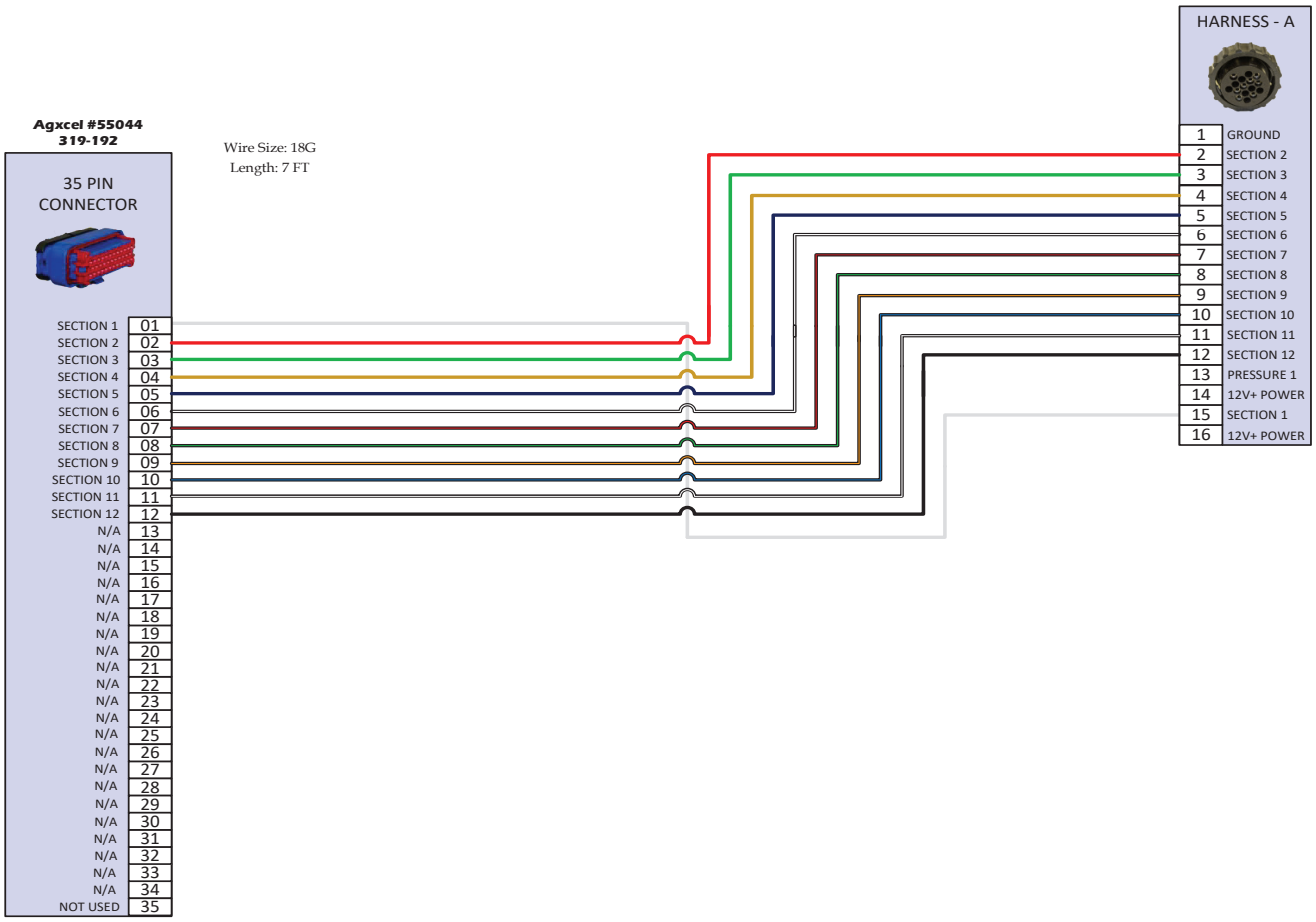


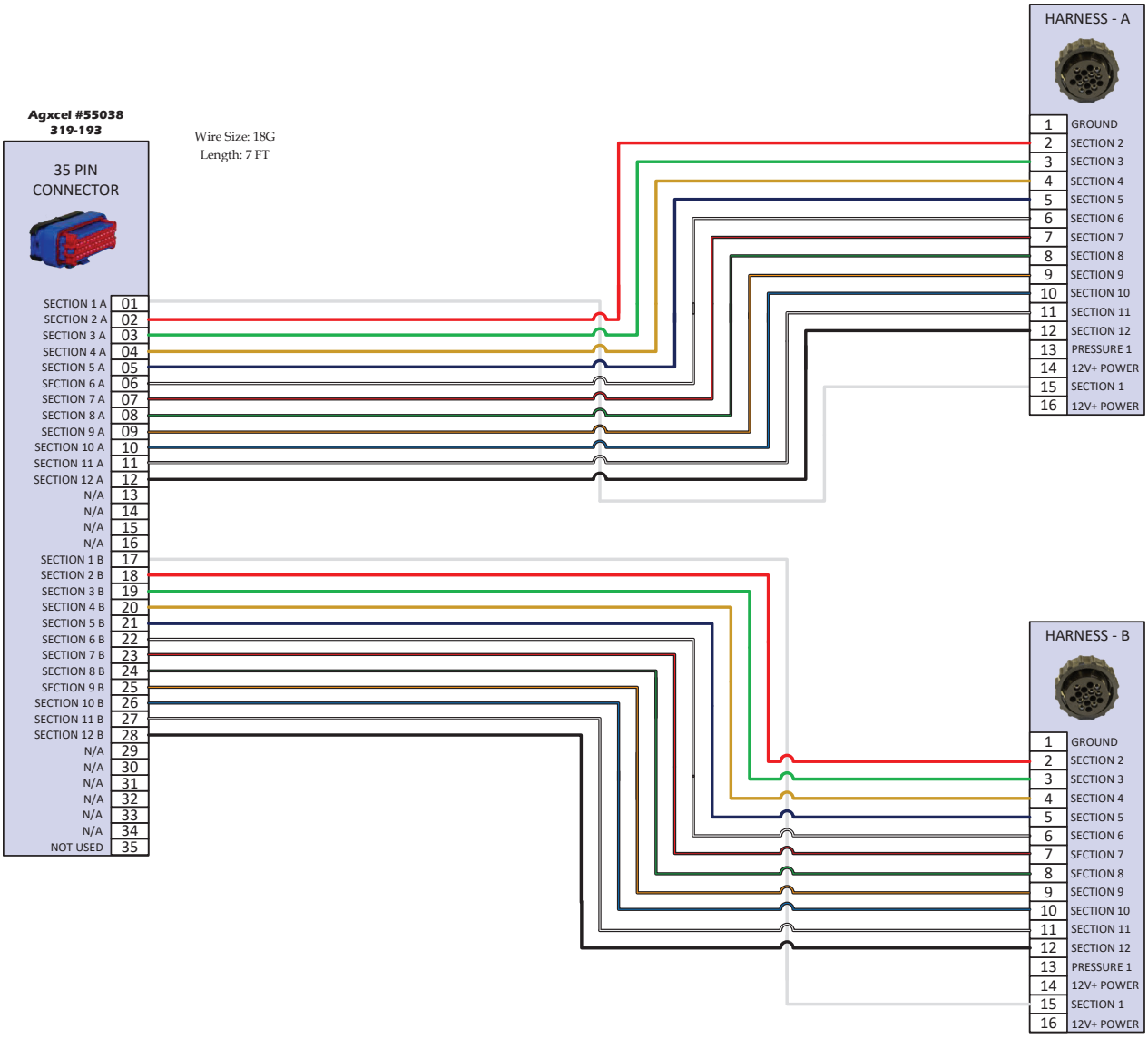
Step 4 – Press in the dial and turn it to the value that best performs with your rate controller. You will have to fine tune this value to eliminate the voltage

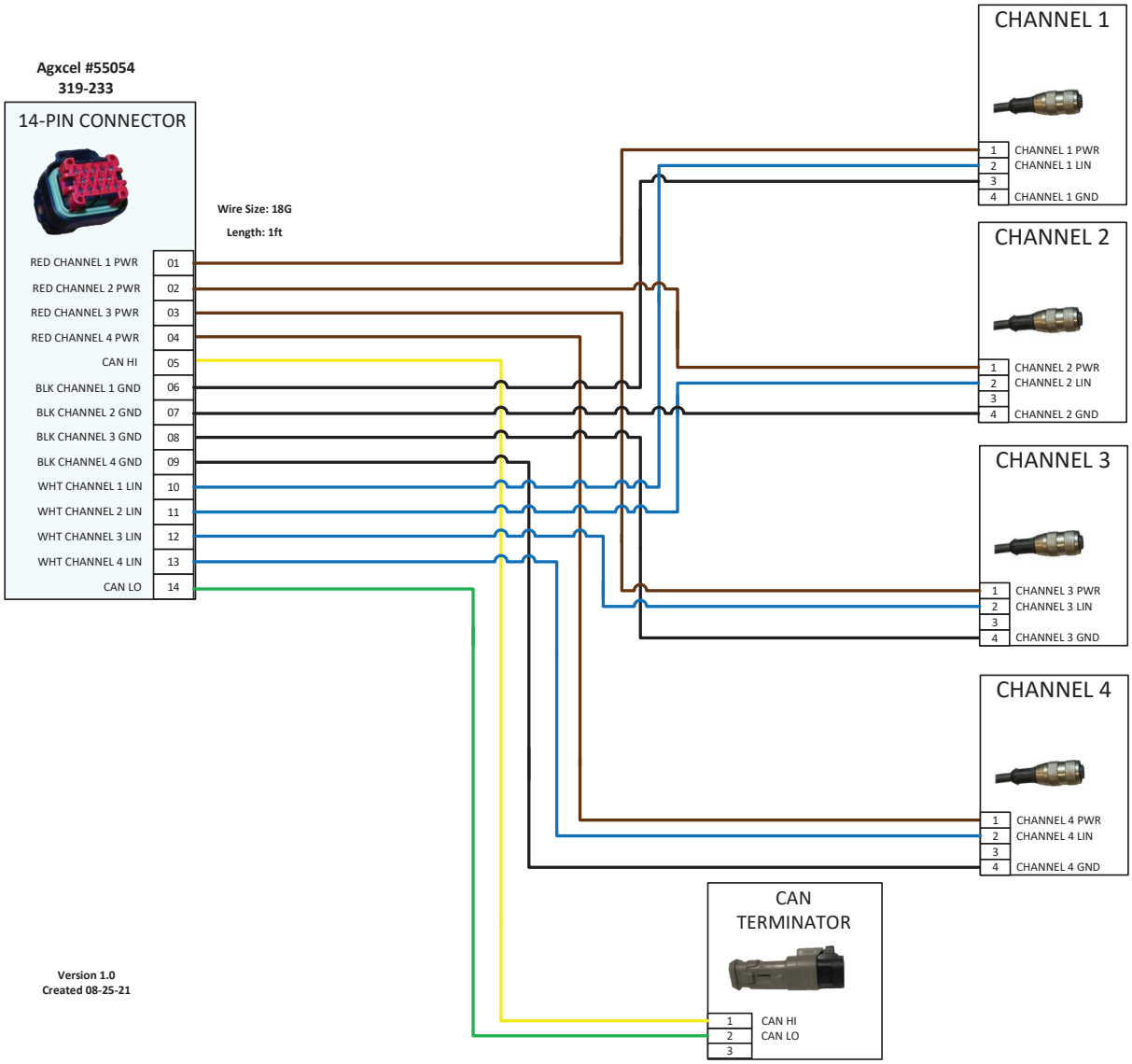

Agxcel #54482
315-209
12-PIN
SECTION
CONNECTOR
Wire Size: 18G
Length: 1 FT
BATTERY (+) INPUT 01
POWER OUT 02
GROUND OUT 03
VALVE 1 SIGNAL 04
PRESSURE SIGNAL 05
VALVE 2 SIGNAL 06
SWITCH 1 5V 07
SWITCH 2 5V 08
SWITCH 1 GROUND 09
SWITCH 2 GROUND 10
PWM SIGNAL 11
BATTERY (-) INPUT 12
PRESSURE TRANSDUCER
A SIGNAL
B 12V PWR
C GROUND
POWER
A 12V PWR
B GROUND
VALVE 1
A 12V PWR
B SIGNAL
C GROUND
VALVE 2
A 12V PWR
B SIGNAL
C GROUND
PWM
A SIGNAL
B
LOW PRESSURE THRESHOLD
A COM
B NO
C NC
HIGH PRESSURE THRESHOLD
A COM
B NO
C NC


Agxcel #54856
319-174
26-PIN CONNECTOR
Wire Size: 18G
Length: 15ft
DISPLAY (+) 01
DISPLAY (+) 02
DISPLAY (-) 03
DISPLAY (-) 04
05
06
07
CAN_H 08
CAN_L 09
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
HARNESS "C"
A BATTERY (+)
B BATTERY (-)
HARNESS "C"
01 DISPLAY (+)
02 DISPLAY (-)
03 BATTERY (+)
04 BATTERY (-)
05 CAN_H
06 CAN_L


Agxcel #54854
319-178
14-PIN CONNECTOR
PRESSURE SIGNAL 01 01
PRESSURE SIGNAL 02 02
PWM SIGNAL 01 03
PWM SIGNAL 02 04
HARNESS "C" CAN_H 05
HARNESS "C" BATTERY (-) 06
HARNESS "C" DISPLAY (-) 07
"A" PRESSURE TRANSDUCER 1 GND 08
"B" PRESSURE TRANSDUCER 2 GND 09
HARNESS "C" BATTERY (+) 10
HARNESS "C" DISPLAY (+) 11
"A" PRESSURE TRANSDUCER 1 PWR 12
"B" PRESSURE TRANSDUCER 2 PWR 13
HARNESS "C" CAN_L 14
Version 1.0
Created 08-31-18
Wire Size: 18G
Length: 15ft
2P WPAK-1
A PWM SIGNAL 01
B
PWM 1
A PWM SIGNAL 01
B
HARNESS "A"
1 PRESSURE TRANSDUCER 1 GND
2 PRESSURE TRANSDUCER 1 PWR
3
4 PRESSURE SIGNAL 01
HARNESS "C"
01 DISPLAY (+)
02 DISPLAY (-)
03
04
05 CAN_H
06 CAN_L
HARNESS "B"
01 PRESSURE TRANSDUCER 2 GND
02 PRESSURE TRANSDUCER 2 PWR
03
04 PRESSURE SIGNAL 02
2P WPAK-2
A PWM SIGNAL 02
B
PWM 2
A PWM SIGNAL 02
B


Agxcel #55044
319-192
35 PIN
CONNECTOR
Wire Size: 18G
Length: 7 FT
HARNESS - A
SECTION 1 01
SECTION 2 02
SECTION 3 03
SECTION 4 04
SECTION 5 05
SECTION 6 06
SECTION 7 07
SECTION 8 08
SECTION 9 09
SECTION 10 10
SECTION 11 11
SECTION 12 12
N/A 13
N/A 14
N/A 15
N/A 16
N/A 17
N/A 18
N/A 19
N/A 20
N/A 21
N/A 22
N/A 23
N/A 24
N/A 25
N/A 26
N/A 27
N/A 28
N/A 29
N/A 30
N/A 31
N/A 32
N/A 33
N/A 34
NOT USED 35
1 GROUND
2 SECTION 2
3 SECTION 3
4 SECTION 4
5 SECTION 5
6 SECTION 6
7 SECTION 7
8 SECTION 8
9 SECTION 9
10 SECTION 10
11 SECTION 11
12 SECTION 12
13 PRESSURE 1
14 12V+ POWER
15 SECTION 1
16 12V+ POWER


Agxcel #55038
319-193
35 PIN
CONNECTOR
Wire Size: 18G
Length: 7 FT
SECTION 1 A 01
SECTION 2 A 02
SECTION 3 A 03
SECTION 4 A 04
SECTION 5 A 05
SECTION 6 A 06
SECTION 7 A 07
SECTION 8 A 08
SECTION 9 A 09
SECTION 10 A 10
SECTION 11 A 11
SECTION 12 A 12
N/A 13
N/A 14
N/A 15
N/A 16
SECTION 1 B 17
SECTION 2 B 18
SECTION 3 B 19
SECTION 4 B 20
SECTION 5 B 21
SECTION 6 B 22
SECTION 7 B 23
SECTION 8 B 24
SECTION 9 B 25
SECTION 10 B 26
SECTION 11 B 27
SECTION 12 B 28
N/A 29
N/A 30
N/A 31
N/A 32
N/A 33
N/A 34
NOT USED 35
HARNESS - A
1 GROUND
2 SECTION 2
3 SECTION 3
4 SECTION 4
5 SECTION 5
6 SECTION 6
7 SECTION 7
8 SECTION 8
9 SECTION 9
10 SECTION 10
11 SECTION 11
12 SECTION 12
13 PRESSURE 1
14 12V+ POWER
15 SECTION 1
16 12V+ POWER
HARNESS - B
1 GROUND
2 SECTION 2
3 SECTION 3
4 SECTION 4
5 SECTION 5
6 SECTION 6
7 SECTION 7
8 SECTION 8
9 SECTION 9
10 SECTION 10
11 SECTION 11
12 SECTION 12
13 PRESSURE 1
14 12V+ POWER
15 SECTION 1
16 12V+ POWER


Agxcel #55054
319-233
14-PIN CONNECTOR
Wire Size: 18G
Length: 1ft
RED CHANNEL 1 PWR 01
RED CHANNEL 2 PWR 02
RED CHANNEL 3 PWR 03
RED CHANNEL 4 PWR 04
CAN HI 05
BLK CHANNEL 1 GND 06
BLK CHANNEL 2 GND 07
BLK CHANNEL 3 GND 08
BLK CHANNEL 4 GND 09
WHT CHANNEL 1 LIN 10
WHT CHANNEL 2 LIN 11
WHT CHANNEL 3 LIN 12
WHT CHANNEL 4 LIN 13
CAN LO 14
CHANNEL 1
1 CHANNEL 1 PWR
2 CHANNEL 1 LIN
3
4 CHANNEL 1 GND
CHANNEL 2
1 CHANNEL 2 PWR
2 CHANNEL 2 LIN
3
4 CHANNEL 2 GND
CHANNEL 3
1 CHANNEL 3 PWR
2 CHANNEL 3 LIN
3
4 CHANNEL 3 GND
CHANNEL 4
1 CHANNEL 4 PWR
2 CHANNEL 4 LIN
3
4 CHANNEL 4 GND
CAN TERMINATOR
1 CAN HI
2 CAN LO
3
Version 1.0
Created 08-25-21

2106 F Ave, Kearney NE 68847

877.218.1981

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