

Marshall Multispread – Trimble Ready Program

A Trimble Ready Marshall Multispread comes complete with Trimble's Field-IQ™ spreader rate control and monitoring system, allowing you to plug 'n' play directly into your new or existing Trimble® display.

A Trimble Ready Multispread comes complete with all hardware including the Field-IQ module, sensors and cabling up to the spreader drawbar. The spreader is fitted with a hydraulic feedbelt drive that precisely controls application rate and is fast to react to changes in forward speed and target rate. When coupling the Trimble Field-IQ system with the Marshall Hydraulic Drive, the system is able to automatically turn off over the covered area minimising fertiliser wastage.

Purchasing a Trimble Ready Marshall Multispread means there is no need for an extra monitor in the cab, increasing cab space and visibility, and also reducing the cost of purchasing another display.

Benefits of the Trimble Field-IQ System

•Rate Control

The Field-IQ system accurately controls fertiliser rates by controlling the speed of the feedbelt. Quickly and easily change rates on the go manually or using two pre-set rates.

•Spreader Monitoring

Monitor all spreader operations including belt speed, spinner speed and optional low bin level sensor. All operations have alarm capability.

•Material Library

Change your material types simply by saving materials into the material library. Full product characteristics are saved into the material library to allow fast changing of material types.

•Auto-Off Over Coverage

Automatically turns the spreader off when going over coverage. Avoids overlapping fertiliser in previously applied areas.

•Virtual Tank

Know exactly how much product is left in the bin, and setup warnings when the bin is getting low. Also the Area to Empty feature will calculate how many hectares are remaining with the current bin load.

•VRT

Vary rates manually or using prescriptions to save money and increase yields while keeping records of what was applied. Real time On-the-go variable rate when the Greenseeker® system is connected to the FmX display.



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Marshall Multispread - Trimble Ready - Frequently Asked Questions

Q. Which Trimble displays are compatible with the Marshall Multispread?

A. Trimble CFX-750 and FmX.

Q. What are the capabilities of each of the Trimble displays?

A. See the table below.

	FmX	CFX-750
Display Size (cm)	30.7	20.3
Rate & Section Control	Y	Y
Spreader Monitoring	Y	Y
Material Library	Y	Y
VRA Compatible	Y	Y
Wireless Office to Vehicle Sync	Y	Y
Greenseeker System Compatible	Y	
Vehicle Sync	Y	
Yield Monitoring	Y	
Remote Assistant	Y	

Q. Do I have to buy a new Trimble display or can I use my existing display?

A. New or existing FmX or CFX-750 displays can be integrated with any Trimble Ready Multispread.

Q. Which Marshall Multispread models can be integrated with the Trimble Field IQ system?

A. All Current 800 and 900 Series Marshall Multispread models can be fitted with the relevant hardware for integration with a suitable Trimble display. For Multispreads built prior to 2010, contact Roesner Pty Ltd for more detailed technical information.

Q. Can I retro-fit my current Multispread with hardware that integrates with the Trimble system?

A. Yes, however its important to consider the model number and age of the spreader. A retro-fit kit containing the necessary hardware and instructions is supplied. It is recommended that the retro-fit kit is fitted by a Multispread dealer and that a local Trimble dealer is available to assist with the software setup.



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Q. What hardware is supplied with a Trimble Ready Multispread?

A. The spreader is equipped with the relevant components up to the connection with the tractor drawbar. The following components are supplied with a Trimble Ready Multispread:

- Hydraulic Feedbelt Drive Motor and Brackets
- Danfoss PVG Valve
- Sensor kit including spinner shaft sensor and belt speed encoder
- Field IQ Rate Control Module
- Cabling to connect sensors and valve to the Field IQ module
- Hydraulic hoses and fittings

Q. How does the Trimble system vary fertiliser application rate?

A. The Trimble display sends an electrical signal to the Danfoss PVG fitted to the spreader setting the target application rate. The Danfoss PVG valve varies the oil flow to the feedbelt drive to both set the target application rate and to maintain the target rate as ground speed increases or decreases.

Q. How does the Trimble display measure ground speed?

A. Ground Speed is provided by the GPS input.

Q. What happens if the GPS signal drops out?

A. It is extremely unlikely that the GPS signal will drop out. However in the rare case that it does a simulated speed can be set inside the Trimble display to provide speed input if the GPS signal drops out. In this case the spreader can still be used until the signal is recovered.

Q. At what speed does the spreader feedbelt operate at?

A. The spreader feedbelt runs in a range between 2-20 RPM and is dependent on the target application rate and the spread width.

Q. How much hydraulic oil flow is required to run the feedbelt drive?

A. A maximum oil flow of 40 L/min is required. Maximum start up pressure is 2500 PSI and normal operating pressure is approximately 1000 PSI, depending on the material being spread.



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Q. Why are chain drives fitted between the feedbelt drive motor and gearbox, and the gearbox shaft and final drive roller?

A. The hydraulic drive has to be driven within an optimum range to ensure the responsiveness of the control system. Due to the chain drive reduction the hydraulic drive can run at optimum performance whilst maintaining the relatively slow feedbelt speed.

Q. At what height is the hopper door set at?

A. The hopper opening is dependent on the fertiliser being spread, the target application rate and the hydraulic oil flow rate to the tractor. As a guide the following door openings can be used as starting points :

Material	Target Rate (kg/ha)	Spread Width (m)	Door Opening (mm)
Urea	100	up to 36*	25
DAP	150	up to 36*	35
Superphosphate	200	up to 36*	35
Lime	1000	up to 12*	75

The values in the chart above are based on a constant forward speed of 20 km/h. Each time the door opening is changed the material calibration setting must be adjusted in the Trimble display.

** Refer to www.marshallmultispread.com.au or the spreader operators manuals for recommended spreading widths**

Q. Do I need an unlock code from Trimble to carry out Variable Rate Applications (VRA)?

A. An unlock code is required

Q. Who provides the technical support ?

A. Support for a Trimble Ready Marshall Multispread is provided by Roesner Pty Ltd and Trimble's dealer network.

Q. Are there pre-set machine calibration factors that can be imported into an existing Trimble ready display to help reduce setup time?

A. A data file containing machine calibration setting can be imported using the USB port located on the rear of the display.



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