



FAST AG SOLUTIONS Raven RCM Rate Control Module Instruction Manual

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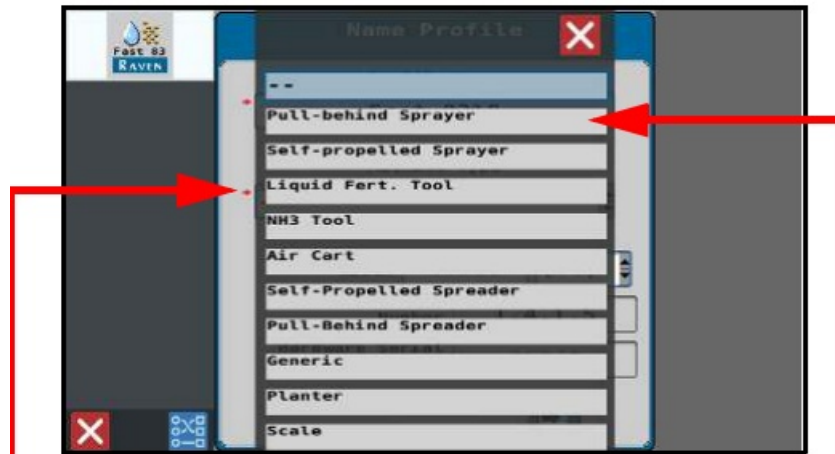
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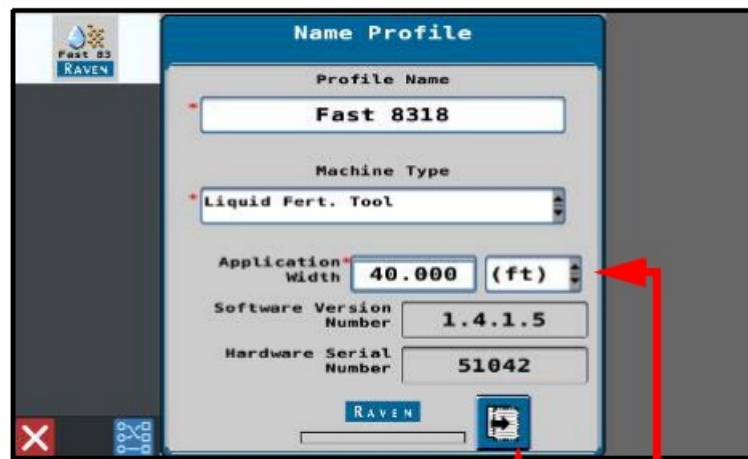
FASTTM

FAST AG SOLUTIONS Raven Rate Control Module

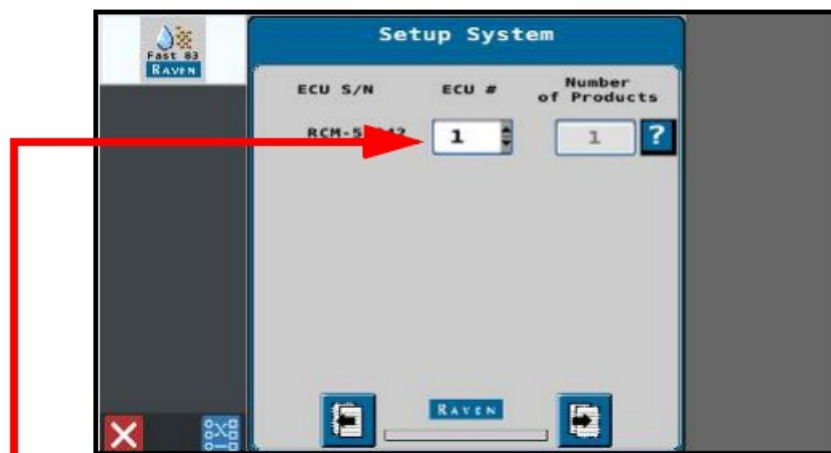
- ## RAVEN RCM SETUP



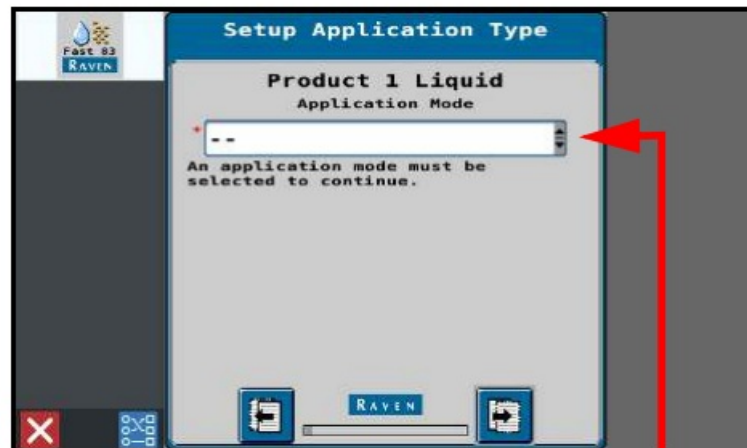
- Enter the Application Width. Press Next.



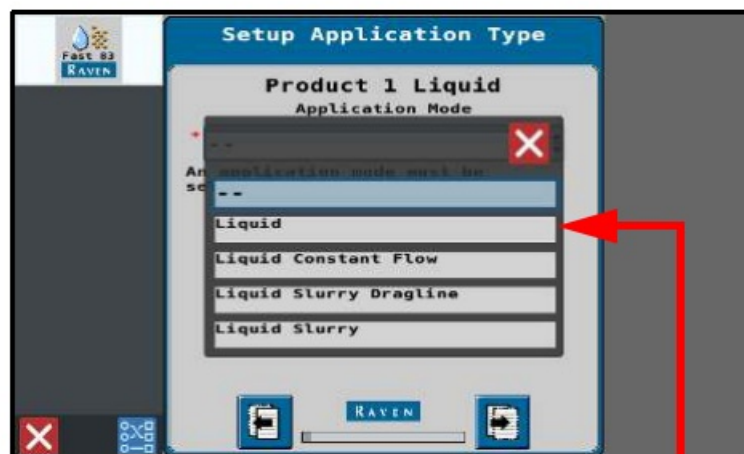
- Leave at "1" unless multiple ECU's are used.
- Press Next.



- Choose Application Mode.



- FAST products only use "Liquid".



- Liquid choice selected. Press Next.



- Enter number of sections (ball valves). FAST only uses "3-wire" valves.
- If the sections are unequal widths, uncheck the box.

FAST 83 RAVEN

Setup Sections

Number of Sections: 0

Section Valve Type: 3-Wire

Equal Width Sections: ☒

Buttons: Back, Next, Cancel

- Example setting:
- 3 sections, 3-wire valve.
- Box unchecked for unequal widths. Press Next

FAST 83 RAVEN

Setup Sections

Number of Sections: 3

Section Valve Type: 3-Wire

Equal Width Sections: ☐

Buttons: Back, Next, Cancel

- Enter the width of the sections.
- For Sprayers: Enter number of tips per section x spacing = width of section.
- The sum of the sections must equal the application width entered on (page 1).

FAST 83 RAVEN

Setup Section Width

Enter the width of the sections

1 (FT): 0.000

2 (FT): 0.000

3 (FT): 0.000

Buttons: Back, Next, Cancel

FOR APPLICATORS

Setup Section Width

Enter the width of the sections

1 13.750 (ft)

2 12.500 (ft)

3 13.750 (ft)

RAVEN

16 row, 17 coulter example, 30" spac-ing.

- Section 1 = 5 full rate coulters = 150". $5 \times 30" = 150"$
- 1 half rate coulters = 15".
- $150" + 15" = 165"$
- $165" / 12" = 13.75$ feet
- Section 2 = 5 full rate coulters = 150". $5 \times 30" = 150"$
- $150" / 12" = 12.50$ feet
- Section 3 = 5 full rate coulters = 150". $5 \times 30" = 150"$
- 1 half rate coulters = 15".
- $150" + 15" = 165"$
- $165" / 12" = 13.75$ feet

16 row, 15 coulter example, 30" spac-ing.

- Section 1 = 4 full rate coulters = 120". $4 \times 30" = 120"$
- 1.5 rate coulters = 45".
- $120" + 45" = 165"$
- $165" / 12" = 13.75$ feet
- Section 2 = 5 full rate coulters = 150". $5 \times 30" = 150"$
- $150" / 12" = 12.50$ feet
- Section 3 = 4 full rate coulters = 120". $4 \times 30" = 120"$
- 1.5 rate coulters = 45".
- $120" + 45" = 165"$
- $165" / 12" = 13.75$ feet

The sum of the sections must equal the application rate entered on page 1. Press Next.

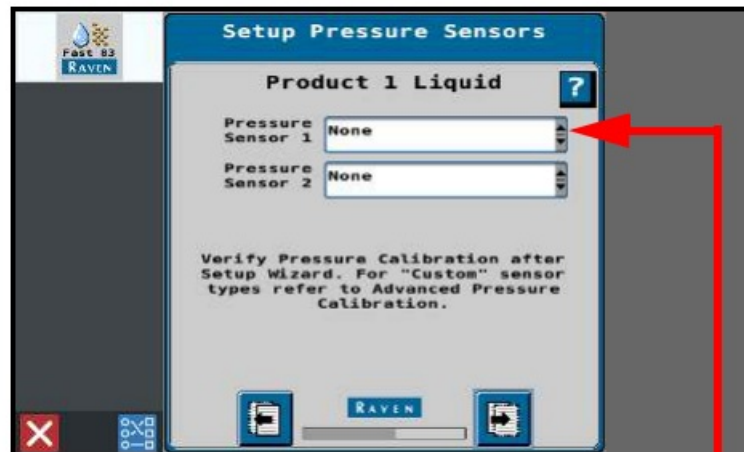
- Not used unless there are special require-ments.
- Press Next.



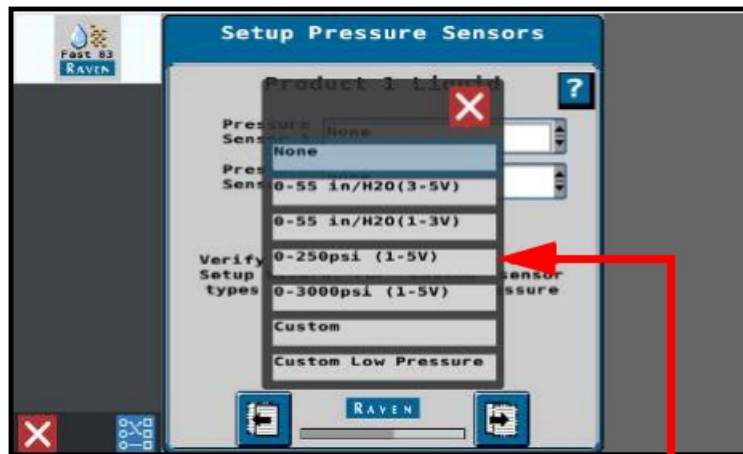
- Section summary per product.
- If using a switch box, switch assignment is entered here.
- Press Next.



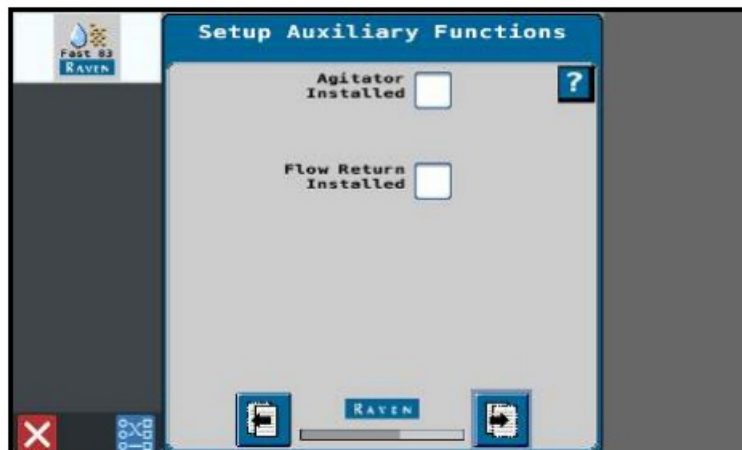
- Choose pressure sensor if installed.



- FAST only uses 0-250 psi. Press Next.



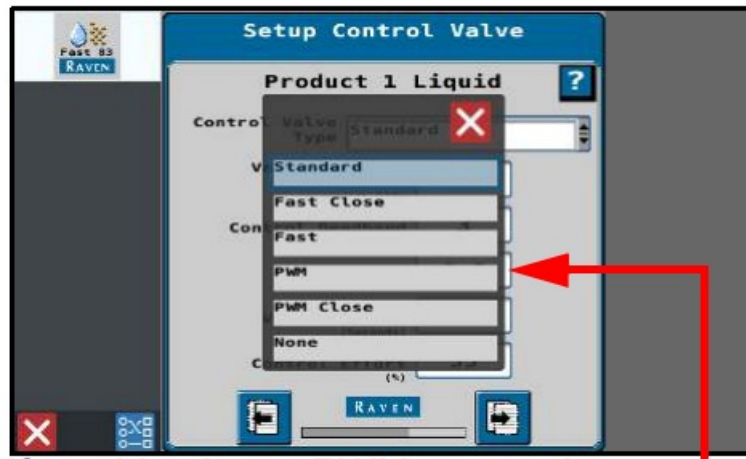
- FAST does not use auxiliary functions, leave unchecked.
- Press Next.



- Standard control valve setup.



- If machine has a PWM pump, choose "PWM".



- PWM setup. Press Next.

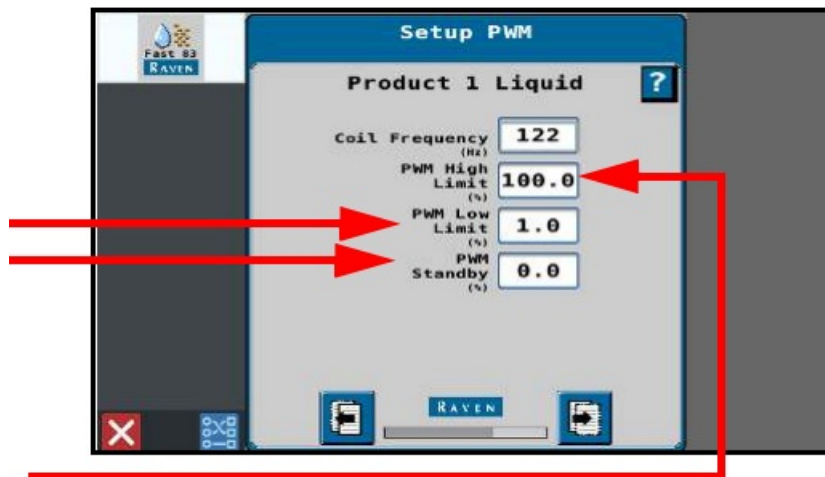


- If using ACE PWM pump, change the coil frequency to 122.

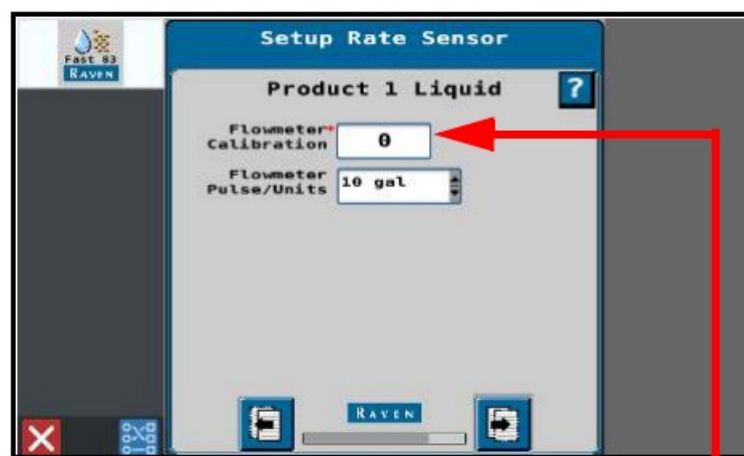


- **Max Pump PWM:**
 - Enter a maximum PWM duty cycle percent to set the maximum desired output for a pulse width modulated (PWM) hydraulic control valve. This setting limits how far the PWM valve will open.
 - (Typically set at 100 psi. deadhead.)
- **Min Pump PWM:**
 - Enter a minimum PWM duty cycle percent to set the minimum desired output (zero point or shutoff point) for a pulse width modulated (PWM) hydraulic control valve).
 - (Typically set at 20 psi. deadhead.)
- **PWM Standby:**
 - Enter desired control valve PWM duty cycle percent when all sections are off. This is utilized when standby pressure control is not available (pressure sensor not available or direct injection is installed).

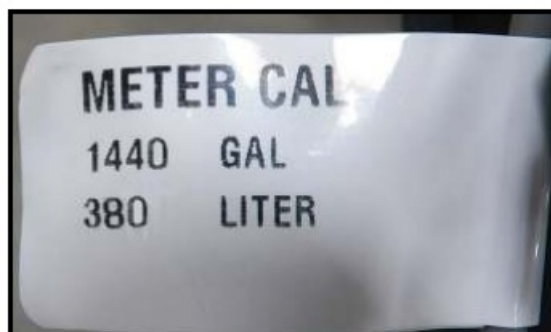
- (Typically set at within 10 psi of spray pressure.)



- Press Next.
- Enter calibration number found on the flowmeter tag.



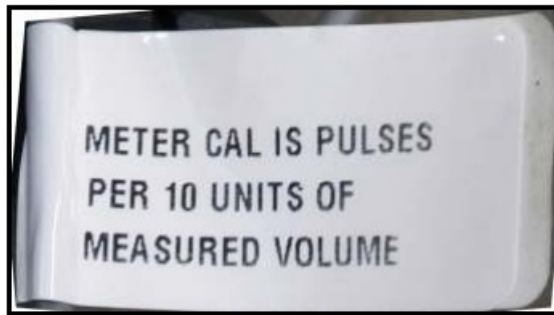
- Flowmeter tag calibration number.



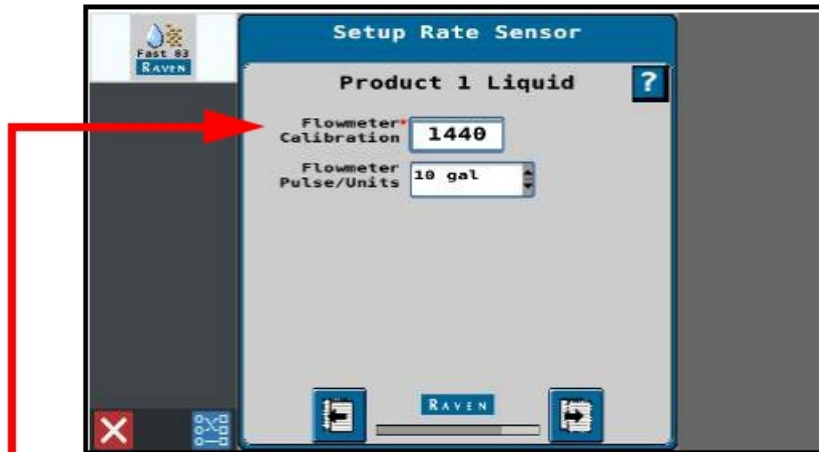
- Choose "Flowmeter Pulse/Units".



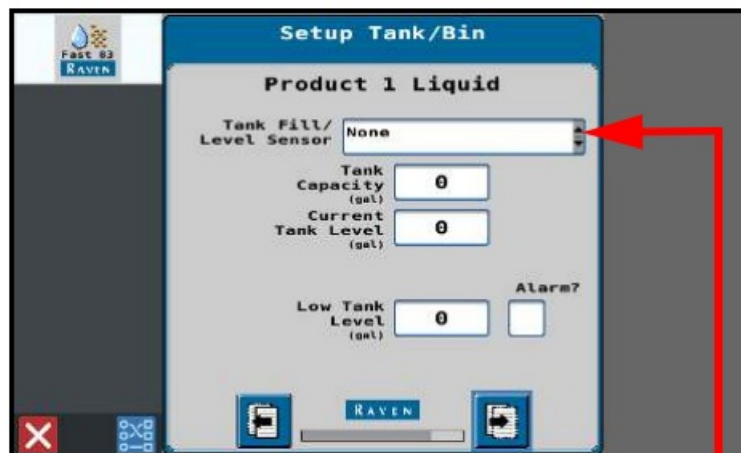
- Flowmeter tag Pulse/Units number.



- Flowmeter calibration number entered. Flowmeter Pulse/Units number entered. Press Next.



- FAST does not use a tank fill sensor.



- Enter tank capacity.
- Enter current tank level. Enter desired low tank level. Choose alarm.
- Press Next.



- Enter the desired rates.

- Enter the desired rate bump.
- “Rate Bump” can be used if preferred over a predefined rate.

Setup Rates

Product 1 Liquid ?

	Rate 1	Rate 2	Rate 3
Preset Rate Values (gal/ac)	0.0	0.0	0.0
Rate Bump (gal/ac)	0.0		
Rate Selection	Predefined or Rx		
Display Smoothing	<input checked="" type="checkbox"/>		
Decimal Shift	1		

- Decimal shift can be used for finer rates.

Setup Rates

Product 1 Liquid ?

	Rate 1	Rate 2	Rate 3
Preset Rate Values (gal/ac)	10.0	15.0	20.0
Rate Bump (gal/ac)	0.0		
Rate Selection	Predefined or Rx		
Display Smoothing	<input checked="" type="checkbox"/>		
Decimal Shift	1		

- Example settings. Press Next.

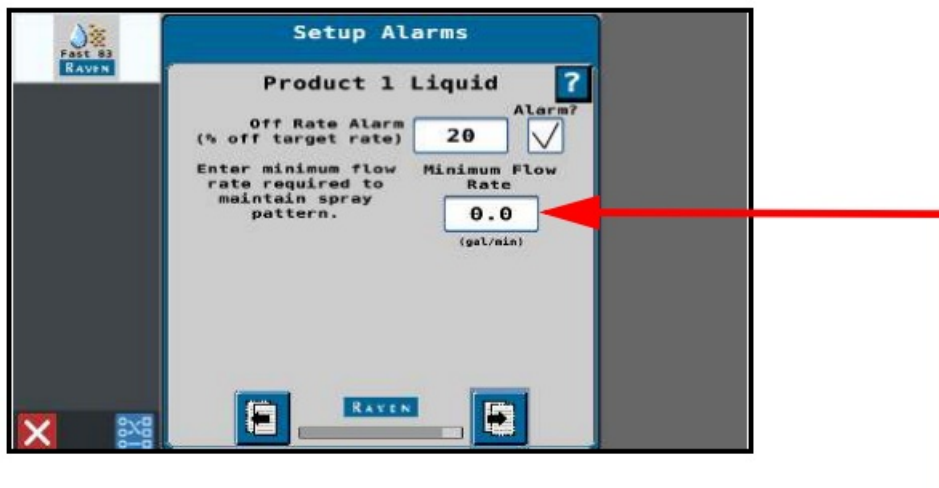
Setup Alarms

Product 1 Liquid ?

Off Rate Alarm (% off target rate) 20 ☒ Alarm?

Enter minimum flow rate required to maintain spray pattern. Minimum Flow Rate 0.0 (gal/min)

NOTE: This setting will vary based on tip selection.



Sprayers:

Nozzle capacity at minimum psi, multiply by the number of nozzles.

Example:

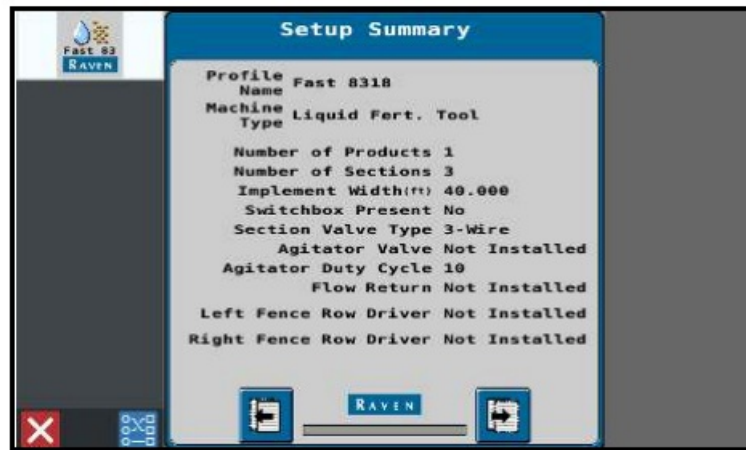
For FAST installed tips, see tip chart. $18 \times (\text{number of tips}) = \text{minimum flow rate}$.

Applicators

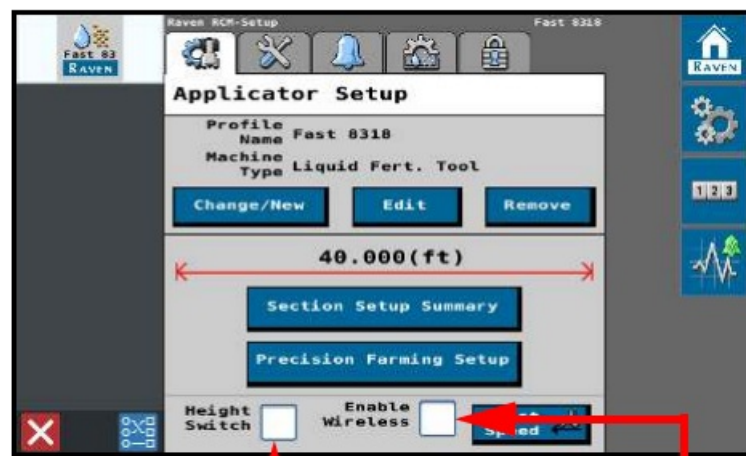
Can be run without entering a minimum flow rate, but if desired, the same formula should be used.

	PSI	DROP SIZE	CAPACITY ONE NOZZLE IN GPM	CAPACITY ONE NOZZLE IN OZ./MIN.			
					4 MPH	5 MPH	6 MPH
TTI110015 (100)	15	UC	0.92	12	6.8	5.5	4.6
	20	UC	0.1	14	8.2	6.5	5.4
	30	UC	0.3	17	9.7	7.7	6.4
	40	UC	0.5	19	11.1	8.9	7.4
	50	UC	0.7	22	12.6	10.1	8.4
	60	XC	0.8	23	13.4	10.7	8.9
	70	XC	0.0	26	14.9	11.9	9.9
	80	XC	0.1	27	15.6	12.5	10.4
	90	XC	0.3	29	17.1	13.7	11.4
	100	XC	0.4	31	17.8	14.3	11.9
TTI11002 (50)	15	UC	0.2	15	8.9	7.1	5.9
	20	UC	0.4	18	10.4	8.3	6.9
	30	UC	0.7	22	12.6	10.1	8.4
	40	UC	0.0	26	14.9	11.9	9.9
	50	UC	0.2	28	16.3	13.1	10.9
	60	UC	0.4	31	17.8	14.3	11.9
	70	XC	0.6	33	19.3	15.4	12.9
	80	XC	0.8	36	21	16.6	13.9
	90	XC	0.0	38	22	17.8	14.9
	100	XC	0.2	41	24	19.0	15.8
TTI110025 (50)	15	UC	0.5	19	11.1	8.9	7.4
	20	UC	0.8	23	13.4	10.7	8.9
	30	UC	0.2	28	16.3	13.1	10.9
	40	UC	0.5	32	18.6	14.9	12.4
	50	UC	0.8	36	21	16.6	13.9
	60	UC	0.1	40	23	18.4	15.3
	70	XC	0.3	42	25	19.6	16.3
	80	XC	0.6	45	26	21	17.3
	90	XC	0.8	49	28	23	18.8
	100	XC	0.0	51	30	24	19.8
TTI11003 (50)	15	UC	0.18	23	13.4	10.7	8.9
	20	UC	0.21	27	15.6	12.5	10.4
	30	UC	0.26	33	19.3	15.4	12.9
	40	UC	0.30	38	22	17.8	14.9
	50	UC	0.34	44	25	20	16.8
	60	UC	0.37	47	27	22	18.3
	70	XC	0.40	51	30	24	19.8
	80	XC	0.42	54	31	25	21
	90	XC	0.45	58	33	27	22
	100	XC	0.47	60	35	28	23
TTI11004	15	UC	0.24	31	17.8	14.3	11.9
	20	UC	0.28	36	21	16.6	13.9
	30	UC	0.35	45	26	21	17.3
	40	UC	0.40	51	30	24	19.8
	50	UC	0.45	58	33	27	22

- Setup summary page. Press Next.




- Not used.
- For connecting to mobile app.



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Documents / Resources

	<p>FAST AG SOLUTIONS Raven RCM Rate Control Module [pdf] Instruction Manual Raven RCM Rate Control Module</p>
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