

## Maxflow VRC II NH<sub>3</sub> High Pressure Application System

- Increased Range of Application Rates
- Increased Manifold Pressure & Accuracy
- Integrates with Variable Rate Technology
- Available with Boom Section Control
- Compatible with Most Rate Controllers

### Increased Range of Application Rates

The Maxflow VRC NH<sub>3</sub> application system will deliver a higher range of application rates and improved distribution accuracy over traditional manual and auto rate control systems. To achieve the higher range of flow rates, the system uses a positive displacement vane pump powered by a hydraulic motor to control the flow rates to the distribution manifolds. The pump essentially replaces the control valve that is traditionally used on auto rate control systems. A cooler is not required by this system as it is with typical auto rate control systems, eliminating the challenges inherent with plumbing vapour lines from the cooler to an opener. An in line pressure compensated back pressure regulating valve is used to keep the NH<sub>3</sub> in a liquid state in the flow meter, to ensure accurate measurement from the flow meter. Maximum pump performance is achieved when the pump is mounted as close to the outlet of the nurse tank as possible, below the nurse tank and plumbing to the pump is optimized to reduce flow restrictions to the inlet of the pump. The overall capacity of this system is about 2 to 2 1/2% of the nurse tank's storage capacity per minute, but will vary somewhat with temperatures of liquid, atmosphere and intake line restrictions. For example a 2,000 gallon nurse tank will be limited to 50 gpm (12,644 lbs. of Nitrogen per hour) maximum withdrawal rate.



### Variable Rate Control

Application rates are controlled by adjusting pump speed which is controlled by an auto rate controller which interprets signals from a flow meter and ground speed indicator. The rate can be adjusted on the go by making adjustments to the application rate in the rate controller. Alternatively, the rate can be varied by a task controller with a prescription map and a GPS signal. Systems can be configured to work with most auto rate controllers.

### Improved Accuracy

Improved distribution accuracy is achieved by using distribution hoses with an inner diameter of 1/8" instead of the traditional 3/8" or 1/2" diameter hoses that are typically used. The smaller hose creates higher manifold pressures which will vary with hose length, temperature and application rates. This higher manifold pressure improves distribution accuracy, reduces vapor formation and subsequently line freezing. The smaller diameter hose is manufactured specifically for NH<sub>3</sub> up to 250 psi working pressure, and can be secured to most standard manifolds using a compression fitting.

### Boom Section Control

Electric manifold valves can be installed onto each manifold to provide individual boom section control which can be either controlled manually or integrated into a GPS automatic boom section control system. In addition to sectional control of the system, manifold valves also provide for a quicker on/off response time.

Part Number	Description
MAXFLOW-VRC II	Maxflow Variable Rate Control Kit



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866-629-7847

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