

# MÄRKSMAN



## Precision Irrigation Injection



### *Flow Controlled Fertigation and Chemigation*



### *Remote Monitoring, Text Notification & Record Keeping*

# Marksman Models

## Marksman Hydra-Cell Pump

**Flow Range:** 10-180 GPH  
**Max Operating Pressure:** 125 PSI  
**Power Options:** 480VAC 3-Phase, 110VAC

Durable and robust industrial grade pump with years of proven use in fertigation and chemigation applications. Variable Frequency Drive (VFD) varies motor speed to achieve desired application rate.



## Marksman 12VDC Pump

**Flow Range:** 6-60 GPH  
**Max Operating Pressure:** 50 PSI  
**Power Options:** 480VAC 3-Phase, 110VAC, 12VDC

The economy solution for low pressure irrigation systems. This system utilizes a 12VDC motor to drive a diaphragm type pump. Works well in low pressure irrigation systems requiring low to medium application rates.



## Marksman No-Pump - Existing Injection Pump Control

**Flow Range:** Determined by Existing Pump  
**Max Operating Pressure:** Lesser of 125 PSI or Maximum of Pump  
**Power Options:** 480VAC

Add all the features of Marksman to your existing injection metering pump--flow measurement and control, water proportional control, shut down alarms and record keeping. The Marksman for existing injection pumps provides VFD controlled output of your current pump.



## Marksman 550 Tank Skid with Hydra-Cell Pump

**Flow Range:** 10-180 GPH  
**Max Operating Pressure:** 150 PSI  
**Power Options:** 480VAC 3-Phase, 110VAC

550 gallon cone-bottom tank with variable speed propeller agitation. Factory assembled with Marksman Hydra-Cell system. Attach it to your trailer and it's ready to go to the field.



▼ Center Pivot

▼ Drip Irrigation

▼ Ditch Irrigation

▼ Flood/Gravity

# Features and Benefits



## Flow Measurement

All Marksman models utilize an electromagnetic flow meter to measure flow rate of fertilizer or water/chemical mixture. Electromagnetic meters have no moving parts to lodge, stick or wear. They precisely measure any electrically conductive liquid.

## Flow Control

Set the desired flow rate (GPH) for your application and Marksman will control the pump output to achieve the desired rate for the entire application. Changes in product viscosity due to temperature variation, changes in head height of tank, and other variables that change flow rate through traditional metering pumps, are a thing of the past. Marksman ensures you get the exact application you need.

## Water Proportional Control

Marksman changes the chemical or fertilizer flow rate in response to changes in water flow such as corner swing-arm systems. Marksman ensures the correct rate is applied regardless of the swing arm position.

## Shut Down Alarms

**Off Rate Alarm** - If tank runs dry or the strainer plugs up and Marksman cannot achieve the desired flow rate, Marksman will automatically shut down. Utilize Marksman pivot shut down relay kit to stop the pivot as well.

**Low and High Pressure Alarm** - If injection pressure drops below the minimum pressure set point, Marksman will shut down. Eliminates hours of costly and harmful spills due to a broken hose.

**Water Pressure Low and High Pressure Alarm** - With optional water pressure sensor, Marksman will shut down based on too low or too high of water pressure.

## Batch Mode

Inject set number of gallons, then turn off.

## Auto Run on Power Up

At power up, Marksman will automatically start pumping. Automatically resume injection after power shut down due to load control. Useful in drip irrigation to apply set batch size to each zone of system.

## Record Keeping - Data Logging

Marksman keeps a complete record of every application. Every 10 minutes it logs an entry which includes field number, date, time, flow rate set point, actual flowrate, pressure and batch total. You will know when, where and how much was applied.

### Regulatory and Supply Chain Reporting

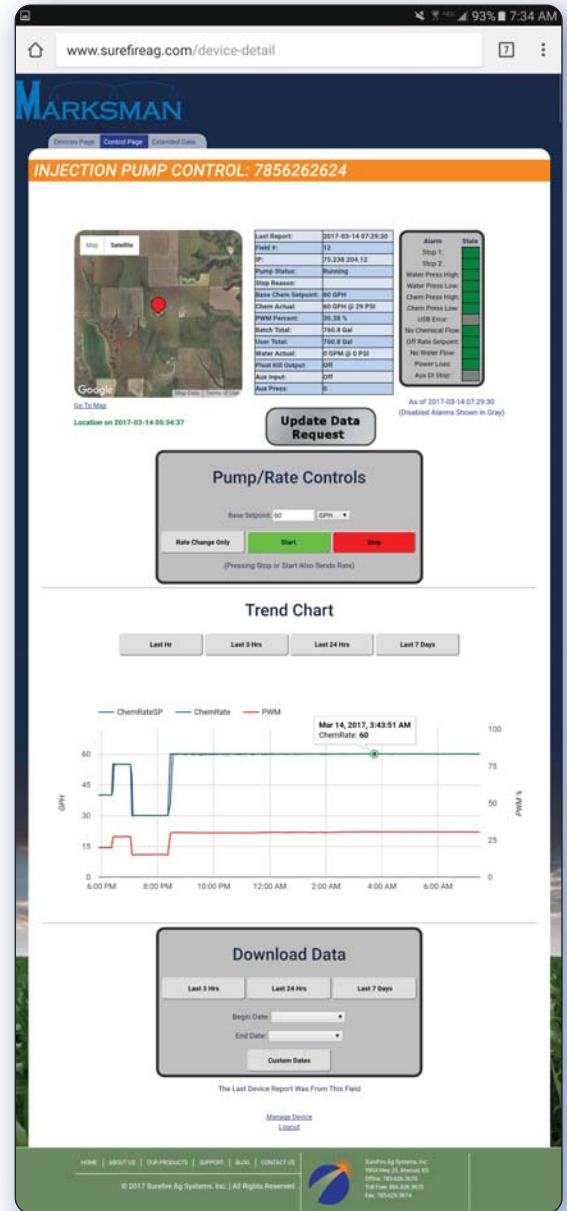
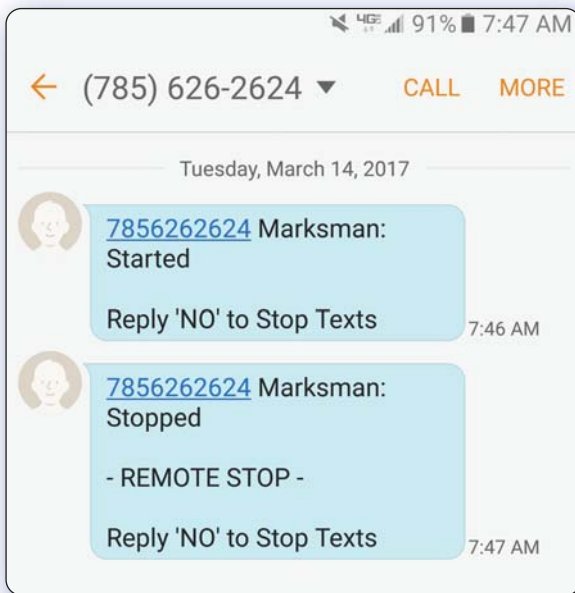
This provides the necessary information you need for regulatory reporting. It also provides a record that can be used throughout a supply chain that wants to know more details of exactly how your product was grown, especially on fruits, vegetables and specialty crops. The log file is an Excel file that is downloaded directly from the Marksman via USB drive or directly from the cloud when equipped with remote connectivity.

	A	B	C	D	E	F	G	H
	Phone #	Field ID	Run ning	Chem RateSP	Chem Rate	Chem PSI	Batch Total	Date and Time
2	7856262624	12	1	60	60	29	765.8	3/14/2017 7:34
3	7856262624	12	1	60	60	29	760.8	3/14/2017 7:29
4	7856262624	12	1	60	59.9	29	755.8	3/14/2017 7:24
5	7856262624	12	1	60	59.9	29	750.8	3/14/2017 7:19
6	7856262624	12	1	60	59.9	29	745.7	3/14/2017 7:14
7	7856262624	12	1	60	59.9	29	740.7	3/14/2017 7:09
8	7856262624	12	1	60	60	29	735.7	3/14/2017 7:04
9	7856262624	12	1	60	60	29	730.7	3/14/2017 6:59
10	7856262624	12	1	60	59.9	29	725.7	3/14/2017 6:54
11	7856262624	12	1	60	60	29	720.7	3/14/2017 6:49
12	7856262624	12	1	60	60	29	715.7	3/14/2017 6:44
13	7856262624	12	1	60	60	29	710.6	3/14/2017 6:39
14	7856262624	12	1	60	60	29	705.6	3/14/2017 6:34
15	7856262624	12	1	60	60	29	700.6	3/14/2017 6:29

# Remote Connectivity

Checking fertigation/chemigation is now as easy as checking Twitter or Facebook...simply look at your phone! Get text message notification instantly if the application encounters a problem.

- Access via Any Web Browser - iPhone, Android, Desktop
- Monitor All System Information
- Marksman Reports System Status Every 10 Minutes
- Start/Stop Injection Pump
- Change Rate
- View Trend Chart
- See GPS Location of System on Map
- Download Application Log (Record Keeping)
- Battery Backup Allows Notification of Power Loss
- Text Message Notification of Start/Stop



## Marksman Connectivity Via AgSense

Utilize your AgSense remote management system to monitor and control Marksman. Install an AgSense CropLink located next to the Marksman. Via the AgSense web portal you will be able to monitor:

- Marksman Flow Rate
- Marksman Pressure
- Water Pressure
- Water Flow Rate

### Variable Rate Application

Marksman accepts prescription application map from AgSense to vary application rate based on pivot position.