Hay Preservative and Application Systems for

Vermeer Balers

Vermeer

Equip your Vermeer baler with a hay preservative application system and enjoy the benefits of baling hay at up to 30% moisture without the worry of heating or mold damage.

HARVEST TEC *Equipment and Products for Quality Hay.™*

Choose a Control System

Hay preservative applicators can be ordered with the choice of three different control systems. Select the type of control that best suits your operation. Available control systems are: Automatic, Electronic and Manual.

Automatic Control System

The automatic control system makes baling high moisture hay easy. It accurately senses moisture up to 60% while the baler is in motion using baler-mounted moisture sensors. The control system's computer uses the moisture readings provided by the moisture sensors and adjusts the preservative application rate every three seconds to match hay conditions. This precision gives the operator the exact amount of preservative required to keep the crop in great condition.

The operator can control the automatic applicator through an iPad or iPad Mini via Bluetooth for a clear, colorful display that does not require any extra wires in the cab. The Harvest Tec Hay App is available for free on the iTunes Store and is what's used to run the applicator on the iPad.

The iPad in the cab gives the operator complete control and provides valuable information for all types of balers equipped with an automatic control system. Features include:

Automatic Mode – Displays moisture content, baling rate in tons per hour, target and actual application rates and volume of preservative used

Manual Mode – Turns pumps on and off, displays moisture content and applies a set rate of preservative

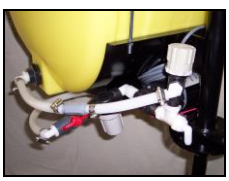
Setup Mode – Adjust baling and application rate settings or view and change spray tip selection

Job Records – Keep track of up to 63 jobs by date and time, tons baled, product used and highest and average moisture

Electronic Control System

The electronic control is a solid state electronic pump control. This control is most often mounted in the cab, but can also be mounted on the fender. The operator, with a turn of the dial, can quickly and easily adjust the rate of preservative applied. Once set, the electronic control will hold the application rate constant.

Manual Control System



The manual pressure regulator provides full-rate adjustment at the applicator. Manual control is available as a 25-gallon applicator only.

Moisture Sensors

Accurate moisture readings are given to the automatic control by moisture sensors. Sensor shape, size and mounting position varies by baler type, but all work in the same fashion.

On Vermeer round balers the sensors mount on the balers sidewalls. One sensor is positive and the other is an isolated ground. When the hay bale comes in contact with the sensors, a current passes all the way through the bale, sensing moisture from one side to the other, through the entire width of the bale. Sensing this thoroughly and all the way through the bale gives a moisture reading that is accurate to within + or – one point.

Moisture Sensing Discs on Round Balers
Applicators with the automatic control system come with two sensing discs that mount on each side of the baler's sidewalls.

Applicator Components

Why wait to bale? Bale earlier, later, longer and without worry with a hay preservative application system on your Vermeer baler. Dense core round bales can be baled at 18% moisture and loose core bales are relatively safe to bale without preservative at under 20% moisture. By using a hay preservative system, you can bale at moistures up to 30% and be assured of consistent quality throughout the entire round bale.

55-gallon applicator on 605M

25-gallon applicator on XL Series

Hay preservative applicators are available to fit all current models of Vermeer balers and just about every other model. Application systems come complete with:

- **Your choice of control system: Automatic, Electronic or Manual**
- **25- or 55-gallon** (*depending on baler model*) **poly tank and saddle**
- **12-volt pumping system**
- **All plumbing, cables and mounting hardware**
- **Moisture sensing discs**
  (if you have selected the automatic control)

Hay Preservative Application Systems Available for Vermeer Round Balers

Control Choices	Automatic (Reads up to 60% moisture)		Electronic		Manual
Tank Sizes	25 Gal.	55 Gal.	25 Gal.	55 Gal.	25 Gal.
Vermeer Round Baler Models					
404, 504, 604 PRO		3494523C		4484523	
504, 505 J, K, M, N, R Series	3464484C		4414484		4394484
604M, 605M, 604N, 605N		3494505C		4484505	
Rebel, XL Series	3464484C		4414484		4394484

Accessories

The **474 Hay Indicator Kit** is a great addition for you automatic or electronic control system. The kit consists of two eyes that mount on the baler's pickup head. The eyes sense when crop is passing through and automatically start or stop preservative application.

iPad Display Kit (030-2670DK)
For customers that want an iPad Mini with the Hay App pre-loaded and ready to go with a mounting bracket and protective case.

Bluetooth Receiver (030-4672A)
A Bluetooth receiver can be ordered to retrofit older 400 Series automatic applicators to be able to be controlled with an iPad.

Model 9214 (top)
12-volt high output electric transfer pump will pump up to 14-gallons per minute.

Model 9213 (middle)
12-volt standard electric transfer pump will pump up to 4-gallons per minute.

Model 9213 (bottom)
Hand Transfer Pump works well for transferring small amounts of preservative easily.

Hay Preservative

Baler's Choice

Two key ingredients help make higher quality hay:

Propionic Acid: The number one ingredient used to control spoilage in hay. The level of propionic acid in Baler's Choice is one of the highest on the market. Yet, it is one of the safest because it has been chemically buffered. With a pH of 6.0, it is as neutral as rainwater and won't harm you or your baler.

Citric Acid: For many years, citric acid has been used in human foods to retain the color and smell. It does exactly the same thing for your hay. Hay baled with citric acid will retain its natural green color and will smell fresh after storage.

UNTREATED **TREATED**


16% -22% Moisture Level

Hay baled at moistures between 16% and 22% will heat enough to cause discoloration and will lose its fresh smell. Applying a low level of Baler's Choice will retain the hay's natural green color and fresh smell.


23% 26% Moisture Level

Without Baler's Choice, hay baled at moistures between 23% and 26% can reach temperatures of over 120° F in storage. Mold will begin to form and hay quality will drop significantly. The same hay baled and treated with a mid-range application of Baler's Choice will stay cool and will come out of the stack the same color it went in.


27% 30% Moisture Level

Baling at moistures over 27% without a preservative can result in bales heating to over 140° F. At such high temperatures the hay will turn black and may even combust. Baler's Choice will work treating hay up to 30% moisture when applied at the correct application rate.

Hay Treated with Baler's Choice Hay Preservative is Safe to Feed all Livestock

Propionic acid, the main ingredient in Baler's Choice, is an organic acid occurring naturally in horse's gastrointestinal tract and in ruminants is produced by rumen bacteria. Bales treated with Baler's Choice yield more and have a higher relative feed value and are safe to feed to any type of livestock.

More and more horse owners are choosing to feed their horses hay treated with Baler's Choice because of the improved bale quality. Untreated hay can mold and spoil causing a loss of dry matter, creating dust and even spores that are harmful to the animal's health.


EPA registered Baler's Choice is available in three sizes convenient for any users baling operation:

Size	Preservative Amount*
13 gallons / 49.2 L	120 lb / 54.4 kg
50 gallons / 189.3 L	450 lb / 204.1 kg
200 gallons / 757.1 L	1,800 lb / 816.5 kg
270 gallons / 1000 L	2,380 lb / 1080 kg

*Preservative is sold per pound, not per gallon. 1 Gallon = 8.83 lb/ 4 kg

Application Rate Chart

Baler Type	Moisture	Stem Moisture	Dew Moisture
Round	16% - 22%	4 lb/ton	2 lb/ton
	23% - 26%	8 lb/ton	6 lb/ton
	27% - 30%	16 lb/ton	16 lb/ton
Large Square	16% - 22%	6 lb/ton	3 lb/ton
	23% - 26%	10 lb/ton	8 lb/ton
	27% - 30%	DO NOT BALE	16 lb/ton
Small Square	16% - 22%	4 lb/ton	2 lb/ton
	23% - 26%	8 lb/ton	6 lb/ton
	27% - 30%	16 lb/ton	16 lb/ton