



# PRECISION AG INTEGRATION GUIDE

Made easy with all our own wiring Looms.

All Liquid Systems (SA) Modules are compatible with many leading brand Displays for ultimate variable rate flexibility



Liquid Systems (SA): Australia PHONE: +61 8 8357 4437

USA & Canada Toll Free: 866-278-5177 EMAIL: [contact@liquidsystems.com.au](mailto:contact@liquidsystems.com.au) EMAIL: [export@liquidsystems.com.au](mailto:export@liquidsystems.com.au)

[www.liquidsystems.com.au](http://www.liquidsystems.com.au)

## JOHN DEERE AIR CART LOOMS

The following looms provide CAN & Power connections for JD Rate Controller 2000, Raven Rate Control Modules and Greenstar Rate Controllers on John Deere Air Carts.

| Order Code | Product                 | Description                                                                                                                                                                                                                                                         |
|------------|-------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| LL07035    | JD TBT CAN Adaptor Loom | Connects to CAN/Power Bus at rear of John Deere Tow Between carts. Provides CAN/Power connection for Greenstar Rate Controller, RC2000 or Raven RCM, through connection of CAN and Power and foot switch connection. <b>No JD front extension harness required.</b> |
| LL07038    | JD TBH CAN Adaptor Loom | Connects to CAN/Power Bus at rear of John Deere Tow Behind carts. <b>Requires JD front extension harness</b> to provide CAN/Power to Greenstar Rate Controller, RC2000 or Raven RCM.                                                                                |

## GREENSTAR™ RATE CONTROLLER LOOMS

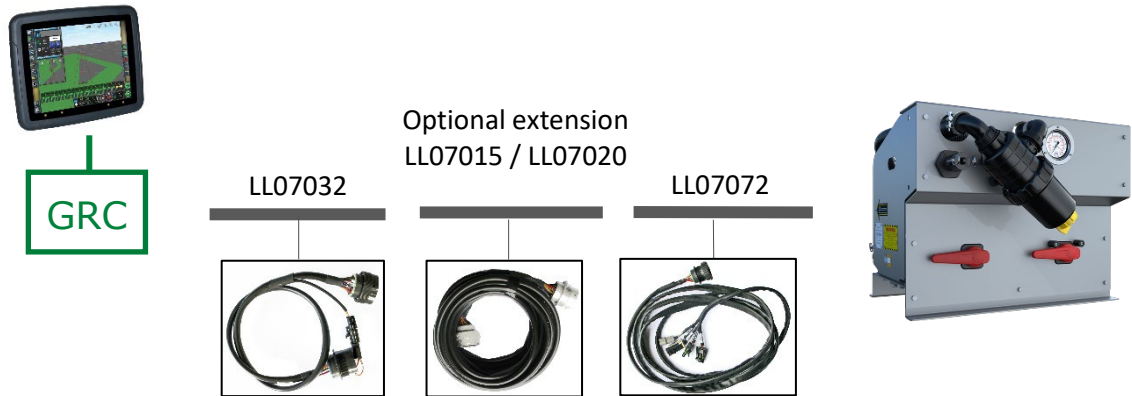
The following wiring looms provide integration with John Deere original Greenstar™ Rate Controllers.

| Order Code                                                                                 | Product                                          | Description                                                                                                                                                                                               |
|--------------------------------------------------------------------------------------------|--------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| LL07032                                                                                    | GRC Single Adaptor Loom (37 pin)                 | Adaptor loom for connecting from GRC (Greenstar Rate Controller) main harness (via 37 pin connector) to LQS Generic Module Loom. For single swath application. One loom for each liquid channel. 1m (3')  |
| LL07033                                                                                    | GRC Single Section Control Adaptor Loom (37 pin) | Adaptor loom for connecting from GRC main harness (via 37 pin connector) to LQS Generic Module Loom and Section Loom. For Section Control of up to 10 sections. One loom for each liquid channel. 1m (3') |
| LL07072                                                                                    | Generic Module Loom (5m)                         | Generic module loom for connecting to LQS Rate Control modules. One harness per liquid channel. 5m (16')                                                                                                  |
| LL07015 (6m)<br>LL07020 (12m)                                                              | Generic Module Loom Extension                    | Optional extensions for longer cabling distances between the GRC and the LQS Rate Control module. 6m (20') & 12m (40')                                                                                    |
| LL07086 (6 Section)<br>LL07087 (8 Section)<br>LL07089 (10 Section)<br>LL07090 (12 Section) | Section Loom (6m)                                | Generic section looms, supporting up to 12 sections for connecting to an LQS Stacker section valve module. 6m (20')                                                                                       |
| LL07014 (6m)<br>LL07021 (12m)<br>LL07088 (4m)                                              | Section Loom Extension                           | Optional Extensions for longer cabling distances between the GRC and Stacker section valve module. E.g. when the GRC and section valve module are installed on different implements.                      |

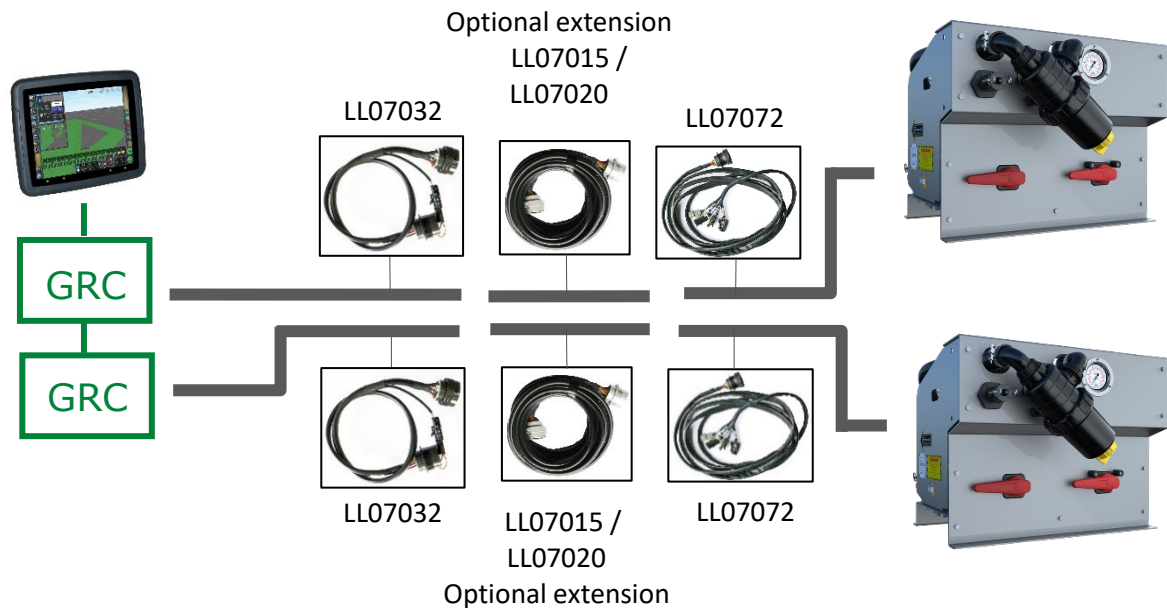
## GREENSTAR™ RATE CONTROLLER LOOMS

### Standard Configurations (no section control)

**Single Product** Loom configuration.



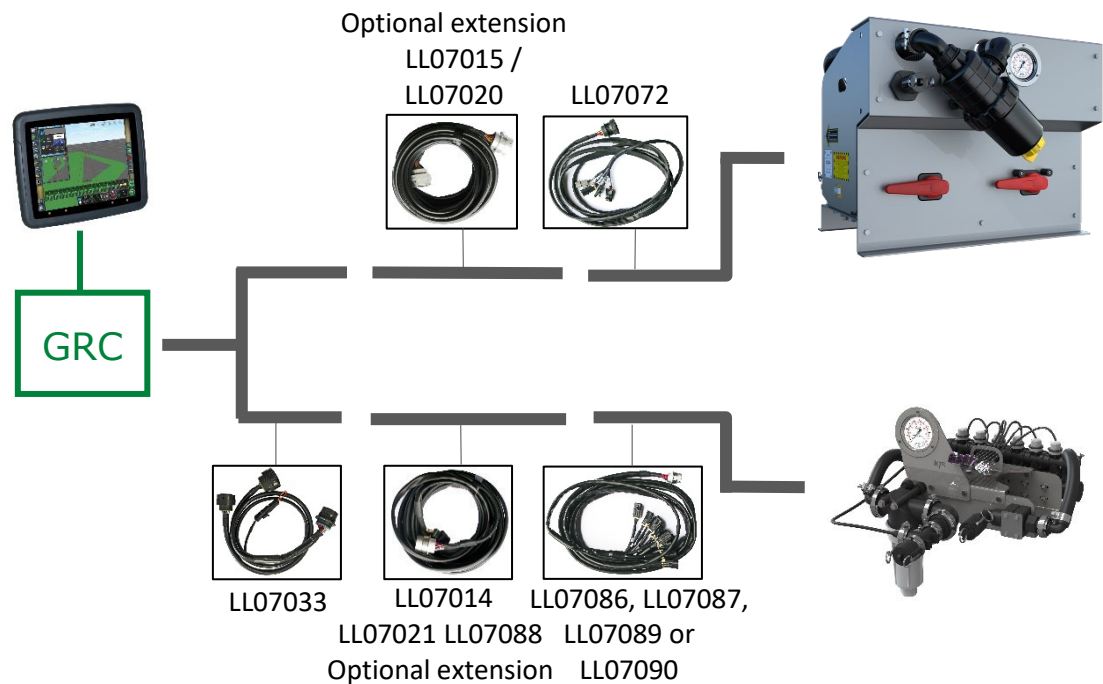
**Dual Product** Loom configuration. One GRC per liquid channel required.



## GREENSTAR™ RATE CONTROLLER LOOMS

### Single Product with Section Control

**Single Product Section Control** Loom configuration.



### Multiple Products with Section Control

To implement **Multiple Products** with **Section Control** a separate Greenstar Rate Controller is required for each liquid module. A full set of looms as shown above is required for each liquid channel.

## JOHN DEERE RC 2000 / RAVEN ISOBUS RCM LOOMS

LQS Rate Control Modules can be integrated with Greenstar™ consoles via the John Deere Rate Controller 2000. Liquid Systems (SA) has a range of looms to implement this integration. The JDRC 2000 can control up to 5 product channels in total and may be running seed and granular bins as well. With appropriate software unlocks, section control can be implemented across all products.

The Raven ISOBUS Rate Control Module is the same hardware as the JDRC 2000 but runs Raven software, is ISOBUS compliant and can be integrated with many different in-cab displays. The following looms can be used for both the JDRC 2000 and the Raven RCM.

**Looms can be dependent on which Raven Product harness is used; it is best to contact Liquid Systems (SA) to ensure correct looms are ordered.**

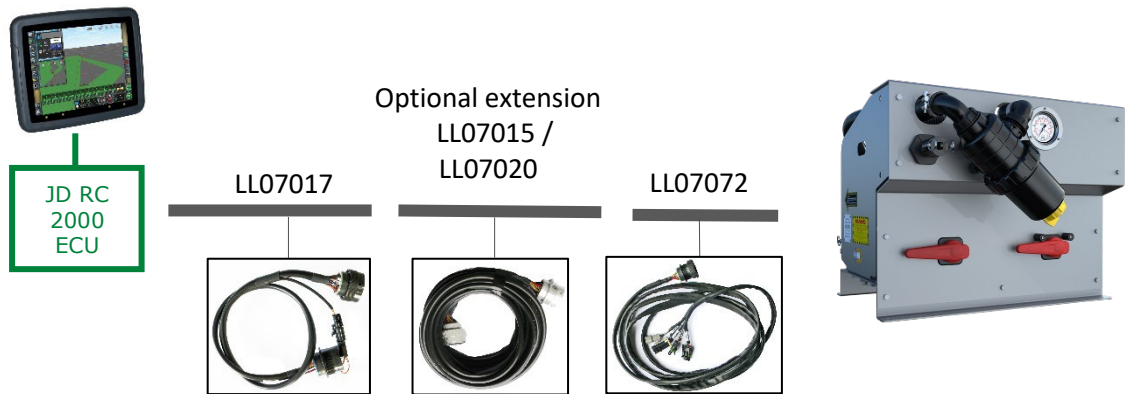
| Order Code                                                                                 | Product                                                  | Description                                                                                                                                                                     |
|--------------------------------------------------------------------------------------------|----------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>All Applications</b>                                                                    |                                                          |                                                                                                                                                                                 |
| LL07072                                                                                    | Generic Module Loom (5m)                                 | Generic module loom for connecting to LQS Rate Control modules. <b>One harness per liquid channel.</b> 5m (16')                                                                 |
| <b>Single Product (Non-SC)</b>                                                             |                                                          |                                                                                                                                                                                 |
| LL07017                                                                                    | JDRC 2000 Single Adaptor Loom                            | Adaptor loom for connecting from RCM harness (via 47 pin connector) to Generic Module Loom. Use for single product setup (without section control). 1m (3')                     |
| <b>Single Product (with SC)</b>                                                            |                                                          |                                                                                                                                                                                 |
| LL07019                                                                                    | JDRC 2000 Single Section Control Adaptor Loom            | Adaptor loom for connecting from RCM harness (via 47 pin connector) to Generic Module Loom and Section Loom. Use for single product setup. 1m (3')                              |
| LL07086 (6 Section)<br>LL07087 (8 Section)<br>LL07089 (10 Section)<br>LL07090 (12 Section) | Section Loom (6m)                                        | Generic section looms, supporting up to 12 sections for connecting to a Stacker section valve module. 6m (20')                                                                  |
| <b>Multi-Product Single Liquid (Non-SC)</b>                                                |                                                          |                                                                                                                                                                                 |
| LL07018                                                                                    | JDRC 2000 Multiple Adaptor Loom                          | Adaptor loom for connecting from RCM Multi-Product harnesses to Generic Module Loom. Use for multiple product setup. 1m (3')                                                    |
| LL07057<br>Or<br>LL07024                                                                   | Raven RCM Power adaptor<br><br>JDRC2000 Section Splitter | Supplies power to LL07018 from main RCM power connectors. <b>One required per liquid channel.</b> 1.2m<br><br>Used if 'Sections Port' on RCM is not used by other product.      |
| <b>Multi-Product Single Liquid (with SC)</b>                                               |                                                          |                                                                                                                                                                                 |
| LL07018                                                                                    | JDRC 2000 Multiple Adaptor Loom                          | Adaptor loom for connecting from RCM Multi-Product harnesses to Generic Module Loom. Use for multiple product setup. 1m (3')                                                    |
| LL07057<br>Or<br>LL07024                                                                   | Raven RCM Power adaptor<br><br>JDRC2000 Section Splitter | Supplies power to LL07018 from main RCM power connectors. <b>One required per liquid channel.</b> 1.2m<br><br>Used if 'Sections Port' on RCM is not used by other product. 0.2m |
| LL07086 (6 Section)<br>LL07087 (8 Section)<br>LL07089 (10 Section)<br>LL07090 (12 Section) | Section Loom                                             | Generic section looms, supporting up to 12 sections for connecting to a Stacker section valve module. 6m (20')                                                                  |
| LL07022                                                                                    | JDRC 2000 Multiple Section Control Adaptor Loom          | Adaptor Loom for connecting Section Looms to John Deere Generic Product Harnesses used for multiple product configurations. 1m (3')                                             |

| Multi-Product Dual Liquid (Non SC)                                                         |                                                          |                                                                                                                                                                                                                                             |
|--------------------------------------------------------------------------------------------|----------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| LL07059                                                                                    | RCM Dual Liquid Multi Adaptor                            | 2x LL07018 combined to allow control and monitoring of both liquid modules. <b>RCM can only accept 2 RPM inputs. If Fan speed from cart is used- one RPM sensor on liquid module must be disconnected.</b> 1m                               |
| LL07057<br>Or<br>LL07024                                                                   | Raven RCM Power adaptor<br><br>JDRC2000 Section Splitter | Supplies power to LL07059 from main RCM power connectors. <b>One required per liquid channel.</b> Used if Sections Port on RCM harness is used by other product. 1.2m<br><br>Supplies power to LL07059 from 'Sections Port' of RCM harness. |
| Multi-Product Dual Liquid (with SC)                                                        |                                                          |                                                                                                                                                                                                                                             |
| LL07059                                                                                    | RCM Dual Liquid Multi Adaptor                            | 2x LL07018 combined to allow control and monitoring of both liquid modules. <b>RCM can only accept 2 RPM inputs. If Fan speed from cart is used- one RPM sensor on liquid module must be disconnected.</b> 1m                               |
| LL07057<br>Or<br>LL07024                                                                   | Raven RCM Power adaptor<br><br>JDRC2000 Section Splitter | Supplies power to LL07059 from main RCM power connectors. <b>One required per liquid channel.</b> Used if Sections Port on RCM harness is used by other product. 1.2m<br><br>Supplies power to LL07059 from 'Sections Port' of RCM harness. |
| LL07022                                                                                    | JDRC2000 Multiple Section Control Adaptor Loom           | Adaptor Loom for connecting Section Looms to John Deere Generic Product Harnesses used for multiple product configurations, <b>when only one Stacker Section Valve module is used for both liquid channels i.e.- Spiker</b> 1m (3')         |
| LL07053                                                                                    | JDRC2000 Multi Section Splitter                          | Splits Section signal outputs when both liquids are on separate Stacker section valve modules but require the same signals.                                                                                                                 |
| LL07086 (6 Section)<br>LL07087 (8 Section)<br>LL07089 (10 Section)<br>LL07090 (12 Section) | Section Loom                                             | Generic section looms, supporting up to 12 sections for connecting to a Stacker section valve module. 6m (20')                                                                                                                              |
| Extensions and Hardware                                                                    |                                                          |                                                                                                                                                                                                                                             |
| LL07014 (6m)<br>LL07021 (12m)<br>LL07088 (4m)                                              | Section Loom Extension                                   | Optional Extensions for longer cabling distances between the JDRC 2000 and Stacker section valve module. E.g., when the JDRC 2000 and section valve modules are installed on different implements.                                          |
| LL07015 (6m)<br>LL07020 (12m)                                                              | Generic Module Loom Extension                            | Optional extensions for longer cabling distances between the JDRC 2000 and the LQS Rate Control module. 6m (20') & 12m (40')                                                                                                                |
| LL07039                                                                                    | Controller Mounting Bracket Kit                          | Controller mounting kit for JD Rate Controller 2000 or Raven ISOBUS RCM. Fits to 3" x 3" RHS.                                                                                                                                               |

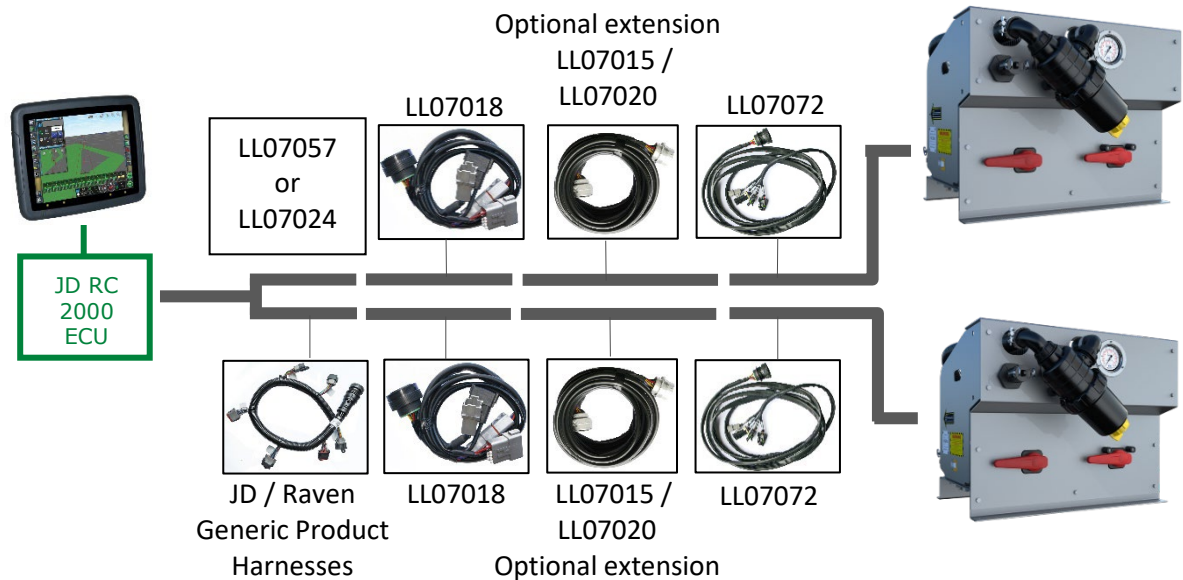
## JOHN DEERE RC 2000 / RAVEN ISOBUS RCM LOOMS

### Standard Configurations (no section control)

**Single Product** Loom configuration.



**Multiple Product** Loom configuration.

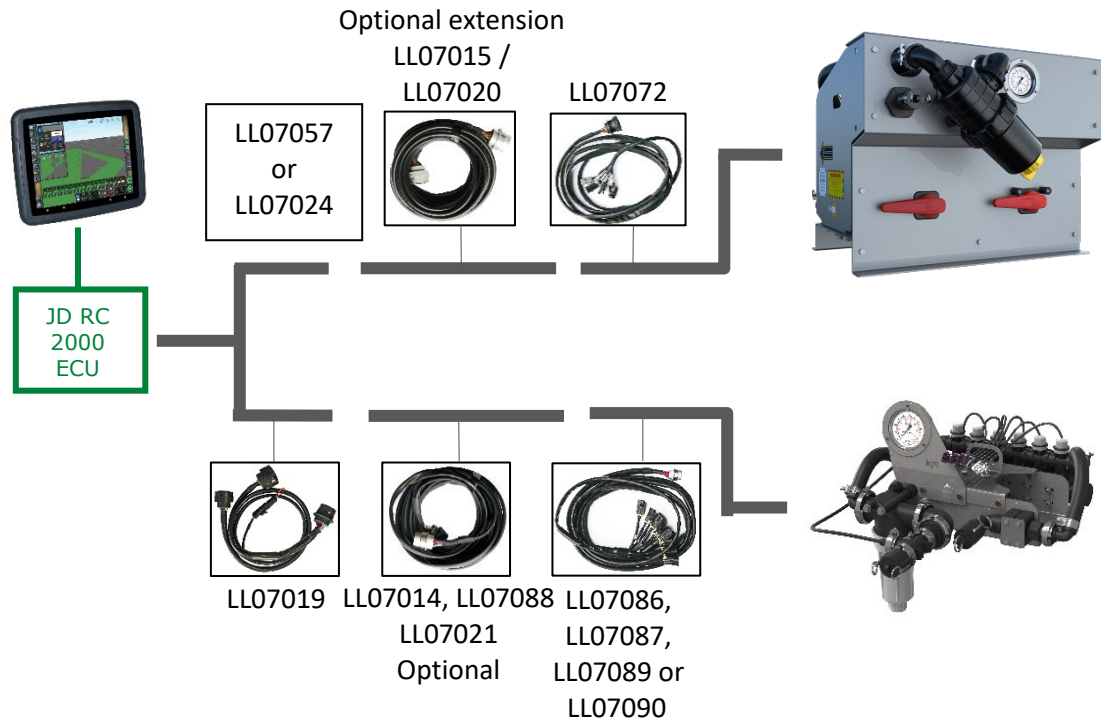


## JOHN DEERE RC 2000 / RAVEN ISOBUS RCM LOOMS

### Single Product with Section Control

When the JDRC 2000 is only controlling one liquid and no other products.

#### Single Product Section Control Loom configuration.



### Multiple Products with Section Control

When implementing **Multiple Products** with **Section Control**, we normally recommend a separate RC2000 or RCM for each liquid module. A full set of looms as shown above is required for each liquid channel.

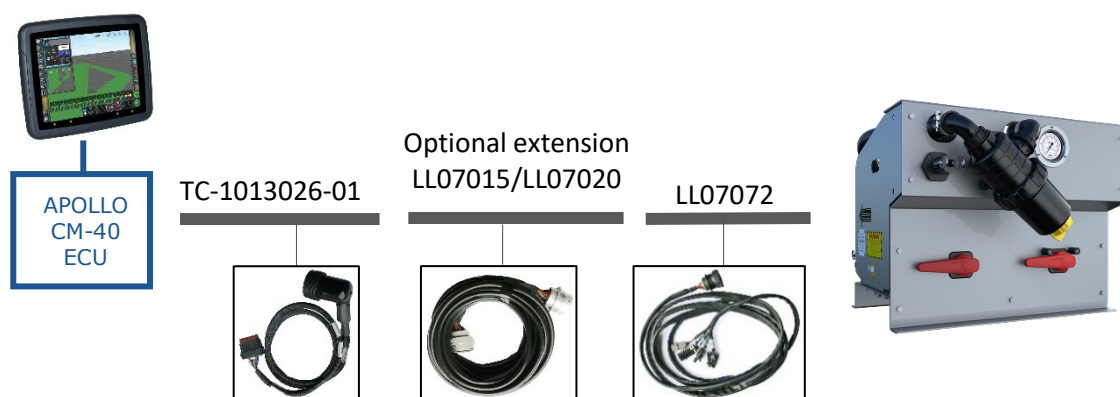
## TOPCON APOLLO LOOMS

### APOLLO ECU (X30, X35)

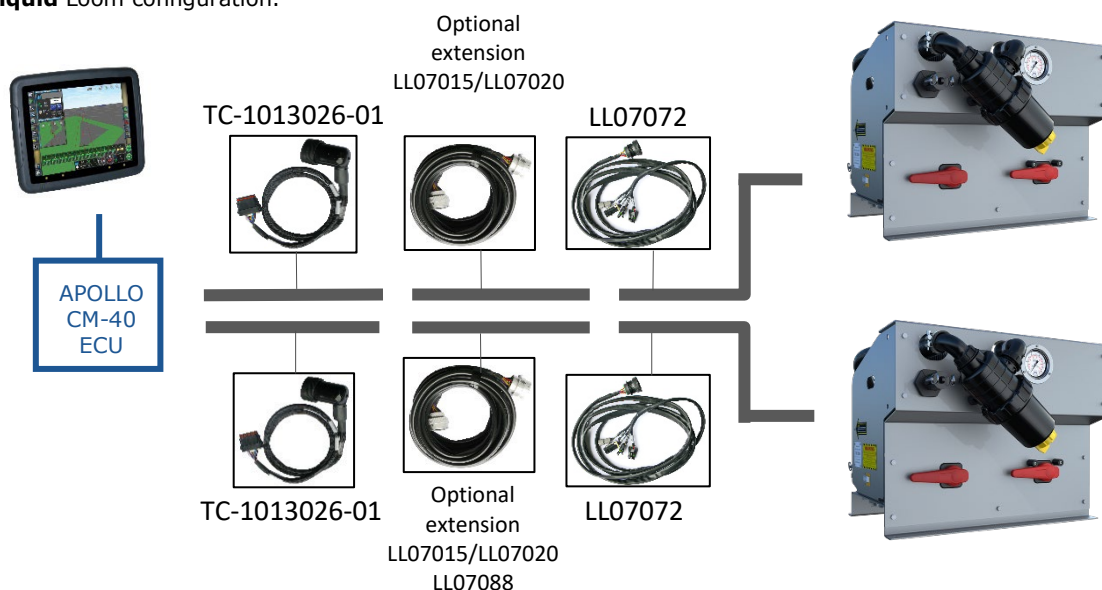
LQS Rate Control Modules can be integrated with Topcon X30 and X35 consoles via the Topcon Apollo CM40 Seeder ECU (Electronic Control Unit). The CM40 can control up to 4 product channels in total and will normally be running seed and granular bins as well.

| Order Code                    | Product                       | Description                                                                                                                   |
|-------------------------------|-------------------------------|-------------------------------------------------------------------------------------------------------------------------------|
| TC-1013026-01                 | Apollo CM40 Adaptor Loom      | Adaptor loom to connect CM40 ECU to LQS Generic Module Loom. One harness per liquid channel. 1m (3')                          |
| LL07072                       | Generic Module Loom (5m)      | Generic module loom for connecting to LQS Rate Control modules. One harness per liquid channel. 5m (16')                      |
| LL07015 (6m)<br>LL07020 (12m) | Generic Module Loom Extension | Optional extensions for longer cabling distances between the CM40 ECU and the LQS Rate Control module. 6m (20') and 12m (40') |

#### Single liquid Loom configuration.



#### Dual liquid Loom configuration.



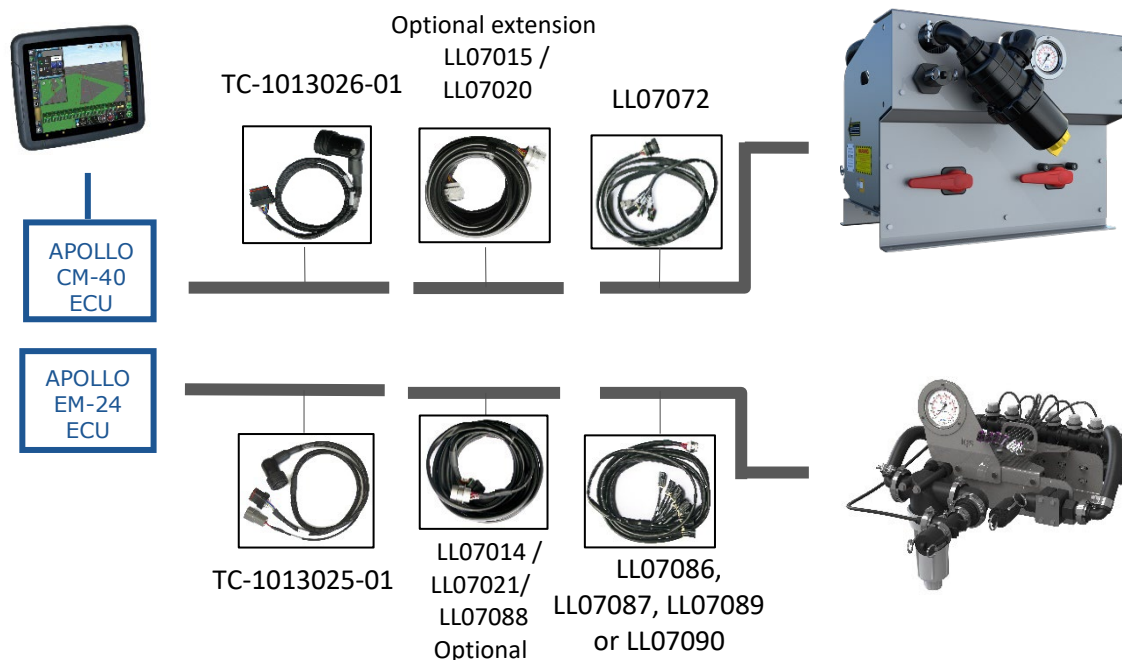
## TOPCON APOLLO LOOMS

### APOLLO ECUs (X30, X35) with Section Control

Topcon X30 and X35 consoles can implement section control for liquid applications with the addition of the Topcon Apollo EM24 ECU (Electronic Control Unit) which provides signals for switching sections on and off. Liquid Systems (SA) provides Looms to implement this integration.

| Order Code                                                                                 | Product                          | Description                                                                                                                                                                                                      |
|--------------------------------------------------------------------------------------------|----------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| TC-1013026-01                                                                              | Apollo CM40 Adaptor Loom         | Adaptor loom to connect CM40 ECU to LQS Generic Module Loom. One harness per liquid channel. 1m (3')                                                                                                             |
| LL07072                                                                                    | Generic Module Loom (5m)         | Generic module loom for connecting to LQS Rate Control modules. One harness per liquid channel. 5m (16')                                                                                                         |
| LL07015 (6m)<br>LL07020 (12m)                                                              | Generic Module Loom Extension    | Optional extensions for longer cabling distances between the CM40 ECU and the LQS Rate Control module. 6m (20') and 12m (40')                                                                                    |
| TC1013025-01                                                                               | Apollo EM24 Section Adaptor Loom | Adaptor loom to connect EM24 ECU to the LQS 12 Section Loom. 1m (3')                                                                                                                                             |
| LL07086 (6 Section)<br>LL07087 (8 Section)<br>LL07089 (10 Section)<br>LL07090 (12 Section) | Section Loom (6m)                | Generic section looms, supporting up to 12 sections for connecting to a Stacker section valve module. 6m (20')                                                                                                   |
| LL07014 (6m)<br>LL07021 (12m)<br>LL07088 (4m)                                              | Section Loom Extension           | Optional Extensions for longer cabling distances between the EM24 ECU and the Stacker section valve module. I.e. when ECU and section valve module are installed on different implements. 6m (20') and 12m (40') |

**Section Control** Loom configuration.



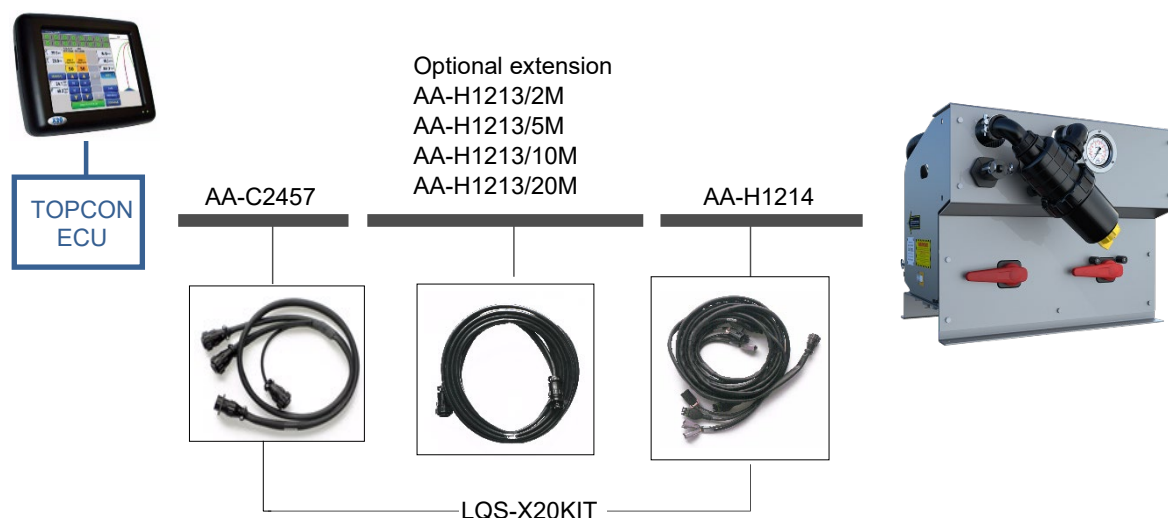
## TOPCON LOOMS

### MDECU (X20, X30, Eagle)

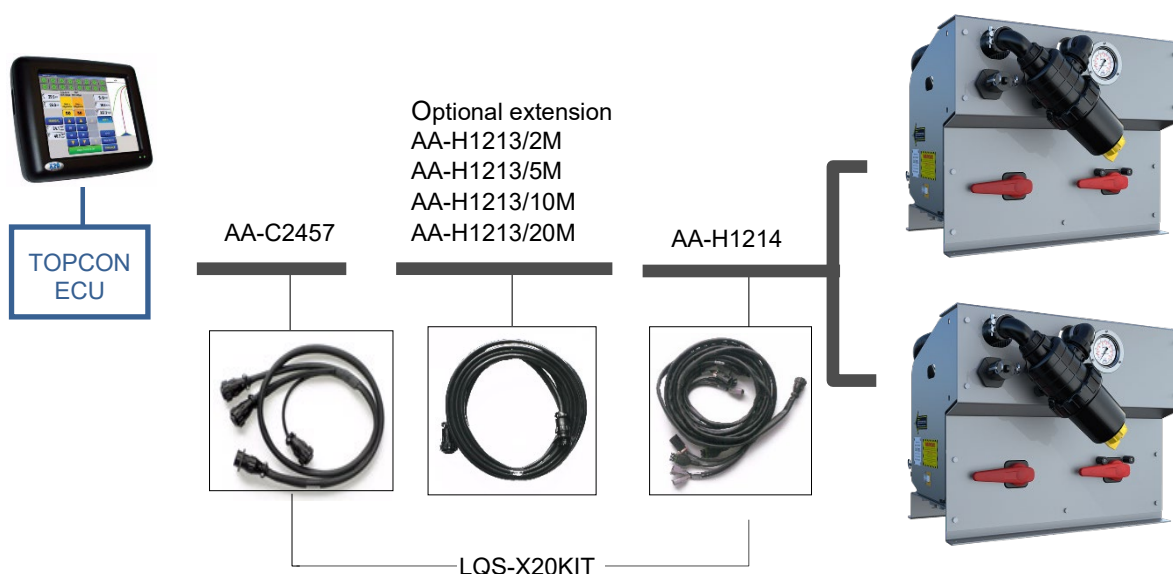
LQS Rate Control Modules can be integrated with Topcon X20, X30 and Eagle consoles via Topcon MDECU (Multi-drive Electronic Control Unit). Liquid Systems (SA) provides Looms to implement this integration. These Looms provide connectivity for control of up to two liquids.

| Order Code   | Product                       | Description                                                                                                                                      |
|--------------|-------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|
| LQS-X20KIT   | Topcon MDECU Loom Kit (7m).   | Looms to connect a Topcon MDECU to LQS Rate Control Module(s). This Loom kit can provide integration for up to two liquid rate control channels. |
| AA-H1213/10M | L2/X20/X30 10m Extension Loom | 10 metre extension Loom for Topcon or L2 Looms.                                                                                                  |
| AA-H1213/5M  | L2/X20/X30 5m Extension Loom  | 5 metre extension Loom for Topcon or L2 Looms.                                                                                                   |
| AA-H1213/2M  | L2/X20/X30 2m Extension Loom  | 2 metre extension Loom for Topcon or L2 Looms.                                                                                                   |

#### Single liquid MDECU Loom configuration.



#### Dual liquid MDECU Loom configuration.



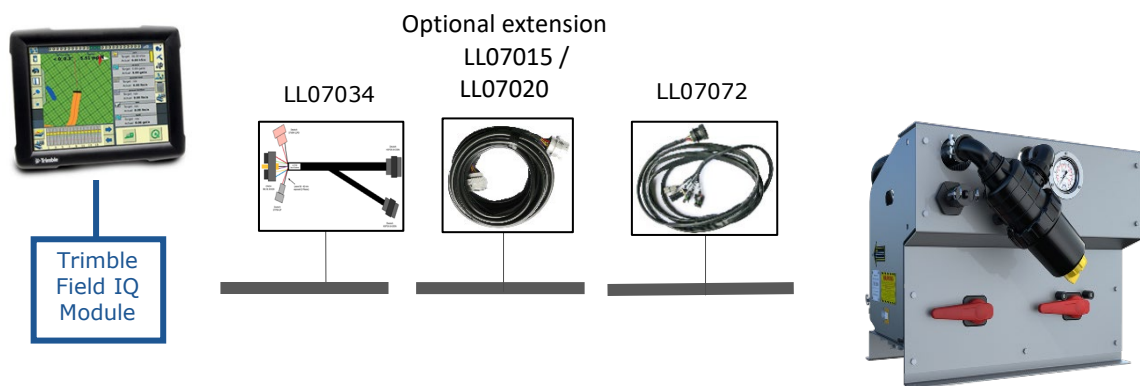
## TRIMBLE FIELD-IQ LOOMS

Liquid Systems (SA) has Looms for integration with Trimble Field-IQ compatible systems including the CFX-750, FmX, TMX-2050 and GFX-750. (Also sold as FM-750, FM-1000 or Intelliview by CNH)  
The following looms for implementing section control with up to 12 sections with a Field IQ Rate & Section Control Module (RSCM) are currently available.

| Order Code                                                                                 | Product                            | Description                                                                                                                                                                                                                          |
|--------------------------------------------------------------------------------------------|------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| LL07034                                                                                    | Trimble Field IQ Single SC Adaptor | Connects Trimble Field IQ Rate and Section Control Module to LQS generic module and section looms.                                                                                                                                   |
| LL07072                                                                                    | Generic Module Loom (5m)           | Generic module loom for connecting to LQS Rate Control modules. One harness per liquid channel. 5m (16')                                                                                                                             |
| LL07015 (6m)<br>LL07020 (12m)                                                              | Generic Module Loom Extension      | Optional extensions for longer cabling distances between the Field-IQ RSCM and the LQS Rate Control module. 6m (20') and 12m (40')                                                                                                   |
| LL07090 (12 Section)<br>LL07087 (8 Section)<br>LL07089 (10 Section)<br>LL07086 (6 Section) | Section Loom (6m)                  | Generic section looms, supporting up to 12 sections for connecting to a Stacker section valve module. 5m (16')                                                                                                                       |
| LL07014 (6m)<br>LL07021 (12m)<br>LL07088 (4m)                                              | Section Loom Extension             | Optional Extensions for longer cabling distances between the RSCM and the Stacker section valve module. 6m (20') and 12m (40'). E.g. when ECU and section valve module are installed on different implements. 6m (20') and 12m (40') |

Depending on existing equipment configuration, additional Trimble components may be required. Contact your Trimble agent or Liquid Systems (SA).

Trimble **Single Liquid Non-Section Control** Configuration.

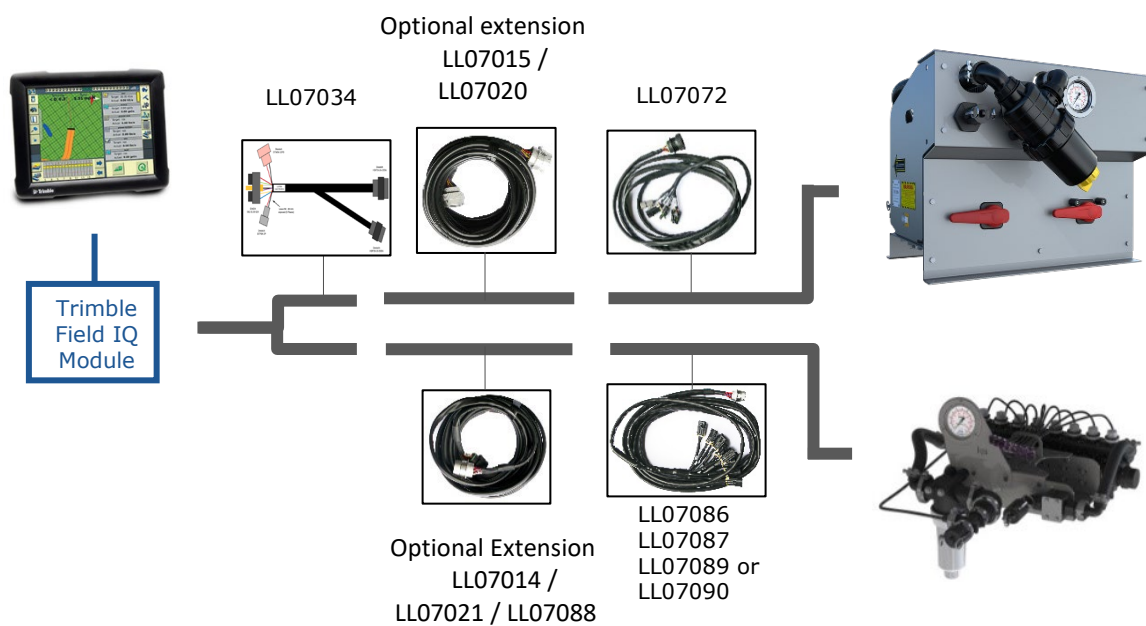


### Multiple Liquid Non Section Control

To implement Multiple Products a separate Field-IQ RSCM and a full set of looms is required for each liquid channel.

## TRIMBLE FIELD-IQ LOOMS (cont.)

Trimble **Single Liquid Section Control** Configuration.



### Multiple Liquid Section Control Configurations

To implement multiple liquids, a separate Field-IQ RSCM and full set of looms is required for each liquid channel.

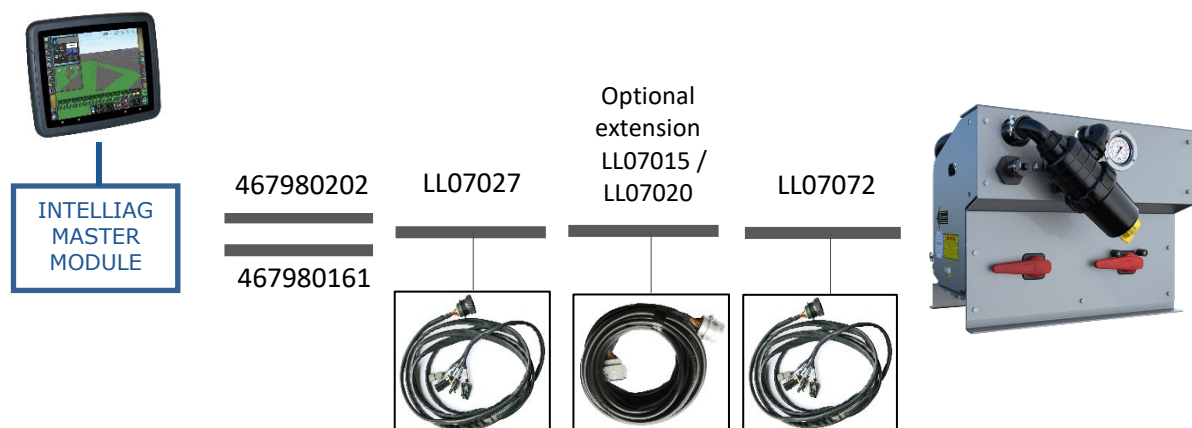
## DICKEY-JOHN INTELLIAG LOOMS

### INTELLIAG AIR CART CONTROLLER WORKING SET MASTER MODULE

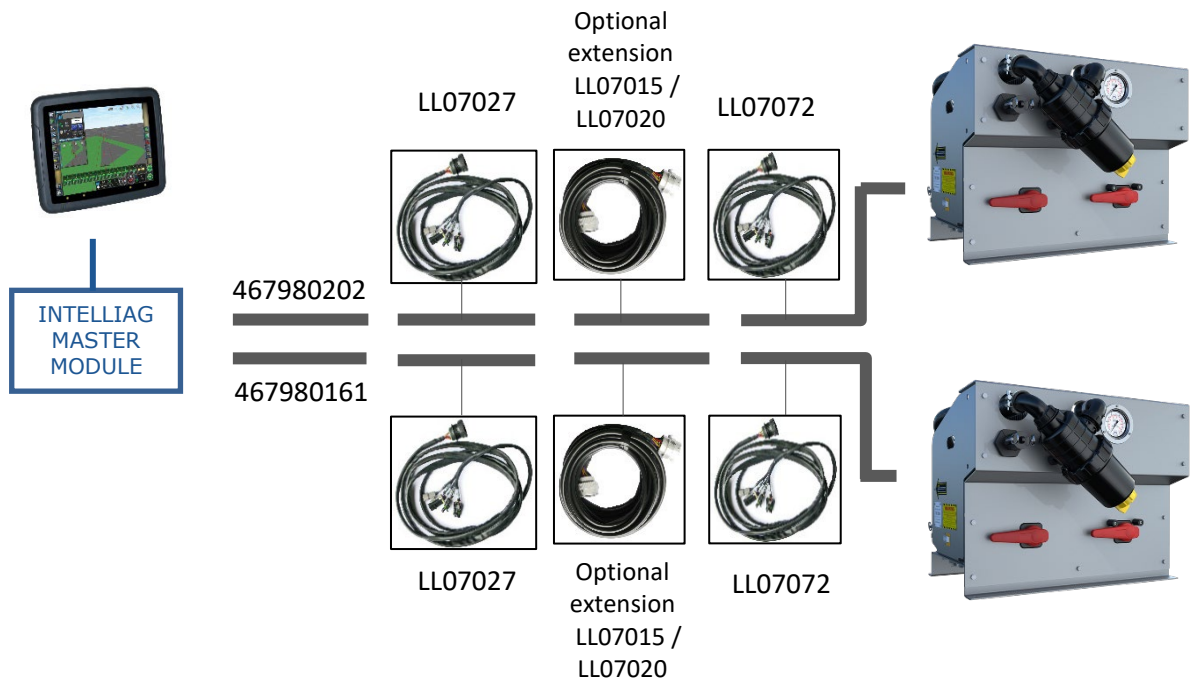
LQS Rate Control Modules can be integrated with an ISOBUS compatible display via the Dickey-John IntelliAg Air Cart Controller WSMM. This Module can control up to 2 liquid product channels (out of 4 in total). Liquid Systems (SA) provides Looms to implement this integration. **IF TEEJET VALVE IS USED A SERVO DRIVER MUST BE USED**

| Order Code                    | Product                                                     | Description                                                                                                                       |
|-------------------------------|-------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|
| 467980161                     | Dickey-John Control Harness (4 Product)                     | Dickey-John 4 product control harness with 2 servo valve output connectors                                                        |
| 467980202                     | Dickey-John Accessory Harness (with Liquid Pressure Inputs) | Dickey-John 4 product accessory harness with liquid pressure input connectors                                                     |
| LL07027                       | Dickey-John IntelliAg Adaptor Loom                          | LQS Adaptor loom to connect Dickey-John Control and Accessory harnesses to Generic Module Loom                                    |
| LL07072                       | Generic Module Loom (5m)                                    | Generic module loom for connecting to LQS Rate Control modules. One harness per liquid channel. 5m (16')                          |
| LL07015 (6m)<br>LL07020 (12m) | Generic Module Loom Extension                               | Optional extensions for longer cabling distances between IntelliAg module and the LQS Rate Control module. 6m (20') and 12m (40') |

**Single liquid** Loom configuration.



## Dual liquid Loom configuration.



## DICKEY-JOHN ISO6 LOOMS (Non SC)

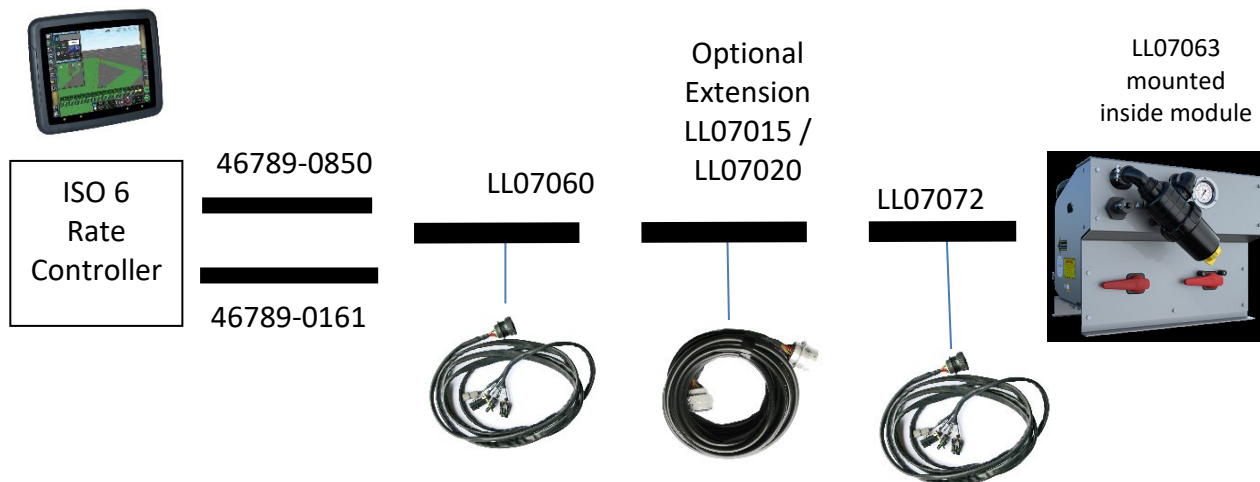
### ISO 6 Controller

LQS Rate Control Modules can be integrated with an ISOBUS compatible display via the Dickey-John ISO6 Controller. This Module can control up to 8 liquid or granular product channels. Liquid Systems (SA) provides looms to implement this integration. **IF TEEJET VALVE IS USED A SERVO DRIVER MUST BE USED**

| Order Code                    | Product                                   | Description                                                                                                                  |
|-------------------------------|-------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|
| 46798-0850                    | Dickey-John ISO T-Harness (4 Product)     | Dickey-John 4 product control harness with 2 servo valve output connectors                                                   |
| 46798-0161                    | Dickey-John ISO Actuator/Feedback Harness | Dickey-John Feedback Harness for flowmeter and pressure sensor inputs                                                        |
| LL07060                       | Dickey-John ISO6 Adaptor Loom             | LQS Adaptor Loom to connect Dickey John Control and Feedback harness to Generic Module Loom                                  |
| LL07072                       | Generic Module Loom (5m)                  | Generic module loom for connecting to LQS Rate Control modules. One harness per liquid channel. 5m (16')                     |
| LL07015 (6m)<br>LL07020 (12m) | Generic Module Loom Extension             | Optional extensions for longer cabling distances between ISO6 module and the LQS Rate Control module. 6m (20') and 12m (40') |
| LL07063                       | Analogue to Digital Convertor kit         | Analogue to Digital Pressure signal convertor and mounting kit                                                               |
| 46421-SERVOF                  | Teejet Servo Driver                       | Converts 4 wire signal to servo motor 2 wire                                                                                 |

If following accessory harnesses are used, **PRESSURE IS NOT AVAILABLE- 467980860, 467980861. Unless Control harness 467980164 is used.**

### Single Liquid Loom Configuration



Dual Liquid Loom Configuration



ISO 6  
Rate  
Controller

46789-0850



46789-0161

LL07060 x2



Optional  
Extension  
LL07015 /  
LL07020 x2



LL07072 x2



LL07063 x 2  
mounted  
inside modules



## DICKEY-JOHN ISO6 LOOMS (SC)

### ISO 6 Controller

LQS Rate Control Modules can be integrated with an ISOBUS compatible display via the Dickey-John ISO6 Controller. This Module can control up to 8 liquid or granular product channels. A Boom Output Control module is required for Section Control, each module can control a maximum of 6 sections. Liquid Systems (SA) provides looms to implement this integration. **IF TEEJET VALVE IS USED A SERVO DRIVER MUST BE USED**

| Order Code                                    | Product                                   | Description                                                                                                                                                                                               |
|-----------------------------------------------|-------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 46798-0850                                    | Dickey-John ISO T-Harness<br>(4 Product)  | Dickey-John 4 product control harness with 2 servo valve output connectors                                                                                                                                |
| 46798-0161                                    | Dickey-John ISO Actuator/Feedback Harness | Dickey-John Feedback Harness for flowmeter and pressure sensor inputs                                                                                                                                     |
| 46798-2001S1                                  | Dickey-John Output Module                 | Dickey-John Boom Control output module for Section Control                                                                                                                                                |
| 46798-3501                                    | Dickey-John Row Clutch Output Harness     | Dickey-John Output Harness for Section control                                                                                                                                                            |
| LL07060                                       | Dickey-John ISO6 Adaptor Loom             | LQS Adaptor Loom to connect Dickey John Control and Feedback harness to Generic Module Loom                                                                                                               |
| LL07072                                       | Generic Module Loom                       | Generic module loom for connecting to LQS Rate Control modules. One harness per liquid channel. 5m                                                                                                        |
| LL07061                                       | Dickey-John ISO6 SC Adaptor               | LQS Adaptor loom for connecting Dickey-John Output harness to Generic Section Loom                                                                                                                        |
| LL07086                                       | 6 Section Loom                            | Generic Section Looms for connecting to a Stacker Section Valve Module (6m)                                                                                                                               |
| LL07014 (6m)<br>LL07021 (12m)<br>LL07088 (4m) | Section Loom Extension                    | Optional Extensions for longer cabling distances between the Output Module and Stacker section valve module. E.g., when the Output Module and section valve module are installed on different implements. |
| LL07015 (6m)<br>LL07020 (12m)                 | Generic Module Loom Extension             | Optional extensions for longer cabling distances between ISO6 module and the LQS Rate Control module. 6m and 12m                                                                                          |
| LL07063                                       | Analogue to Digital Convertor kit         | Analogue to Digital Pressure signal convertor and mounting kit                                                                                                                                            |
| 46421-SERVOF                                  | Teejet Servo Driver                       | Converts 4 wire signal to servo motor 2 wire                                                                                                                                                              |

If following accessory harnesses are used, **PRESSURE IS NOT AVAILABLE- 467980860, 467980861. Unless Control harness 467980164 is used.**

## Single Liquid Loom Configuration

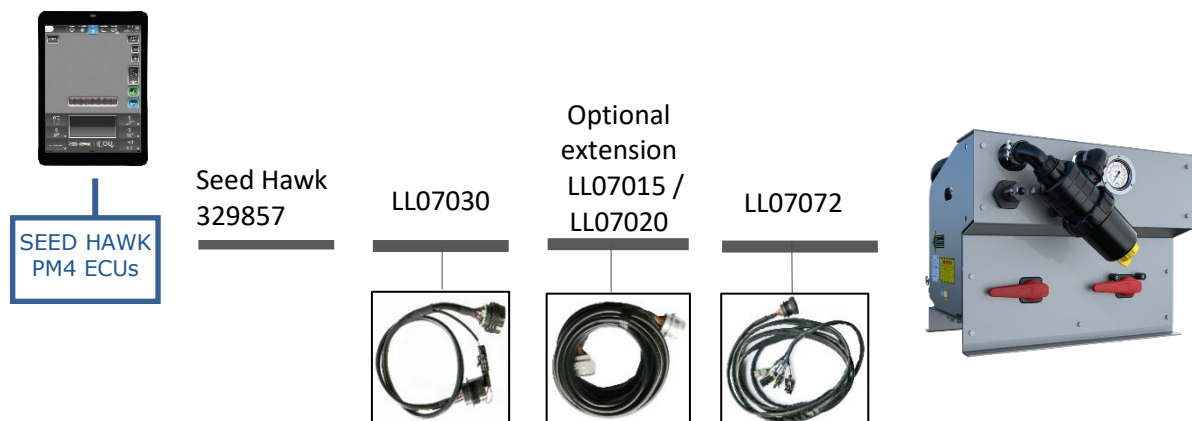


## SEED HAWK ICON CONTROLLER LOOMS

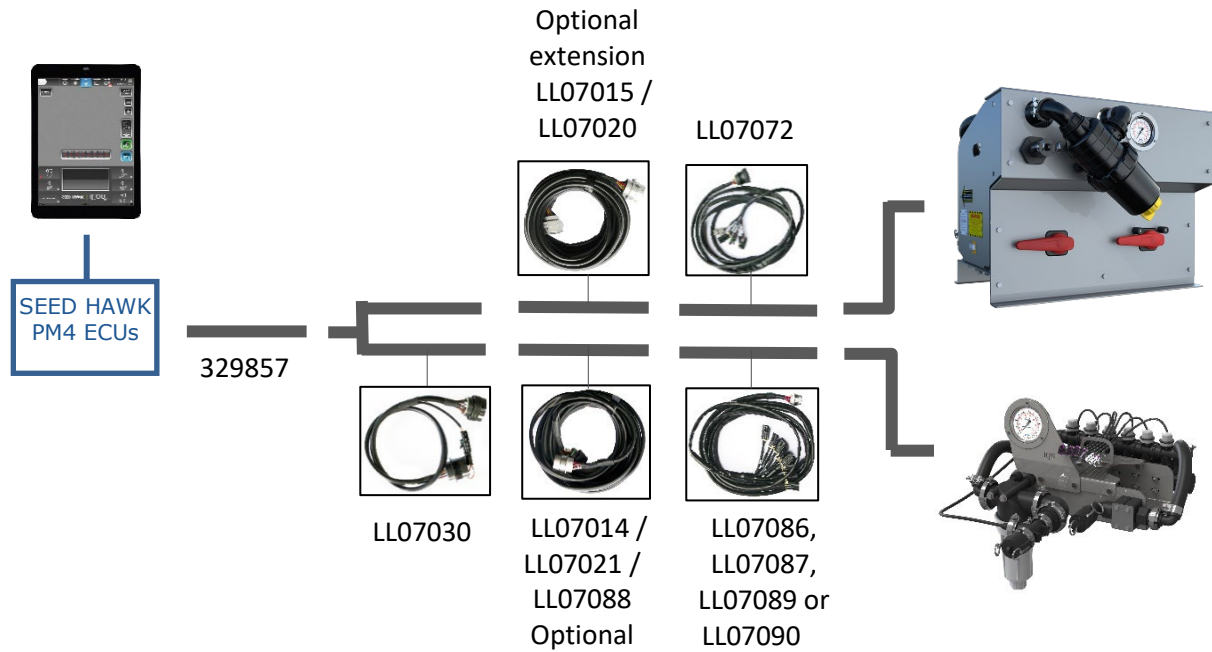
LQS Rate Control Modules can be integrated with Seed Hawk iCon Wireless Control System via Seed Hawk Gateway and PM4 ECUs. The iCon system can control up to 2 liquid channels and will normally be running seed and granular bins as well. The following looms for implementing section control with up to 8 sections are currently available.

| Order Code                                                                                 | Product                                 | Description                                                                                                                                                                                |
|--------------------------------------------------------------------------------------------|-----------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 329857                                                                                     | Seed Hawk iCon Liquid Adapter Cable     | Seed Hawk iCon Liquid Adapter Cable for connecting a liquid channel to Seedhawk PM4 ECUs.                                                                                                  |
| LL07072                                                                                    | Generic Module Loom (5m)                | Generic module loom for connecting to LQS Rate Control modules. One harness per liquid channel. 5m (16')                                                                                   |
| LL07030                                                                                    | Seed Hawk Icon SC Adaptor Loom (37 pin) | Adaptor loom connects Seed Hawk iCon Liquid Adapter Cable (via 37 pin connector) to LQS Generic Module Loom. One loom for each liquid channel. 1m (3')                                     |
| LL07015 (6m)<br>LL07020 (12m)                                                              | Generic Module Loom Extension           | Optional extensions for longer cabling distances between the PM4 ECUs and the LQS Rate Control module. 6m (20') & 12m (40')                                                                |
| LL07090 (12 Section)<br>LL07087 (8 Section)<br>LL07089 (10 Section)<br>LL07086 (6 Section) | Section Loom (6m)                       | Generic section looms, supporting up to 12 sections for connecting to a Stacker section valve module. 6m (20')                                                                             |
| LL07014 (6m)<br>LL07021 (12m)<br>LL07088 (4m)                                              | Section Loom Extension                  | Optional Extensions for longer cabling distances between the PM4 ECUs and Stacker section valve module. E.g. when PM4 ECUs and section valve module are installed on different implements. |

Seed Hawk **Single Liquid Non-Section Control** Configuration.



## Seed Hawk **Single Liquid Section Control** Configuration.



## **Multiple Liquid Section Control** Configurations

To implement multiple liquids, separate PM4 ECUs and a full set of looms is required for each liquid channel.

## Mueller ISOBUS/Trimble ISOBUS Rate Controller

LQS Rate Control Modules can be integrated with Mueller ISOBUS Rate Control System. The Mueller system can control up to 3 channels and will normally be running seed and granular bins as well. The following looms for implementing section control with up to 10 sections are currently available.

**Mueller CNHi ISOBUS Controller and Trimble ISOBUS Liquid controller are equivalent.**

| Order Code                                                                                 | Product                                         | Description                                                                                                                                                                       |
|--------------------------------------------------------------------------------------------|-------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ME0502049- 3 Product or<br>ME0502050- 1 Product                                            | Mueller ISOBUS ECU Product Harness              | Mueller ISOBUS Product Harness for connection of 1 or 3 product channels                                                                                                          |
| LL07072                                                                                    | Generic Module Loom (5m)                        | Generic module loom for connecting to LQS Rate Control modules. One harness per liquid channel. 5m (16')                                                                          |
| LL07051                                                                                    | Mueller ISOBUS ECU Adaptor Loom                 | Adaptor loom to connect Generic Module Harness to Mueller Product Harness                                                                                                         |
| LL07052                                                                                    | Mueller ISOBUS ECU Section Control Adaptor Loom | Adaptor loom connects Mueller Product harness to Generic Section Control Looms                                                                                                    |
| LL07015 (6m)<br>LL07020 (12m)                                                              | Generic Module Loom Extension                   | Optional extensions for longer cabling distances between the ECU and the LQS Rate Control module. 6m (20') & 12m (40')                                                            |
| LL07090 (12 Section)<br>LL07087 (8 Section)<br>LL07086 (6 Section)<br>LL07089 (10 Section) | Section Loom (6m)                               | Generic section looms, supporting up to 12 sections for connecting to a Stacker section valve module. 6m (20')                                                                    |
| LL07014 (6m)<br>LL07021 (12m)<br>LL07088 (4m)                                              | Section Loom Extension                          | Optional Extensions for longer cabling distances between the ECU and Stacker section valve module. E.g., when ECU and section valve module are installed on different implements. |

Mueller **Single Liquid Non-Section Control** Configuration.



Mueller  
ME0502050  
or  
ME0502049

LL07051



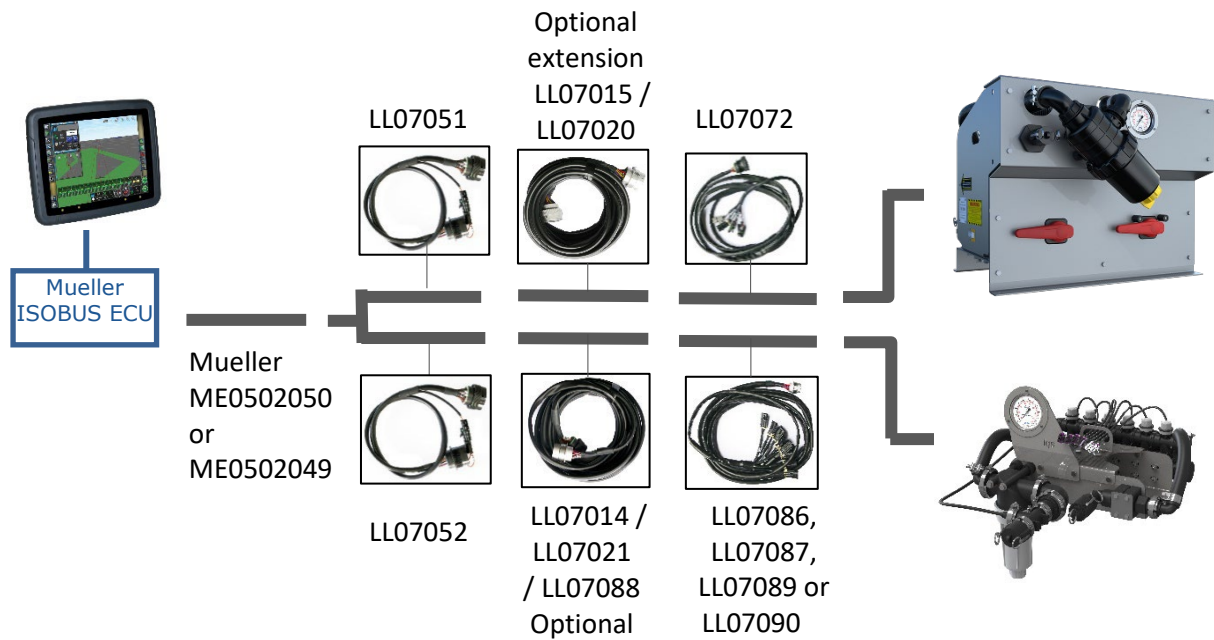
Optional  
extension  
LL07015 /  
LL07020



LL07072



### Mueller **Single Liquid Section Control** Configuration.



### **Multiple Liquid Section Control** Configurations

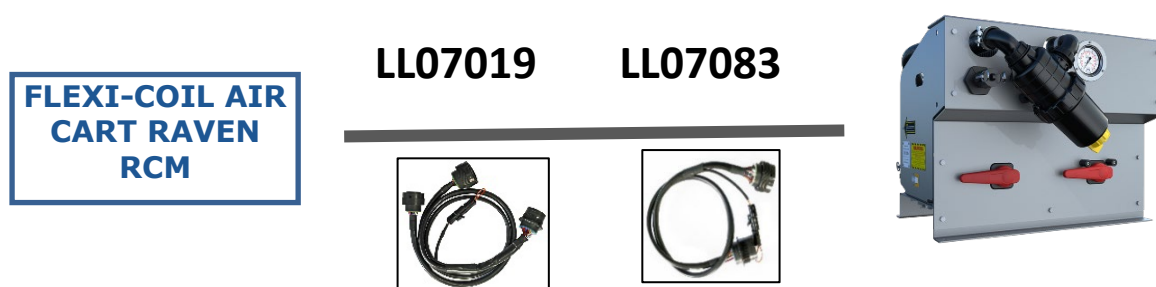
To implement more than 3 products in total, a slave ECU and a full set of looms is required for an additional 3 channels.

## FLEXI-COIL WITH RAVEN RCM LOOMS

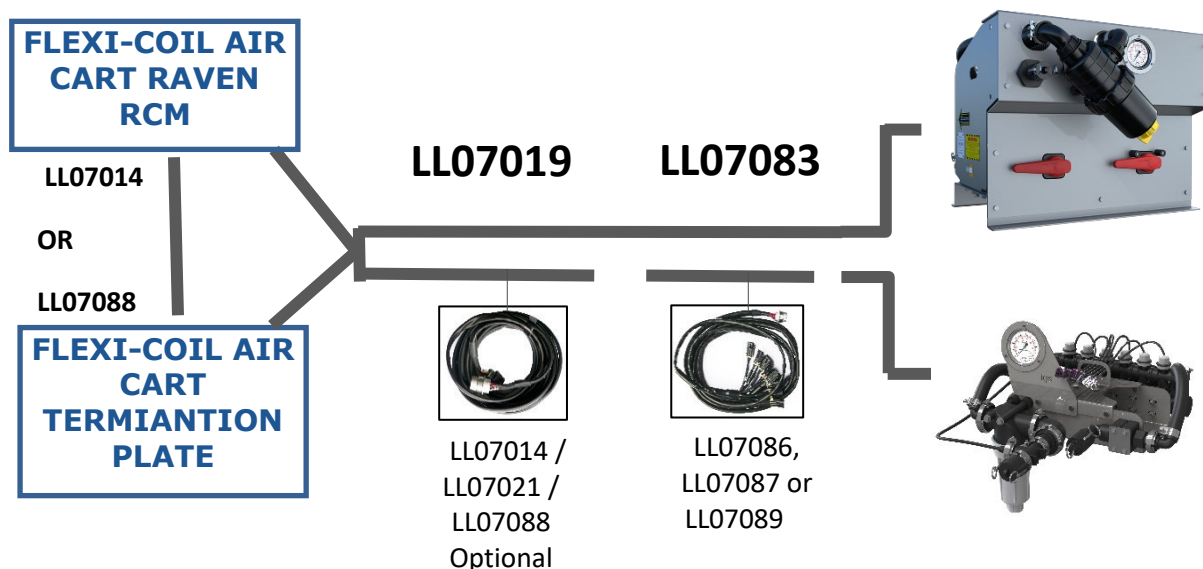
LQS Rate Control Modules are factory fitted to Flexi-Coil air carts. These carts are fitted with a Raven RCM as standard and the looms below are used for integration.

| Order Code                                                         | Product                                                            | Description                                                                                                               |
|--------------------------------------------------------------------|--------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|
| LL07083                                                            | Generic Module Loom (2m)<br><b>(Included on cart from factory)</b> | Generic module loom for connecting to LQS Rate Control modules. One harness per liquid channel. 5m (16')                  |
| LL07019                                                            | Raven RCM Single SC Adaptor <b>(Included on cart from factory)</b> | Adaptor from Raven RCM 47 pin connector to LQS Generic Looms                                                              |
| LL07086 (6 Section)<br>LL07087 (8 Section)<br>LL07089 (10 Section) | Section Loom (6m)                                                  | Generic section looms, supporting up to 12 sections for connecting to a Stacker section valve module. 6m (20')            |
| LL07014 (6m)<br>LL07021 (12m)<br>LL07088 (4m)                      | Section Loom Extension<br><b>(Included on cart from factory)</b>   | Optional Extensions for longer cabling distances between the air cart termination plate and Stacker section valve module. |

Flexi-Coil **Single Liquid Non-Section Control** Configuration.



Flexi-Coil **Single Liquid Section Control** Configuration.



**Multiple Liquid Section Control** Configurations

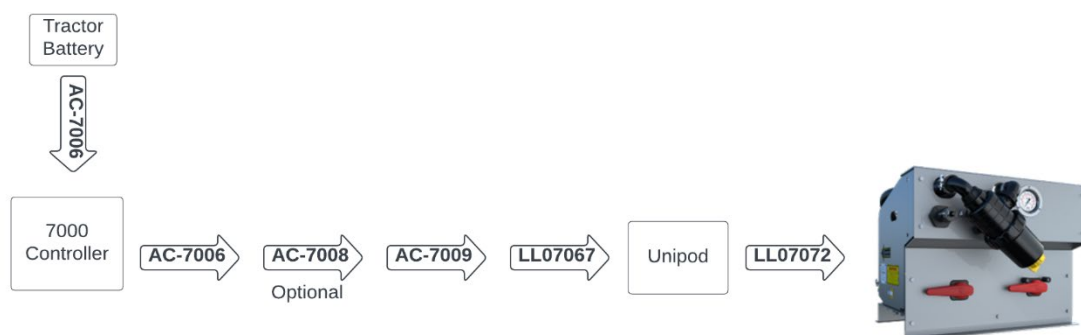
To implement multiple liquids, a full set of looms is required for each liquid channel, Constant flow can not be used with multiple products. Contact Liquid Systems.

## LQS 7000 Rate Controller – Loom Guide

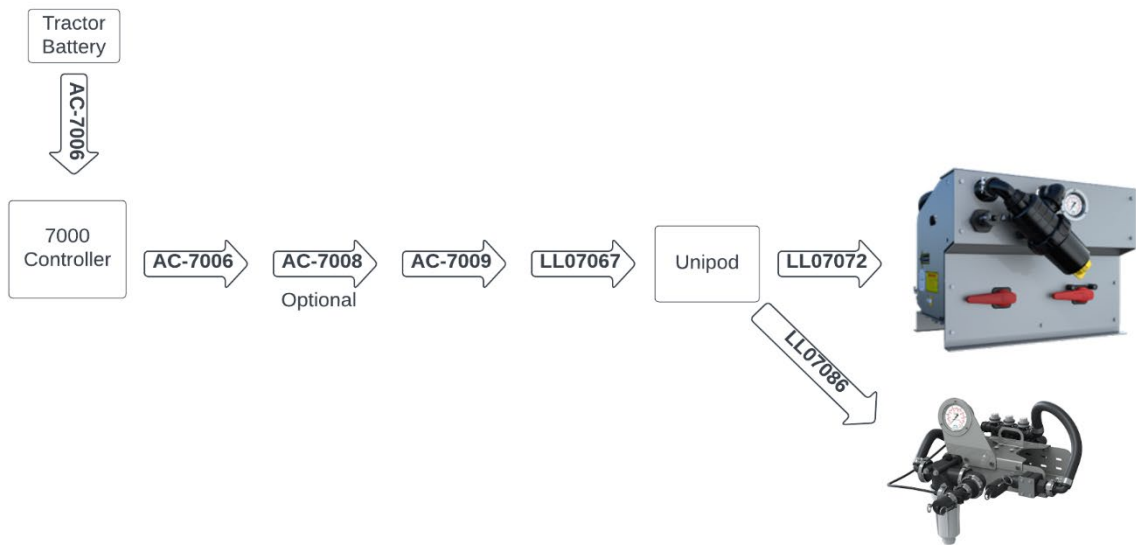
The LQS7000 is made up of a customised controller and Unipod ECU. The system can control a maximum of 2 products and 6 sections. The following looms are required for implementation of a LQS rate and control module with the 7000. Software files are available for multiple configurations.

| Order Code                    | Product                           | Description                                                                                                                                                                                                                                                            |
|-------------------------------|-----------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| FA-AC-7006                    | Smart-Ag Tractor Harness          | Connects to 7000 screen and tractor battery, provides power and CAN outputs for Unipod via an implement connector                                                                                                                                                      |
| FA-AC-7009                    | Smart-Ag CANBUS/Power Harness     | Provides CAN and Power to Unipod from AC-7006 or Extension                                                                                                                                                                                                             |
| FA-AC-7008                    | Smart-Ag Implement Extension (6m) | Implement harness extension which connects from AC-7006 to AC-7009                                                                                                                                                                                                     |
| FA-AC-7700                    | Smart-Ag CANBUS Terminator        | CAN Terminator for LL07067                                                                                                                                                                                                                                             |
| FA-AC-7701                    | Smart-Ag Power Relay              | Power Relay for LL07067                                                                                                                                                                                                                                                |
| LL07067                       | LQS-7000 Adaptor                  | Adaptor harness which connects Generic Module and Section harnesses to Unipod.                                                                                                                                                                                         |
| LL07072                       | Generic Module Loom (5m)          | Generic module loom for connecting to LQS Rate Control modules. One harness per liquid channel. 5m (16')                                                                                                                                                               |
| LL07015 (6m)<br>LL07020 (12m) | Generic Module Loom Extension     | Optional extensions for longer cabling distances between the Unipod and the LQS Rate Control module. 6m (20') & 12m (40')                                                                                                                                              |
| LL07086 (6 Section)           | Section Loom (6m)                 | Generic section looms, supporting up to 6 sections for connecting to a Stacker section valve module. 6m (20')                                                                                                                                                          |
| LL07014 (6m)<br>LL07021 (12m) | Section Loom Extension            | Optional Extensions for longer cabling distances between the Unipod and Stacker section valve module. E.g. when ECU and section valve module are installed on different implements.                                                                                    |
| LL07068                       | L2 Retrofit Adaptor               | 'Quick Fix' option for a failed L2 monitor. Harness connects to original L2 AMP connectors and provides power and implement control through L2 harnesses for the LQS7000. No other harness change is required for equivalent monitoring and control offered by the L2. |

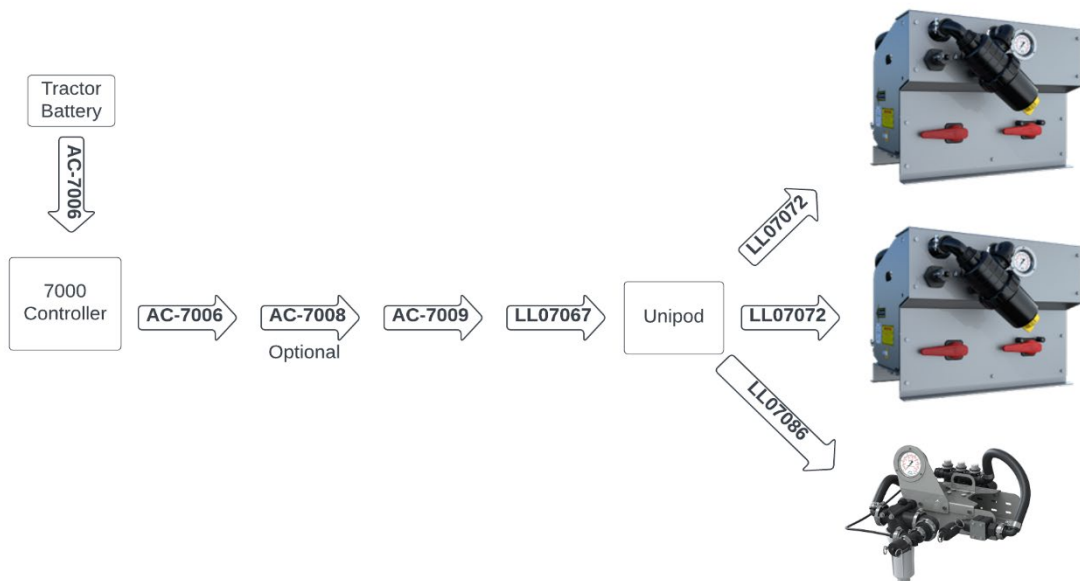
### Single Liquid Non-Section Control Configuration.



## Single Liquid Section Control Configuration



## Dual Liquid Section Control Configuration





**Liquid Systems (SA) Australia**

Ph: +61 8 8357 4437 Email (Australia): [contact@liquidsystems.com.au](mailto:contact@liquidsystems.com.au)

USA & Canada Toll Free: 866-278-5177

Email (Other Countries): [export@liquidsystems.com.au](mailto:export@liquidsystems.com.au)

**LET'S GET SOCIAL**

- Keep up to date with our product information & new customer stories, SIGN UP to our [E NEWS HERE](#)
- Follow us on [FACEBOOK](#) [TWITTER](#) [INSTAGRAM](#) [YOUTUBE](#)