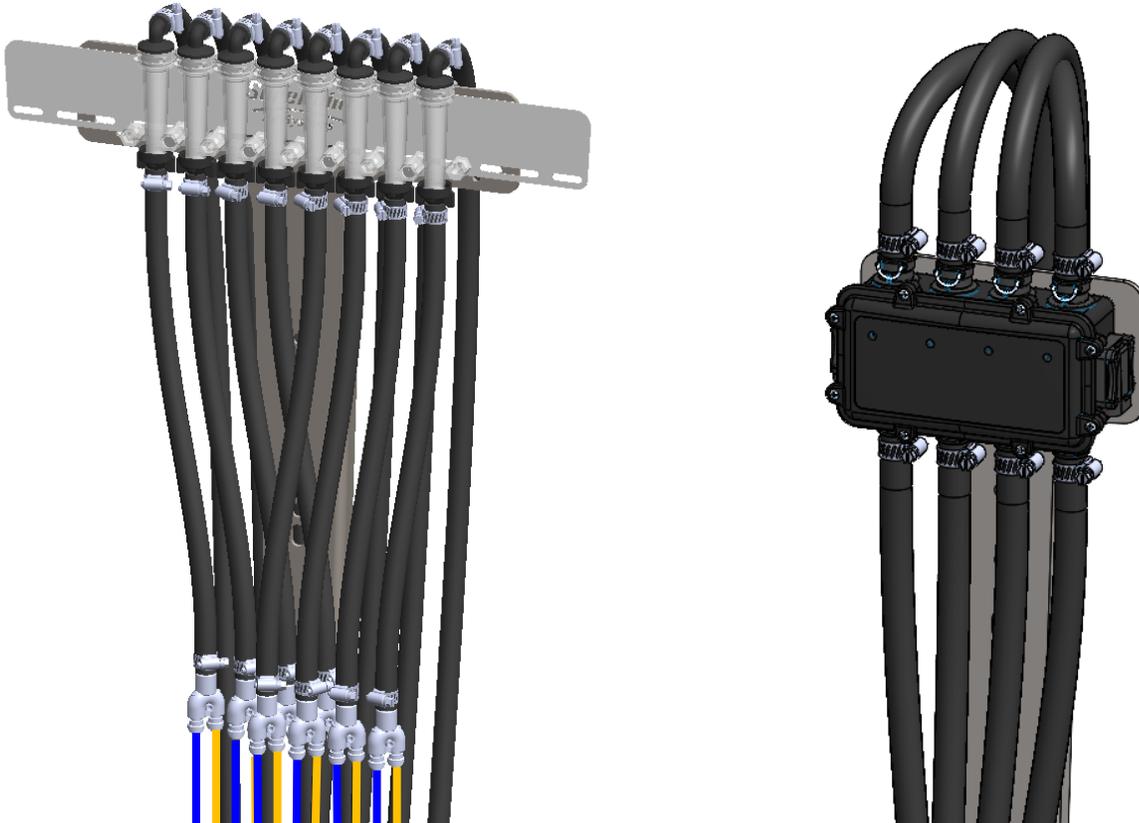




# 396-6547Y1

## High Rate GEN3 Liquishift Plumbing Instructions

### High Rate - Flow Indicator and Sentinel Plumbing Kits



Kit Number	Flow Indicator Kits
522-11-000500	Plumbing Kit, HIGH RATE Gen3 Liquishift, 11 Row, 1/2" Hose, Flow Indicator
522-12-000700	Plumbing Kit, HIGH RATE Gen3 Liquishift, 12 Row, 1/2" Hose, Flow Indicator
522-13-000500	Plumbing Kit, HIGH RATE Gen3 Liquishift, 13 Row, 1/2" Hose, Flow Indicator
522-15-000500	Plumbing Kit, HIGH RATE Gen3 Liquishift, 15 Row, 1/2" Hose, Flow Indicator
522-16-000700	Plumbing Kit, HIGH RATE Gen3 Liquishift, 16 Row, 1/2" Hose, Flow Indicator
522-23-000500	Plumbing Kit, HIGH RATE Gen3 Liquishift, 23 Row, 1/2" Hose, Flow Indicator
522-24-000700	Plumbing Kit, HIGH RATE Gen3 Liquishift, 24 Row, 1/2" Hose, Flow Indicator
522-25-000500	Plumbing Kit, HIGH RATE Gen3 Liquishift, 25 Row, 1/2" Hose, Flow Indicator
Kit Number	Sentinel Kits
522-11-000600	Plumbing Kit, HIGH RATE Gen3 Liquishift, 11 Row, 1/2" Hose, Sentinel
522-12-000800	Plumbing Kit, HIGH RATE Gen3 Liquishift, 12 Row, 1/2" Hose, Sentinel
522-13-000600	Plumbing Kit, HIGH RATE Gen3 Liquishift, 13 Row, 1/2" Hose, Sentinel
522-15-000600	Plumbing Kit, HIGH RATE Gen3 Liquishift, 15 Row, 1/2" Hose, Sentinel
522-16-000800	Plumbing Kit, HIGH RATE Gen3 Liquishift, 16 Row, 1/2" Hose, Sentinel
522-23-000600	Plumbing Kit, HIGH RATE Gen3 Liquishift, 23 Row, 1/2" Hose, Sentinel
522-24-000800	Plumbing Kit, HIGH RATE Gen3 Liquishift, 24 Row, 1/2" Hose, Sentinel
522-25-000600	Plumbing Kit, HIGH RATE Gen3 Liquishift, 25 Row, 1/2" Hose, Sentinel



# Sentinel Kits Parts List

Parts List for Kit [522-12-000600 — Plumbing Kit, HIGH RATE Gen3 Liquishift, 12 Row, 1/2" Hose, Sentinel] shown. Quantities vary with different Row Count Kits.

Item Number	Description	QTY U Of M
103-4845Y1	Zip Valve 3/8" Nylon, 2-way, SS Ball, QD Style fittings, Deutsch Connector	13 each
117-QD050	TX2 Series 1/2" HB x female QD fitting - Straight	24 each
117-QDCLIP	TX2 Valve QD quick connect pin—Stainless	24 each
120-T4FCAP	Fork Fitting, T4 Female Cap	4 each
120-T4FT3MT4MTEE	Fork Fitting, T4F x T3M x T4M Modular Manifold Tee	6 each
121-T1M050	Fork Fitting, T1M x 1/2" HB, 10mm ID	24 each
121-T3F050-90	Fork Fitting, T3F x 1/2" HB - 90°	6 each
121-T4M100	Fork Fitting, T4M x 1" HB	4 each
204-01-4625AAGB1B1	4 Row Electro Magnetic Sentinel Flow Meter (10oz to 202 oz per min per row) .08 - 1.6 GPM	3 each
113-05-038	Plug - 3/8" QC	0 each
120-T1M038QC	Fork Fitting, T1M x 3/8" QC	0 each
280-050-AG200-100	1/2" AG200 100' Coil	2 each
280-100-AG100	1" AG200 Bulk	40 feet
350-0605	SS Hose Clamp - Size 6 - 7/8" Diameter (fits 3/8" and 1/2" AG200)	110 each
350-1608	SS Hose Clamp - Size 16 - 1-1/2" Diameter (fits 1" AG200)	10 each
353-ZT07LS	Ziptag Kit, Qty 20 Blue and Orange Hose Label Kit, Liquid Systems	1 each
384-1105	Hardware Kit - Qty 4 of 5/16" Hex Cap Bolts and Flange Nuts for Sentinel Flow meter	6 each
399-PM80128	128 oz Calibration Pitcher with SurePoint Logo	1 each
353-15	15" Zip Tie	2 PKG 100
15-200TEE	2" Manifold Tee	2 each
105-200150BRB	2" Manifold x 1-1/2" HB	2 each
105-200100BRB	2" Manifold x 1" HB	4 each
105-FC200	2" Manifold Clamp	6 each
105-150G-H	1-1/2" EPDM Manifold Gasket for 200 Series Manifold fittings	6 each
350-PS238	Pressure Seal HD Clamp, Size 238 - 1.625" - 2.125" (1-1/4" - 1-1/2" ENF, WBS or AG200 hose)	4 each
396-6547Y1	High Rate GEN3 Liquishift Plumbing Instructions	1 each



# Flow Indicator Kits Parts List

Parts List for Kit [522-12-000500 — Plumbing Kit, HIGH RATE Gen3 Liquishift, 12 Row, 1/2" Hose, Flow Indicator] shown. Quantities vary with different Row Count Kits.

Item Number	Description	QTY	U Of M
103-4845Y1	Zip Valve 3/8" Nylon, 2-way, SS Ball, QD Style fittings, Deutsch Connector	13	each
117-QD050	TX2 Series 1/2" HB x female QD fitting - Straight	24	each
117-QDCLIP	TX2 Valve QD quick connect pin—Stainless	24	each
120-T4FCAP	Fork Fitting, T4 Female Cap	4	each
120-T4FT3MT4MTEE	Fork Fitting, T4F x T3M x T4M Modular Manifold Tee	6	each
121-T3F050-90	Fork Fitting, T3F x 1/2" HB - 90°	24	each
121-T4M100	Fork Fitting, T4M x 1" HB	6	each
132-40426-05	RadialLock Cap with 1/2" hb (needs 40160 oring)	4	each
133-03-40160	Wilger O-ring Seal	3	each
280-050-AG200-100	1/2" AG200 100' Coil	0	each
280-100-AG100	1" AG200 Bulk	0	feet
350-0605	SS Hose Clamp - Size 6 - 7/8" Diameter (fits 3/8" and 1/2" AG200)	2	each
350-1608	SS Hose Clamp - Size 16 - 1-1/2" Diameter (fits 1" AG200)	40	each
353-ZT07LS	Ziptag Kit, Qty 20 Blue and Orange Hose Label Kit, Liquid Systems	110	each
384-1003	Hardware Kit - Wilger Mounting Bolts	10	each
399-PM80128	128 oz Calibration Pitcher with SurePoint Logo	1	each
701-20480-00	Flow Indicator Assembly - Isolated Feed(Body, Retainer, Lock U-Clips, Balls)	6	each
701-20512-00	ORS x 1/2" HB - 90 Degree	1	each
353-15	15" Zip Tie	2	each
15-200TEE	2" Manifold Tee	2	each
105-200150BRB	2" Manifold x 1-1/2" HB	2	each
105-200100BRB	2" Manifold x 1" HB	4	each
105-FC200	2" Manifold Clamp	6	each
105-150G-H	1-1/2" EPDM Manifold Gasket for 200 Series Manifold fittings	6	each
350-PS238	Pressure Seal HD Clamp, Size 238 - 1.625" - 2.125" (1-1/4" - 1-1/2" ENF, WBS or AG200 hose)	4	each
396-6547Y1	High Rate GEN3 Liquishift Plumbing Instructions	1	each



# High Rate Tube Kits

High Rate Plumbing Kits will be shipped with pre-assembled High Rate Tube Kits. The correct tube kits will be selected for your specific application. Tube Kits vary in meter tube color combinations, meter tube length (typically 8' or 5'), and row count (the combination of which will add up to your total rows installed). Below is the list of High Rate Tube Kits available for selection and an example parts list from the 3 different row variations.

NOTE: High Rate Tube Kits have 1/2" Hose Barb on the inlet end and 1/2" hose on the outlet end of each pre-assembly

<b>Kit Item Number</b>	<b>Kit Description</b>
523-02-120600	5' Tube Fitting Kit for 2 Rows, HIGH RATE, 1/2" HB inlet, 1/2" Hose outlet
523-02-800600	8' Tube Fitting Kit for 2 Rows, HIGH RATE, 1/2" HB inlet, 1/2" Hose outlet
523-03-120600	5' Tube Fitting Kit for 3 Rows, HIGH RATE, 1/2" HB inlet, 1/2" Hose outlet
523-03-800600	8' Tube Fitting Kit for 3 Rows, HIGH RATE, 1/2" HB inlet, 1/2" Hose outlet
523-04-120600	5' Tube Fitting Kit for 4 Rows, HIGH RATE 1/2" HB inlet, 1/2" Hose outlet
523-04-800600	8' Tube Fitting Kit for 4 Rows, HIGH RATE, 1/2" HB inlet, 1/2" Hose outlet



# Gen3 LiquiShift Metering Tube Combo HIGH RATE Kit for 4 Rows

Kit: 523-04-120600 or 523-04-800600  
 Tube Fitting Kit for 4 Rows

## Route to Flow Indicators / Sentinel Flow Module

**285-050-6519Y1**  
 1/2" AG200 Bulk – 20" Length

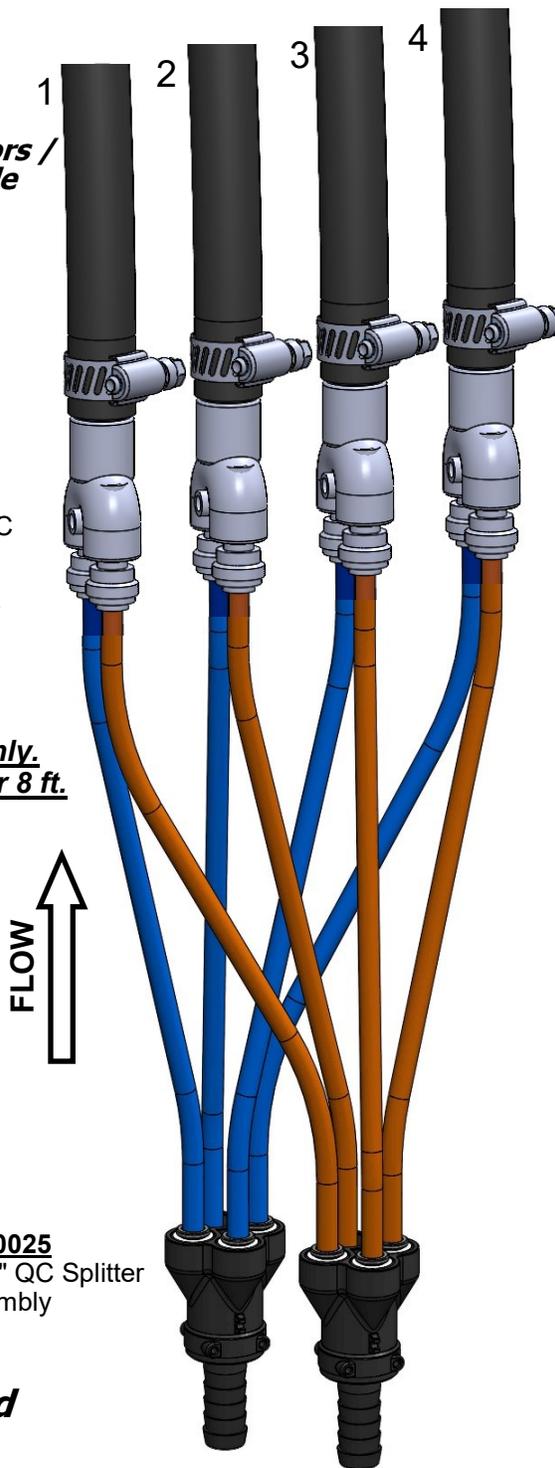
**350-0605**  
 SS Hose Clamp - Size 6 - 7/8" Diameter

**113-01-038050**  
 Stem to HB - 3/8" Stem x 1/2" HB

**113-19-038038038**  
 Y Divider - 3/8" QC x 3/8" QC x 3/8" QC

**113-03-038025**  
 Stem Reducer - 3/8" Stem x 1/4" QC

Shown for illustration purposes only.  
Typical metering tube length is 5ft or 8 ft.



**113-24-050025**  
 1/2" HB x 4-way 1/4" QC Splitter  
 Final Assembly

## Route 1/2" hose from manifold assembly to LiquiShift Tubes

Plumb to "A"  
 Valves  
 Smaller DIA  
 Metering Tubes

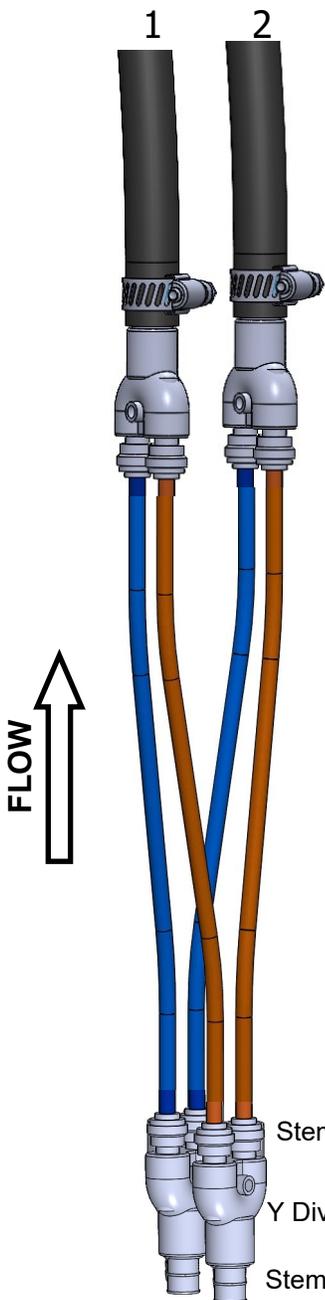
Plumb to "B"  
 Valves  
 Larger DIA  
 Metering Tubes



# LiquiShift Metering Tube Combo HIGH RATE Kits for 2 or 3 rows

Kit: 523-02-120600 or 523-02-800600  
**Tube Fitting Kit for 2 Rows**

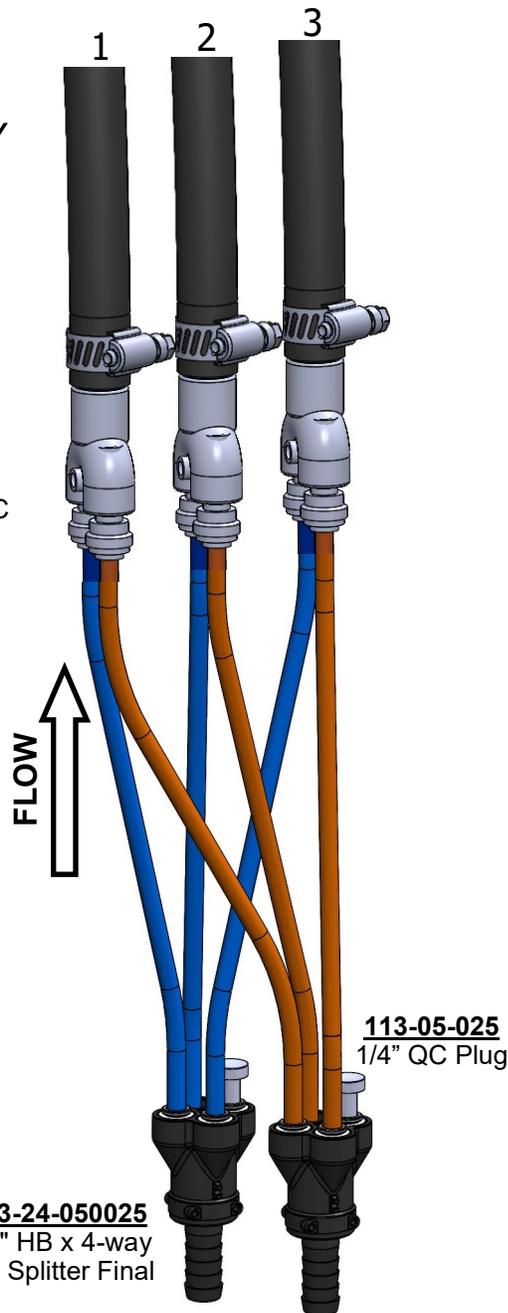
Kit: 523-03-120600 or 523-03-800600  
**Tube Fitting Kit for 3 Rows**



### ***Route to Flow Indicators / Sentinel Flow Module***

- 285-050-6519Y1**  
1/2" AG200 Bulk – 20" Length
- 350-0605**  
SS Hose Clamp - Size 6 - 7/8" Diameter
- 113-01-038050**  
Stem to HB - 3/8" Stem x 1/2" HB
- 113-19-038038038**  
Y Divider - 3/8" QC x 3/8" QC x 3/8" QC
- 113-03-038025**  
Stem Reducer - 3/8" Stem x 1/4" QC

***Shown for illustration purposes only. Typical metering tube length is 5ft or 8 ft.***



- 113-03-038025**  
Stem Reducer - 3/8" Stem x 1/4" QC
- 113-19-038038038**  
Y Divider - 3/8" QC x 3/8" QC x 3/8" QC
- 113-01-038050**  
Stem to HB - 3/8" Stem x 1/2" HB

- 113-05-025**  
1/4" QC Plug
- 113-24-050025**  
1/2" HB x 4-way  
1/4" QC Splitter Final

Plumb to "A" Valves  
 Larger DIA Metering Tubes

Plumb to "B" Valves  
 Smaller DIA Metering Tubes

### ***Route 1/2" hose from manifold assembly to LiquiShift Tubes***

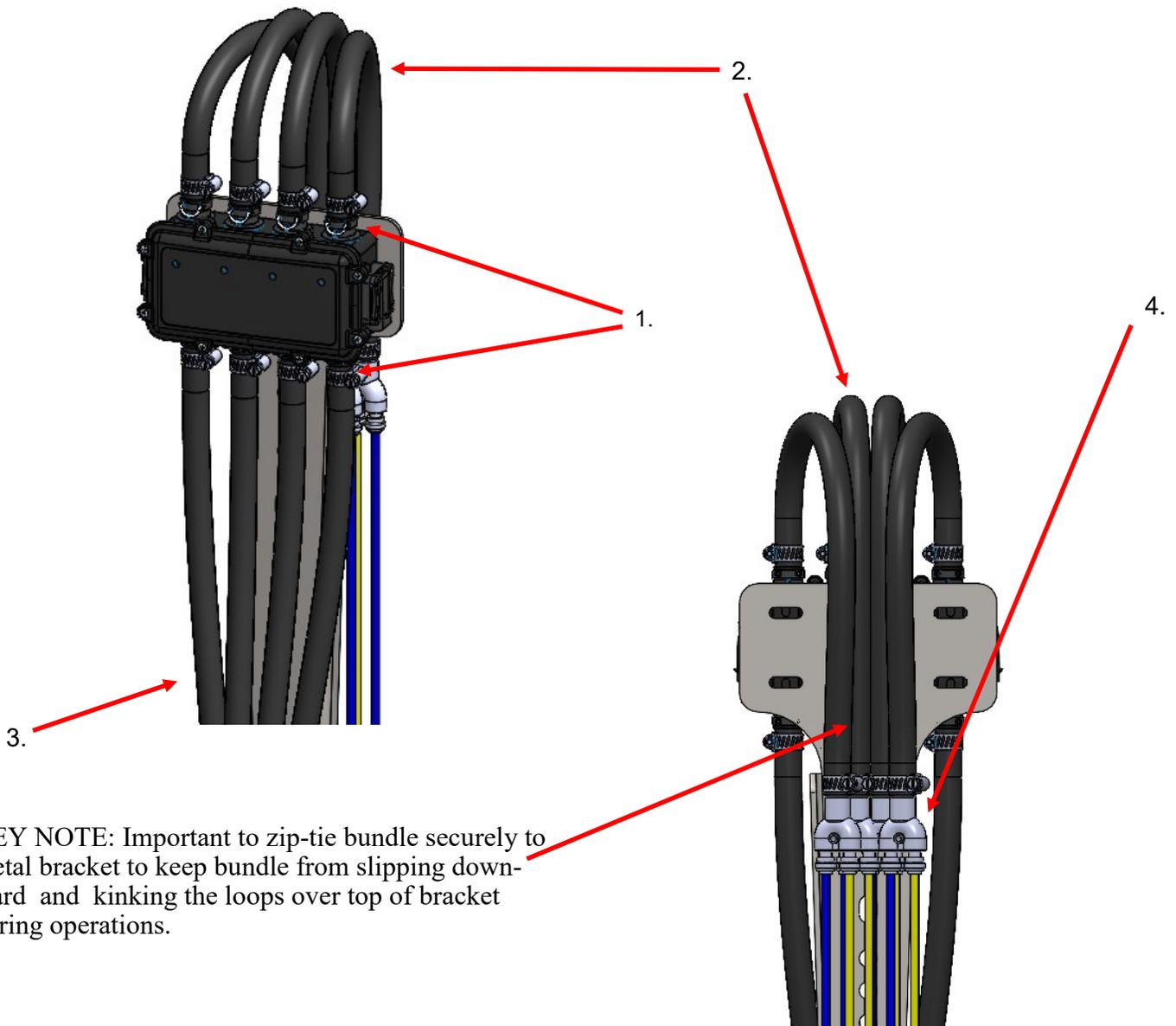
Plumb to "A" Valves  
 Larger DIA Metering Tubes

Plumb to "B" Valves  
 Smaller DIA Metering Tubes



# High Rate Flowmeter Plumbing Kit Assembly Highlights

1. Flowmeter High Rate plumbing kits use [121-T1M050 Fork Fitting, T1M x 1/2" HB, 10mm ID] use straight 1/2" HB connections on the inlet and outlet of the flow meter to reduce pressure loss
2. Inlet hose from preassembled Meter Tube Kits will require purposeful routing, gathering and securing to allow each hose to make a smooth and unknicked transition over the T-Bracket to the top of the flowmeter.
3. Row Hose will be routed down the T-Bracket and out to each row unit
4. Preassembled Meter Tube Kits each come with a 3/8" x 3/8" x 3/8" Y connector attached to a 20" long x 1/2" hose piece to enable a smooth transition to the top of the flowmeter. These 20" hose pieces may be trimmed in installation as required for an organized hose bundle.

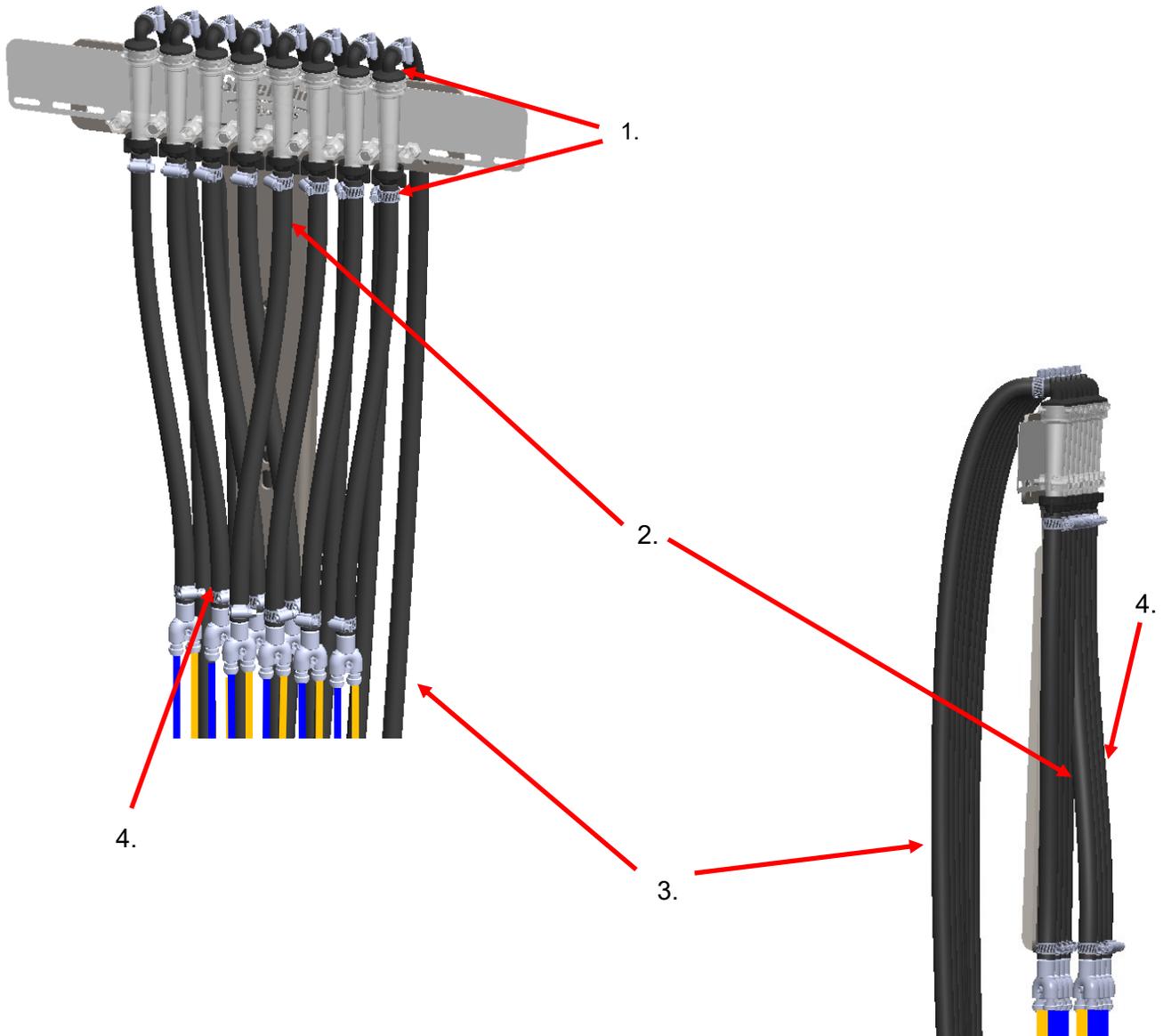


**KEY NOTE:** Important to zip-tie bundle securely to metal bracket to keep bundle from slipping downward and kinking the loops over top of bracket during operations.



# High Rate Flow Indicator Plumbing Kit Assembly Highlights

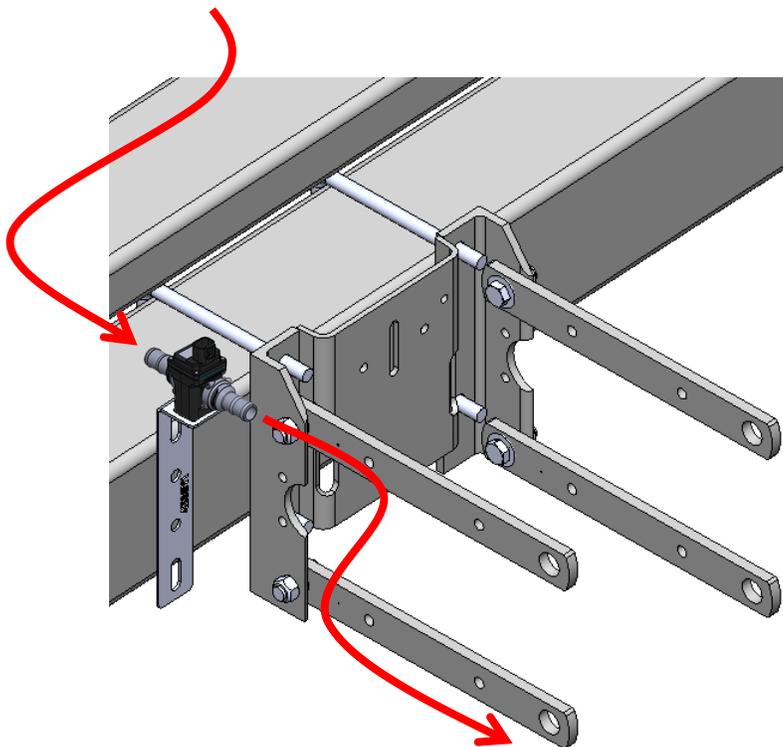
1. Flow Indicator High Rate plumbing kits use a straight 1/2" HB connection on the inlet and a 90° 1/2" HB outlet connection on the top of each indicator to reduce pressure loss.
2. Inlet hose from preassembled Meter Tube Kits will require purposeful routing, gathering and securing to allow each hose to make a smooth and unknicked transition up into the bottom of the flow indicators.
3. Row Hose will be routed down the T-Bracket and out to each row unit
4. Preassembled Meter Tube Kits each come with a 3/8" x 3/8" x 3/8" Y connector attached to a 20" long x 1/2" hose piece to enable a smooth transition to each flow indicator inlet. These 20" hose pieces may be trimmed in installation as required for an organized hose and tube bundle.



*Gen3 LiquiShift installation is the cleanest when Flow Indicators / Sentinel Flowmeter Modules are distributed across the toolbar.*

**Valve P/N: 103-4845Y1 — Zip Valve 3/8" Nylon, 2-way, SS Ball, QD Style fittings, Deutsch Connector.**

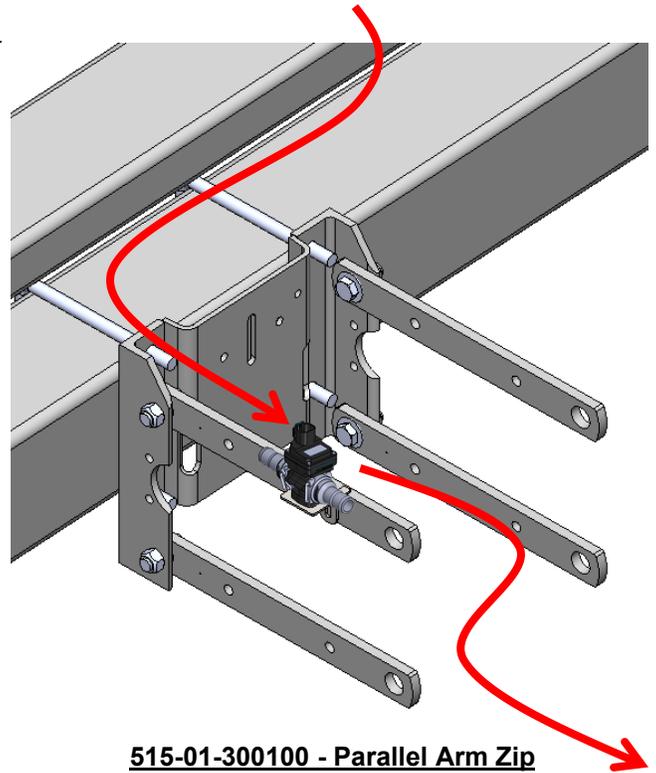
1. Route 1/2" hose from the Flow Indicator or Sentinel Flowmeter Module to the row unit. Avoid pinch points on the planter and allow for row unit travel.
2. Route 1/2" hose from the Zip Valve to the placement device



**515-01-300300 - Toolbar Zip Valve Mounting Kit**  
Bracket and Hardware to mount the Zip Valve to toolbar  
(Fits up to 8x8 toolbar)

**515-01-300350 - Toolbar Zip Valve Mounting Kit for Dual Product**

Bracket and Hardware to mount (2) Zip Valves to toolbar

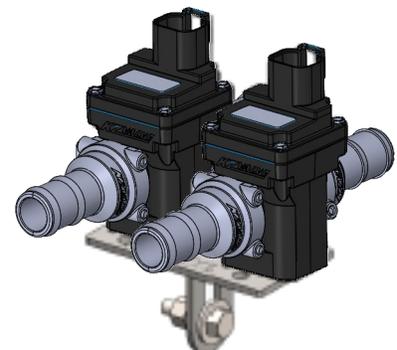


**515-01-300100 - Parallel Arm Zip Valve Mounting Kit**

Bracket and Hardware to mount the Zip Valve to the row unit parallel arm

**515-01-300200 - Parallel Arm Zip Valve Mounting Kit for Dual Product**

Bracket and Hardware to mount (2) Zip Valves to the row unit parallel arm for a dual





# High Rate Section Zip Valve Assembly Highlights

1. To reduce pressure loss, High Rate Plumbing Kits use a larger zip valve for on/off control of a row/section. [103-4845Y1 — Zip Valve 3/8" Nylon, 2-way, SS Ball, QD Style fittings, Deutsch Connector]
2. The inlet and outlet of the valve is connected using a fork-style TX2 female x Straight 1/2" HB fitting. [117-QD050 — TX2 Series 1/2" HB x female QD fitting - Straight] with a [117-QDCLIP — TX2 Valve QD quick Connect pin—Stainless]

