

# TORPEDO™



# NH3

## Precision Anhydrous Ammonia Application

For Great Plains Nutri-Pro®  
Fertilizer Applicators





# Torpedo™ NH3 Precision Anhydrous Ammonia Application For Great Plains Nutri-Pro® Fertilizer Applicators

**SureFire's Torpedo™ NH3 systems** are specifically configured for Great Plains Nutri-Pro® Fertilizer Applicators and the application scenario you desire to achieve on your farm. Torpedo systems come complete with all components needed to get product from the tank to the soil. SureFire will work with you to ensure all necessary components are supplied as part of the complete kit.

## **Torpedo™ Anhydrous Ammonia systems are available in three base models:**

- Model 100 23-31 GPM Maximum Capacity\*  
Small to Medium Implements, Lower to Moderate Application Rates
- Model 200 35-47 GPM Maximum Capacity\*  
Medium to Large Implements, Moderate Application Rates
- Model 300 50-70 GPM Maximum Capacity\*  
Large Implements, High Application Rates, High Speed  
Utilizes two tanks to achieve maximum capacity

*\*Maximum Capacity ratings are temperature dependent. Maximum rates listed are at 34°F and 64°F, respectively. Additionally, to achieve maximum capacity the tank withdrawal valve and lead hose from tank to Torpedo™ must be sized correctly.*

## **Torpedo™ NH3 systems are compatible with the following controllers:**

- John Deere Rate Control
- Trimble Field IQ
- Ag Leader Direct Command
- Case Pro700 with AccuControl
- Raven

When not integrating with an existing control platform, Torpedo™ is offered with the SureFire Commander II.



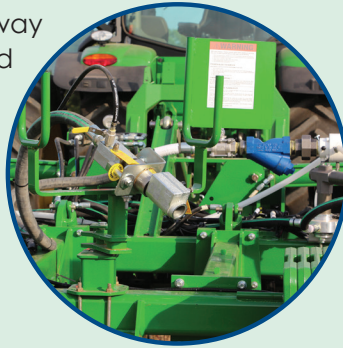
# Components

## Tank Withdrawal Valves

To achieve maximum flow rates it is essential to have high-capacity withdrawal valves at the tank. If the anhydrous ammonia supplier's tanks do not have 1¼" or 1½" valves (depending on your application needs), retrofit valves are available to ensure maximum rates can be achieved.

## Break-Away Couplers

High Capacity Break-Away Coupler(s) are provided at the hitch. Break away coupler(s) are either 1¼" or 1½" depending on the system model. The Model 300 uses two 1½" couplers from two tanks to achieve the maximum flow.



## Cooler (Heat Exchanger)

Torpedo™ NH3 Systems feature Continental NH3 Products' new 2" SuperFlow Cooler. This high capacity cooler is supplied with single tank lead hose in the Model 100 and 200 systems. The Model 300 utilizes two tank lead hoses from independent tanks to achieve maximum flow rates of 70 GPM at 64°F.



## 1¼" Precision Flow Control Valve

The flow control valve has two distinct features that work in combination with one another to provide more accuracy and stability in controlling the application rate. First, the control valve barrel is "V" shaped. Secondly, due to the "V" shape, the valve can utilize 120° of control, this is 30° more control range than traditional valves which only use 90° of control. The "V" shape and extended control range provide increased accuracy and stability, especially on lower application rates. The 1¼" full port passage way reduces restriction and allows for maximum capacity when on the highest application rates.



## Raven Flow Meter

Torpedo™ utilizes the widely used and reliable Raven 1-60 GPM flowmeter.

## Injection Mixing Manifold

All models can be factory configured with an injection mixing manifold for injecting nutrient stabilizers. Ask about SureFire injection systems sold separately.

## High-Pressure Hose

In applications where section valves are utilized, high-pressure crimped hose is utilized from a central splitter to each section valve and distribution manifold.

## Section Valves

3-wire motorized on/off valves are mounted directly to the distribution manifold.

## Distribution Manifolds

Two options are available:

### A-360

New.....High-accuracy. +/- 1-3% Row to Row Accuracy. Continental NH3 Products patented "Step Down Injector Technology" mixes and accelerates the ammonia into an upper chamber, the tee, and the lower manifold chamber. These key features mix the vapor and liquid so each outlet gets an equal amount of both to get an even distribution of nitrogen.

### Vertical Dam (MVD)

Economy manifold option that has been widely used for many years. +/- 6% Row to Row Accuracy.

*Nutri-Pro® is a Registered Trademark of Great Plains Manufacturing*





# SureFire Liquid Application Systems

SureFire Liquid Application Systems are custom configured for your application needs.

Our Application Control Experts take into account all the variables of your fertility program including:

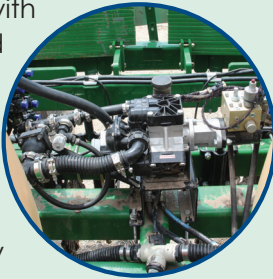
- Implement Size
- Row Spacing
- Application Rate
- Desired Placement
- Tank Location
- Liquid Product to be Applied

SureFire Liquid Application systems seamlessly integrate with the technology in your cab.

**John Deere Rate Control | Ag Leader Direct Command | Trimble Field IQ | Case AFS AccuControl | All120/TopCon X30 with Working Set Master Module**

## PumpRight

Diaphragm style pump with hydraulic motor drive and PWM variable speed control valve. PumpRight pumps are available in four sizes – 15, 25, 35 and 55 GPM output. The pump is paired with SureFire's E-Mag flowmeter for accuracy and reliability.



## Section Control, Manifold, and Distribution

Everything from the pump to the placement device. Based on your scenario and preferences the best options will be selected.

**Metering Tube** is used in place of a traditional orifice to provide even distribution to each row. In a typical in-furrow application scenario a 0.030" orifice is replaced with an 8' length of metering tube having a passageway of 0.096". The combination of length and diameter equalizes flow to each row. Metering tube virtually eliminates the problem of plugged orifices.

# LIQUISHIFT®

**Variable Rate Technology**

10-50 GPA Variable Rate is no problem for LiquiShift®

When your scenario requires a flow range beyond what a single orifice or metering tube will allow, LiquiShift® is the solution. This patent pending technology provides a turn down ratio of 10:1. **LiquiShift® is ideal for prescription variable rate, high speed application, and makes field to field rate changes fast and hassle free.**



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