

# DEWPOINT 632 BUYER'S GUIDE



STAHELI**WEST**



## Changing Agriculture. Changing Lives.

[www.staheliwest.com](http://www.staheliwest.com) - 600 N Airport Rd, Cedar City, UT 84721 - 435.586.8002



Dave Staheli, President  
Staheli West, Inc

# Making DEW: The Story of How it All Started

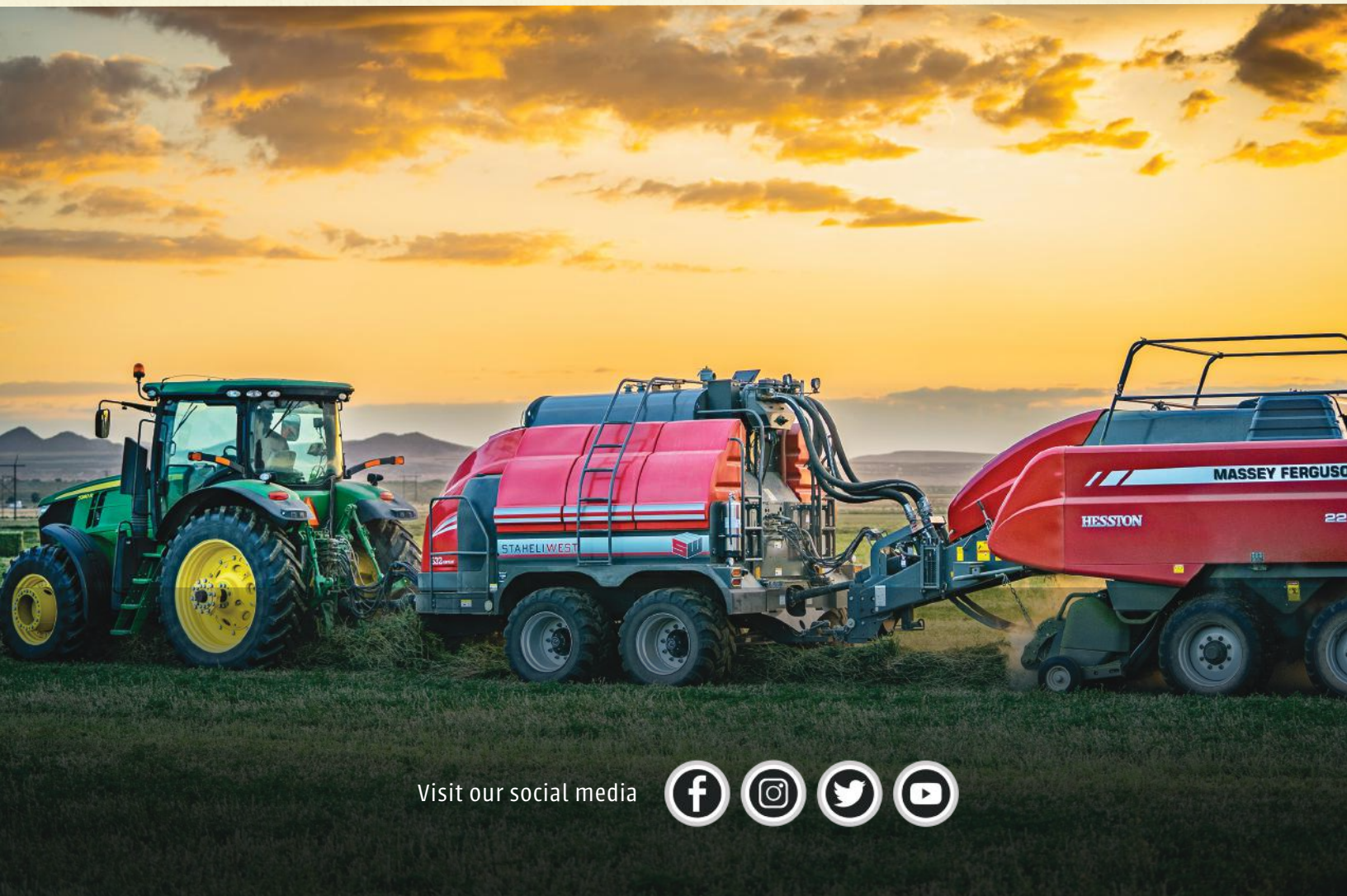
A Taco Restaurant – That’s where the idea to apply steam to hay came from. Staheli West, Inc. was founded by Dave Staheli while managing Brent Hunter Farms in Cedar City, Utah.

Watch our latest documentary on the miraculous and inspiring story of one man’s struggle to put up high-quality hay and how a prayer and a taco restaurant inspired one of the most revolutionary concepts in haymaking.

Simply scan the QR code to see the video.



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# Benefits of Using Steam While Baling



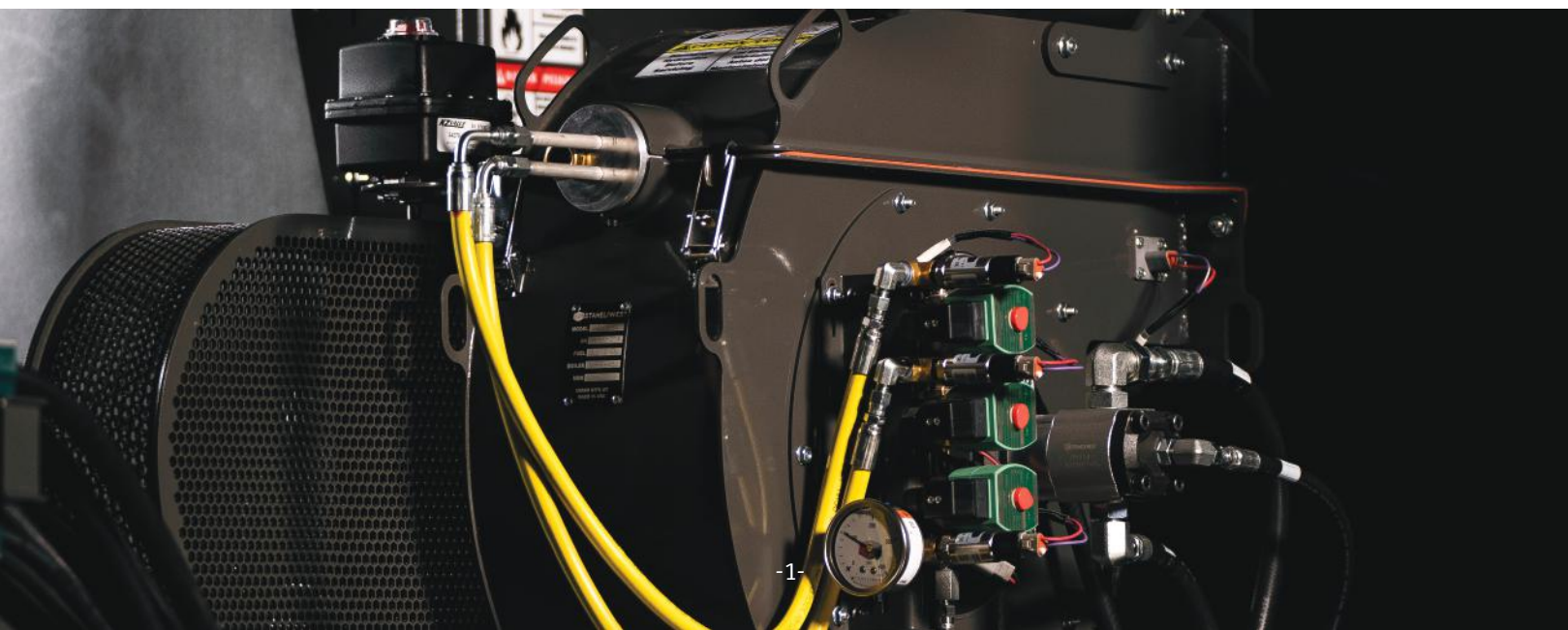
**Leaf Retention:** University studies done with large square balers show that baling with steam reduces leaf loss by over 58% compared to baling with natural dew at night. Researchers at the University of Wisconsin state, “Steam rehydrated bales indicated that leaf retention on the stems was superior to that of bales formed with [natural] dew rehydration.”



**Hay Quality:** Baling hay too dry significantly lowers the nutritional and financial value of hay. Marketing is much easier when your bales are consistent from the first to the last. Your customers will know what to expect every time, and some hay buyers will pay more for steamed hay. Even with some rain damage, farmers using steam during baling are still able to soften the brittle hay and produce a higher-grade of hay.

**IMPROVED EFFICIENCIES.  
YOU CAN DEW MORE!**

The DewPoint 632 is used in the large square bale market. The machine uses a boiler and hydraulic-powered diesel-fired burner to turn water into steam. The steam is applied to the cured hay during the baling process through a series of distribution manifolds mounted onto the baler. Steam is injected into the hay at the pickup of the baler and further as the hay passes through the feed chamber. Steam application during baling has been proven to significantly reduce leaf loss compared to baling with natural dew and improves hay quality and quality of life for the farmer.





**Bale Density:** With steam, a farmer can expect to have good bale density, increased leaf retention, and a bale that looks nice and has good smell and color. Steamed hay bales will hold together better, flake better, and stack and store easier than conventional hay. On average, baling with steam will increase bale weight by 5-10%. Most of the weight increase is attributed to leaf retention.



**DEW More With Less:** By utilizing steam, farmers can extend their baling window, allowing for high-quality hay production for 12-24 hours per day. With this increased efficiency, 1 DewPoint setup can often replace 2-4 conventional baler setups, resulting in reduced capital, maintenance, and labor costs.



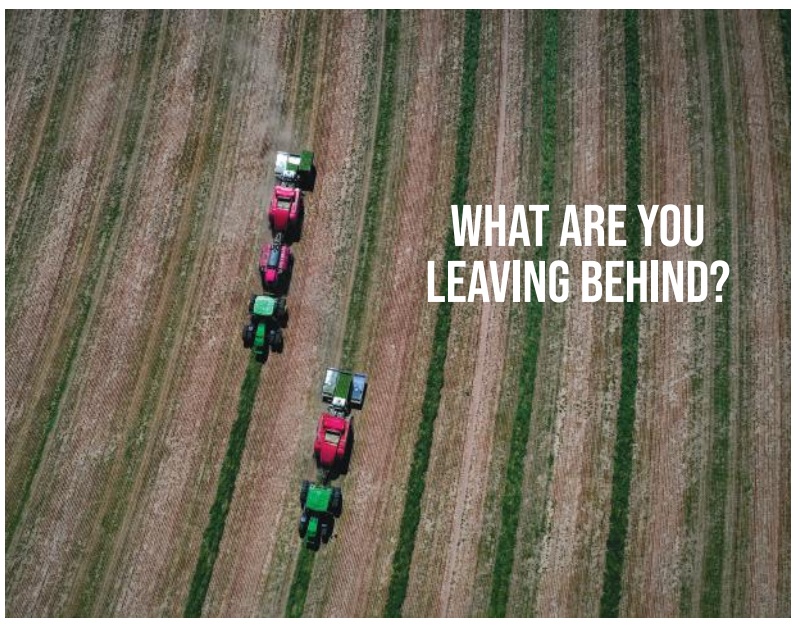
**Reduce Weather Losses:** The DewPoint 632 lowers the risk of crop value loss due to rain or baling in overly dry conditions. How many tons of hay do you bale too dry each year? Farmers without steamers are often faced with the decision to bale hay too dry to beat storms, or wait, risking further crop value loss. If the hay is cured, you can bale it with optimal steam moisture. We've had customers bale over 500 acres in one day to beat impending storms.



**More Control:** With the DewPoint 632, farmers have more control to work on their schedule, not Mother Nature's. Farmers have changed their management approach because baling is no longer the bottle neck. Harvest operations can be scheduled better, knowing that you can bale a set number of hours each day.



**Higher Yields on Final Cuttings:** In many areas, farmers utilizing DewPoint technology have seen increases in their last cutting yields. This is because most farmers can now bale whenever their hay is dry. They can cut, rake, bale their hay, and get water back on their fields quicker. This adds valuable growing days when the weather is warmest. Added growing days means that farmers will realize higher yields at the end of the year. This is just another way the DewPoint 632 can pay for itself.



## The DewPoint 632 Will Pay for Itself

The DewPoint 632 should be viewed as an investment, because it has been proven to pay for itself time and time again on hundreds of operations all over the world. As Don Roberts, one of our very first customers, stated, "You can't afford not to have [the steamer]."

Interested in how the DewPoint 632 would pencil out on your farm? Watch this tutorial, download the Value Spreadsheet, and plug in your numbers! You may be surprised just how fast the steamer will pay for itself on your operation.



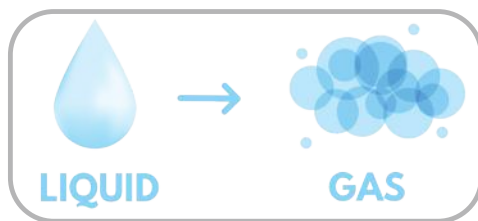
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# Why Use Steam?

Steam is the hot gas that forms from water when it is boiled. 1 Gallon of water produces approximately 1,700 Gallons of steam. Unlike water particles in the liquid state, steam particles are widely separated and are free to move randomly. When injected steam contacts dry crop material it instantly condenses and bonds with other water molecules in the vicinity, which causes instant absorption into the dry crop material. Steam particles can penetrate through the tiny pores in plant material more effectively than water and soften the hay without making it too wet. This is the reason the DewPoint system works so efficiently.



# How It Works

The DewPoint 632 generates steam which is injected into hay windrows. The machine is powered by the electrical and hydraulic system of the tractor. A diesel oil burner heats water inside the boiler to produce steam. This steam is transferred through hoses into custom manifolds mounted on the baler. The operator controls the steam rate and distribution in the baler.



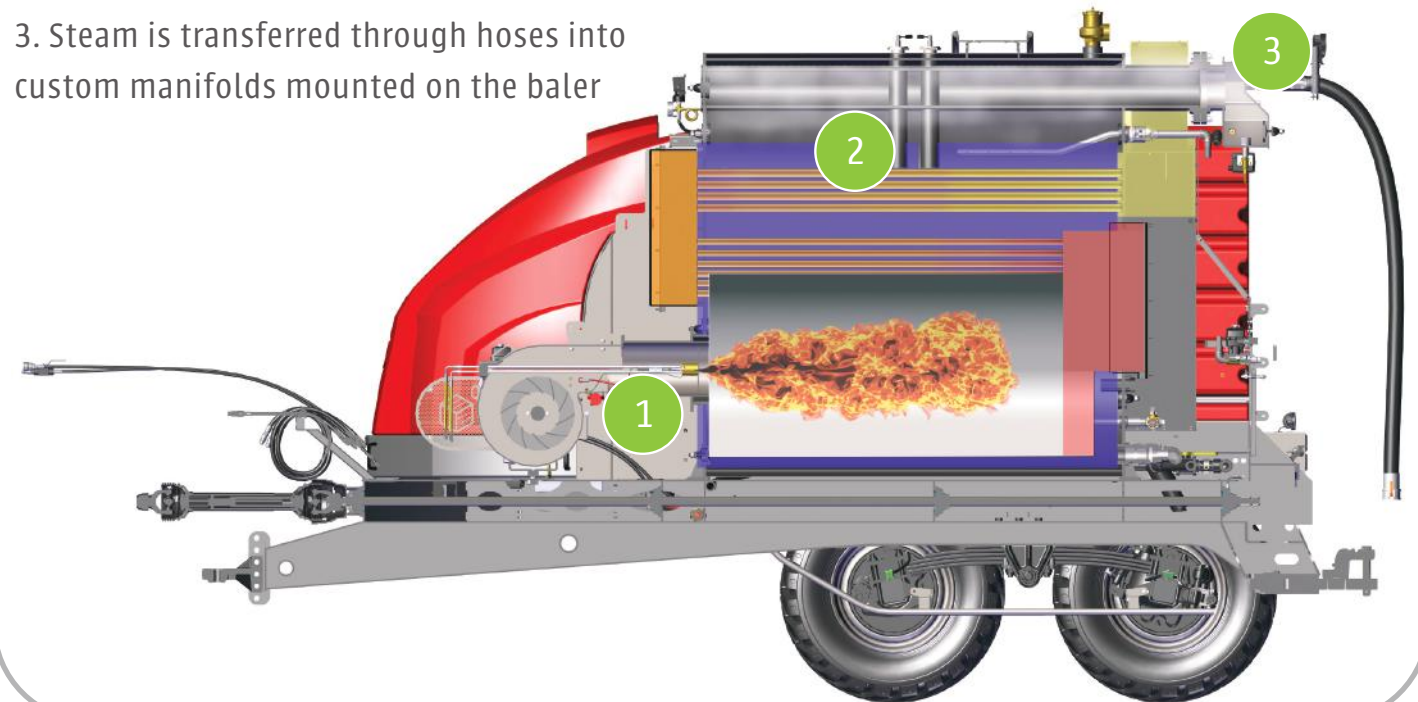
## Main Components

- Boiler
- Steam Hoses
- Water Tanks
- Fuel Tanks
- Burner
- Baler PTO Shaft



## The Process

1. Diesel oil burner heats water
2. Water inside the boiler turns to steam
3. Steam is transferred through hoses into custom manifolds mounted on the baler



# New Features & Upgrades on the DewPoint 632



**New User-Interface:** Dewpoint 632 features an all-new, brighter in-cab display with a fresh new design. With a convenient steam on/off button, large twist knob for easy steam adjustment, and steam ratio presets for different baling conditions, operating the DewPoint 632 is simple and intuitive



**New Operating System:** The DewPoint 632 is equipped with an entirely new operating system. You will no longer find a generator, control panels with circuits running different voltages, and high voltage motors. The fan motor and water pump are now powered by hydraulics supplied by the tractor. The electronic control system is a simple 12v system built on the latest technology. All these new developments have been thoroughly field proven.



**More Supply Water for Longer Run Times:** With an additional 200 gallons of water capacity, the Dewpoint 632 allows you to steam hay for extended periods; approximately 20% longer run times compared to previous models, reducing downtime and extending baling time.



**Improved Operating Efficiency and Steam Consistency:** The DewPoint 632 and its advanced boiler design incorporates more heat exchange areas, maximizing efficiency and enhancing heat transfer. Additionally, the DewPoint 632 boasts an intelligent system that automatically regulates the air-fuel ratio, resulting in improved fuel efficiency and cleaner burns. The DewPoint 632 also guarantees more consistent steam pressure during operation, ensuring consistent output, while delivering higher quality steam for superior results.



**Improved Design for Service and Maintenance:** With its innovative design, maintenance and service on the DewPoint 632 is a breeze. Reduced maintenance requirements and quick, toolless access to all regular maintenance items means more time operating and less time and money spent servicing and maintaining the machine.



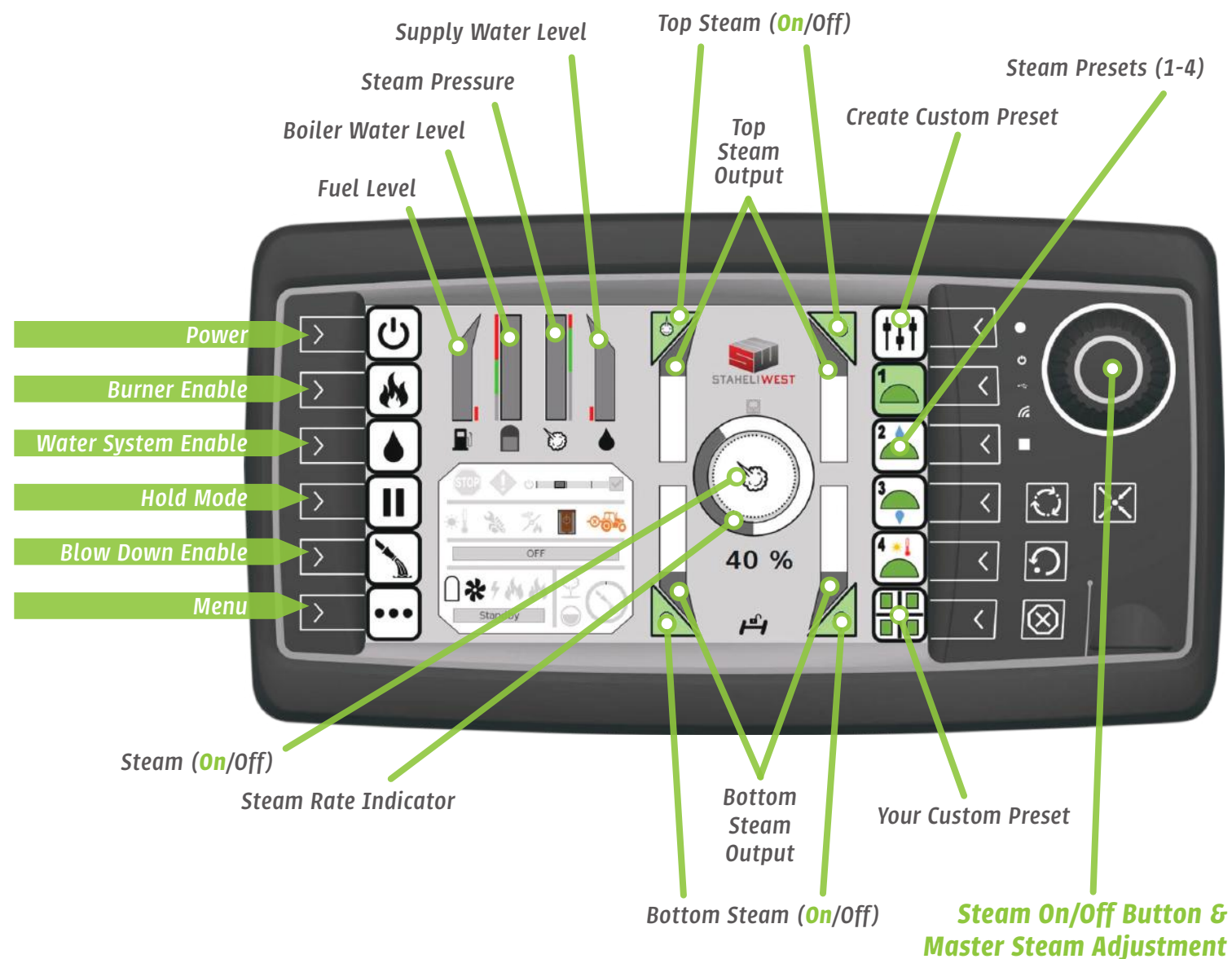
**Higher Chassis for Improved Crop Clearance:** The DewPoint 632 has a higher chassis which is advantageous when baling in heavy windrows.

**The DewPoint 632 enables you to take your hay farm to the next level, and gives you more control over hay quality than ever before. Time to turn up the steam!**



# User Interface

The DewPoint 632 is controlled by the operator in the tractor cab. The DewPoint 632 display automates most of the machine functions to make it easy and simple to use. The display allows farmers to make steam rate and steam distribution adjustments on the fly as needed.



# Where Is the Steam Applied?

Steam produced by the DewPoint 632 is injected into the hay as it is lifted from the windrow by the baler pickup and further as it passes through the feed chamber of the baler. The treatment of the hay is accomplished by injecting steam through a series of distribution manifolds mounted in the baler. Bale moisture is monitored continuously and adjustments to the steam injection rate are made by the machine operator as needed to maintain desired bale moisture conditions at all times. Most baler steam hardware is made up of 4 manifolds that inject steam into the hay during the baling process.

The DewPoint 632 display allows the operator to control not only the amount of steam being injected into the hay but the distribution of the steam as well. For example, the top and bottom manifolds can each be controlled separately for different windrow conditions. The distribution of the steam can either be done manually or a steam ratio preset can be selected on the display. The next page highlights the different steam ratio presets operators may use for different baling conditions.



**DEWPOINT 632**



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**WHEN DO YOU DEW IT?  
MORNING - NOON - NIGHT**

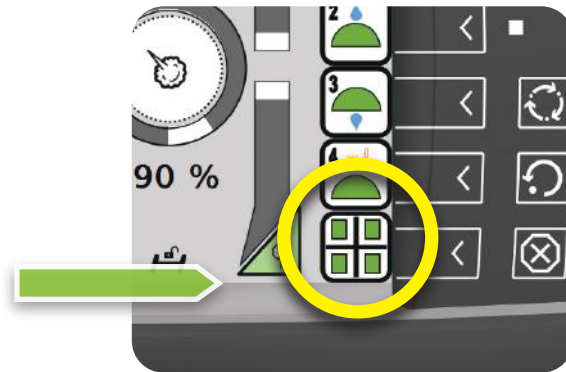


# Steam Ratio Presets for Different Weather Conditions

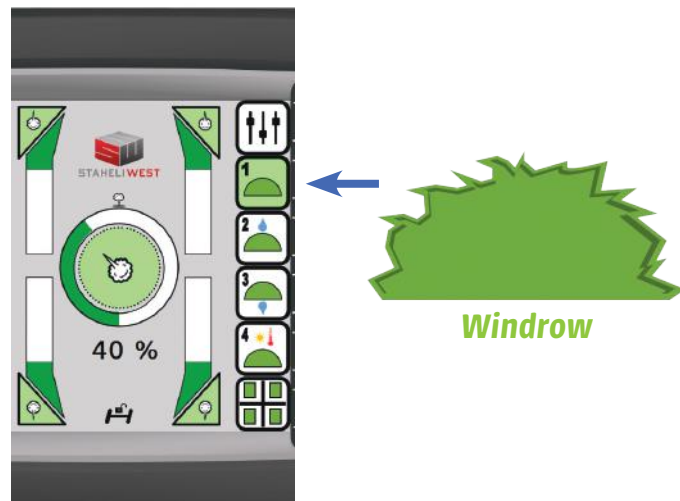
The DewPoint 632 in-cab display comes programmed with 4 different steam ratio presets for quick steam distribution adjustments. You can use these presets in different weather and baling conditions. Using these presets automatically adjusts the steam distribution through the manifolds mounted on the baler.

- Windrow Evenly Cured Top to Bottom
- Windrow with More Moisture on Top than Bottom
- Windrow with More Moisture on Bottom than Top
- Hot and Dry Conditions

The display also comes with a 5th custom steam ratio preset option. The operator can use this to create their very own preset. Once set you can quickly jump to this setting with the push of one button.

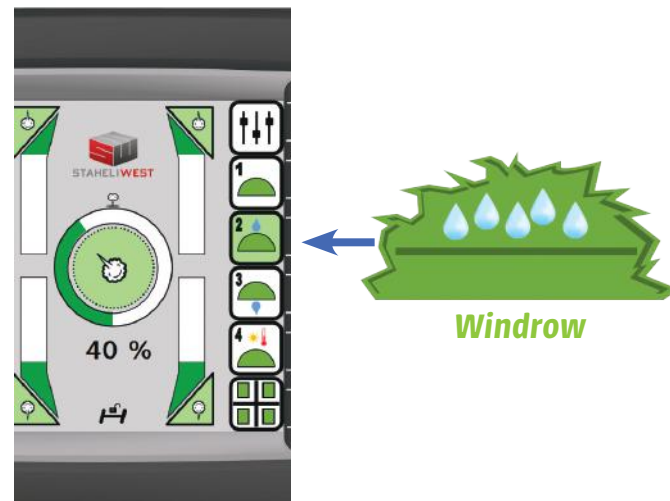


## Windrow Evenly Cured Top to Bottom #1



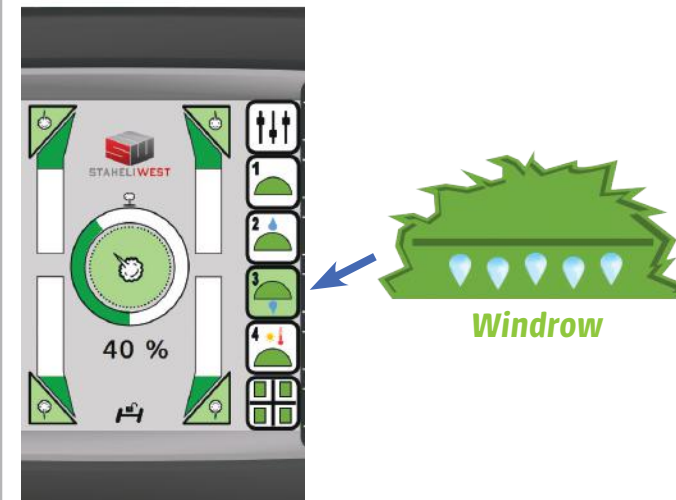
When a windrow is evenly cured, use Steam Preset #1, and start with the steam rate at 40%. Adjust steam rate as needed.

## Windrow with More Moisture on Top than Bottom #2



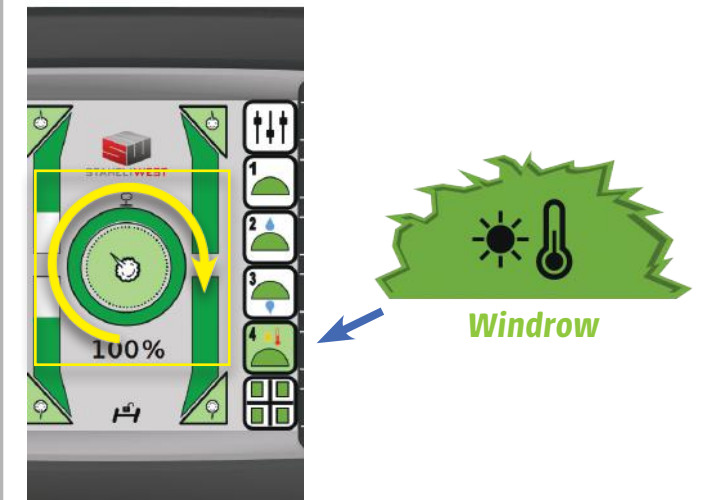
When a windrow has more moisture on top than on bottom, use Steam Preset #2, and start with the steam rate at 40%. Adjust steam rate as needed.

## Windrow with More Moisture on Bottom than Top #3



When a windrow has more moisture on bottom than on top, use Steam Preset #3, and start with the steam rate at 40%. Adjust steam rate as needed.

## Hot and Dry Conditions #4



When baling in hot and dry conditions, use Steam Preset #4, and set the steam rate at 100%. Adjust steam rate as needed.

## Moisture Sensor

Typically, a Gazeeka moisture sensor is used when baling with steam. The Gazeeka moisture sensor is a non-contact moisture sensor that uses high frequency electromagnetic waves that are transmitted between two antennae. These waves pass through the entire width of the bale and give operators an accurate bale moisture reading in real time right in the tractor cab. By using the moisture readings from the Gazeeka, operators of the DewPoint 632 can adjust steam rates to meet their desired moisture level and produce a consistent product.



# Water Requirements

## Water Softener or Reverse Osmosis Unit



Since the DewPoint 632 machine uses a boiler to generate steam, it's important that you use softened or RO water to avoid building up scale inside the boiler.

## Water Storage & Transportation



We recommend using a black water tank for treated water storage to avoid algae growth in the tank.

## Boiler Water Treatment



Whenever you fill the DewPoint 632 with water, you will also add Boiler Guard® at a dosing rate of 1 Gallon of Boiler Guard for every 1,000 gallons of supply water. This will maintain the inside of the boiler and keep it from building up scale.

## Water Transfer Pump



You may use a transfer pump to quickly fill the supply water tanks on the DewPoint machine.

Depending on the geography of your farm, you may consider investing in a water truck or trailer.





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## Tractor Requirements



0-2% Slopes  
0-5% Slopes  
0-10% Slopes

**Minimum  
Engine Horsepower**

**Recommended  
Engine Horsepower**

200
240
275

240
275
300+

### Brake Requirements

Because of the weight of the DewPoint 632 and the baler, you will need a tractor equipped with a hydraulic trailer-brake valve.

With the added lights of the steamer, you may also need a light boost harness (right). Some tractor lighting systems do not supply enough amperage through their work light circuit to power the lights on both the DewPoint machine and the baler.



### Hydraulic Requirements

The burner fan and feed water pump on the DewPoint 632 are run off of the hydraulic system of the tractor.

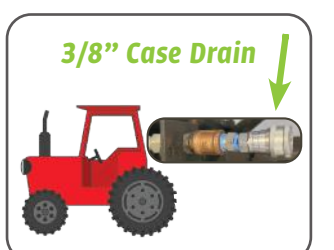
**Minimum recommended hydraulic GPM:** Closed Center 15 GPM Closed center hydraulic systems will create less heat because they send only the necessary GPM to the DewPoint 632. Closed center hydraulic systems are preferred for this reason.

**1 Set of SCV's**



**3/8" Case Drain**

Female hydraulic fitting that will fit the Parker 0303-050 male fitting direct to tractor hydraulic tank



### Electrical Requirements

**12 Volt Auxiliary Port Required**



# Compatible Balers

Staheli West has designed steam hardware to fit all the major brands and models of balers. Call us or check with your local dealer for more information on specific models.



MASSEY FERGUSON



JOHN DEERE



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# Common Questions

**In terms of quality, how does steam compare to natural dew?** University studies have shown that using steam to bale hay reduces leaf loss by 58% compared to baling with natural dew. Some customers have stated that baling with steam is like baling with a perfect natural dew. One of the main differences with steam is that you can produce high quality hay in dry and even windy conditions both day and night.

**Won't I lose a lot of leaves at the pickup?** Because steam reacts to the hay so quickly, it must be injected into the hay right at the baler pickup and further as the hay passes through the feed chamber of the baler. The hardware designs have seen years of testing and experimentation and are mounted in a way to optimize leaf retention.

**How does the DewPoint 632 affect my baling speed?** The DewPoint 632 will not slow you down. Enough steam is produced that it will easily keep up with your baler. Because steamed hay packs into a bale easier, you can typically increase your field speeds by 15-25% and still have higher bale density.

**What are the operating costs of running the DewPoint 632?** You will consume approximately 1/2 gallon of diesel fuel per ton of hay on average to produce steam. So, the cost of fuel will drive the cost of operation. You will also spend about 15-20¢/ton for water conditioning. Currently (2023), the total cost of operation is around \$2-\$2.50/ton. The operating costs are more than offset by the benefits.

**How often do I have to refuel and refill the water tanks?** The 1,175 gallons of on-board supply water will last 3.5-7 hours, depending on the steam injection rate. The 250 gallons of on-board fuel will last for 2 loads of supply water (7-14 hours).

**How is maneuverability?** Thanks to the geometric design of the DewPoint 632 you will have at least the same maneuverability as a tractor with only a baler attached. Some owners have said it actually decreases their turning radius.

**How do I see the baler?** One of the biggest adjustments you will notice is that you can't turn your head and see the baler. The DewPoint 632 comes with a 4-camera system. These cameras are mounted on the back of the steamer and on the baler, so you can easily keep a good eye on the baler pickup, the knotter area, and the bales coming out of the baler.

**How difficult is it to operate the DewPoint 632?** Customers are always surprised by how easy it is to learn how to operate the steamer. If you already know how to operate a large square baler you will have no problem running the DewPoint machine. The in-cab display is very intuitive and easy to learn, and most of the machine functions are automated. When buying a new DewPoint 632 we will be there to train you and walk you through the implementation process. We also have great online resources for our customers, and we hold annual operator training courses.

**How much moisture will I be adding?** You are in total control of the amount of steam injected into your hay. When your hay is completely cured and you're working in dry conditions, you will likely add around 2-3% moisture, which equates to around 5-7 Gallons of water per ton of hay.

**Can I bale in the day?** In most places operators can bale high-quality hay all day long if necessary. However, most farmers still choose to bale hay in the cooler parts of the day and at night to reduce water and fuel consumption. In areas like Arizona, farmers bale at night during the summer, because daytime temperatures are often above 100°F (37.8°C). If internal bale temperatures stay below 135°F (57.2°C), you can continue to bale.



## Common Questions

### **Can I stack hay the same day?**

Yes, as long as the internal bale temperature is below 115°F (46.1°C). Typically, if hay is baled at night, it can be hauled and stacked the next morning. If it is baled in the hot afternoon, it should not be hauled and stacked until the next morning after the bale has cooled, unless the bale temperatures are already below 115°F (46.1°C).

### **How many balers will the DewPoint 632 replace?**

Farmers baling with steam typically have a baling window of 12-24 hours/day. Because of this, 1 tractor-steamer-baler setup can typically do the work of 2-4 conventional baler setups.

### **Am I just adding water weight?**

No. With the steamer you will likely be baling either in the same moisture range or lower than you would be with natural dew. So, the 5-10% increase in weight is mainly due to increased leaf retention.

### **“I don’t need to add moisture. I already have too much.”**

Hay producers working in climates where it’s often too wet to bale at night or who receive good dew at night still experience large amounts of time during the day when the hay is too dry to bale. Being able to bale with steam when the hay is too dry to bale otherwise will open up your baling window and allow you to produce high-quality, consistent hay during the day.

### **“I don’t think my customers will pay more for steamed hay.”**

Because of the consistency and improved overall bale quality of steamed hay, DewPoint machine owners have reported that customers have paid from \$5-\$40/ton more for steamed hay. Customers have also reported that baling slightly rained-on hay with steam has dramatically improved the results and value of their hay.

### **“I don’t think I can operate such a complicated machine.”**

Running the DewPoint machine consists of adjusting the steam rate into four steam manifolds mounted in your baler. Simply adjust the steam rate until your bale

moisture reading is where you want it. In fact, if your hay is fully cured, it is almost impossible to ruin it by adding too much steam. With redundant safety features and a clear user-interface, making great hay is easier than you might think.

### **“I don’t have enough acres to justify buying one.”**

Every operation is different, and everyone will utilize the DewPoint machine differently. After completing a financial assessment with us, you will see how even smaller farms can increase revenue with the DewPoint machine. We’ve seen operations with as few as 300 acres boost quality, production, and profit.

Download the ROI value spreadsheet and plug in your farm’s number. **Scan the QR code below!**



We know that you may have other questions about what the DewPoint 632 can DEW for you. Please don’t hesitate to reach out to your local Staheli West territory manager with any questions you may have.

**Contact us today! Scan the QR code below!**



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**WE DEW HAY®**

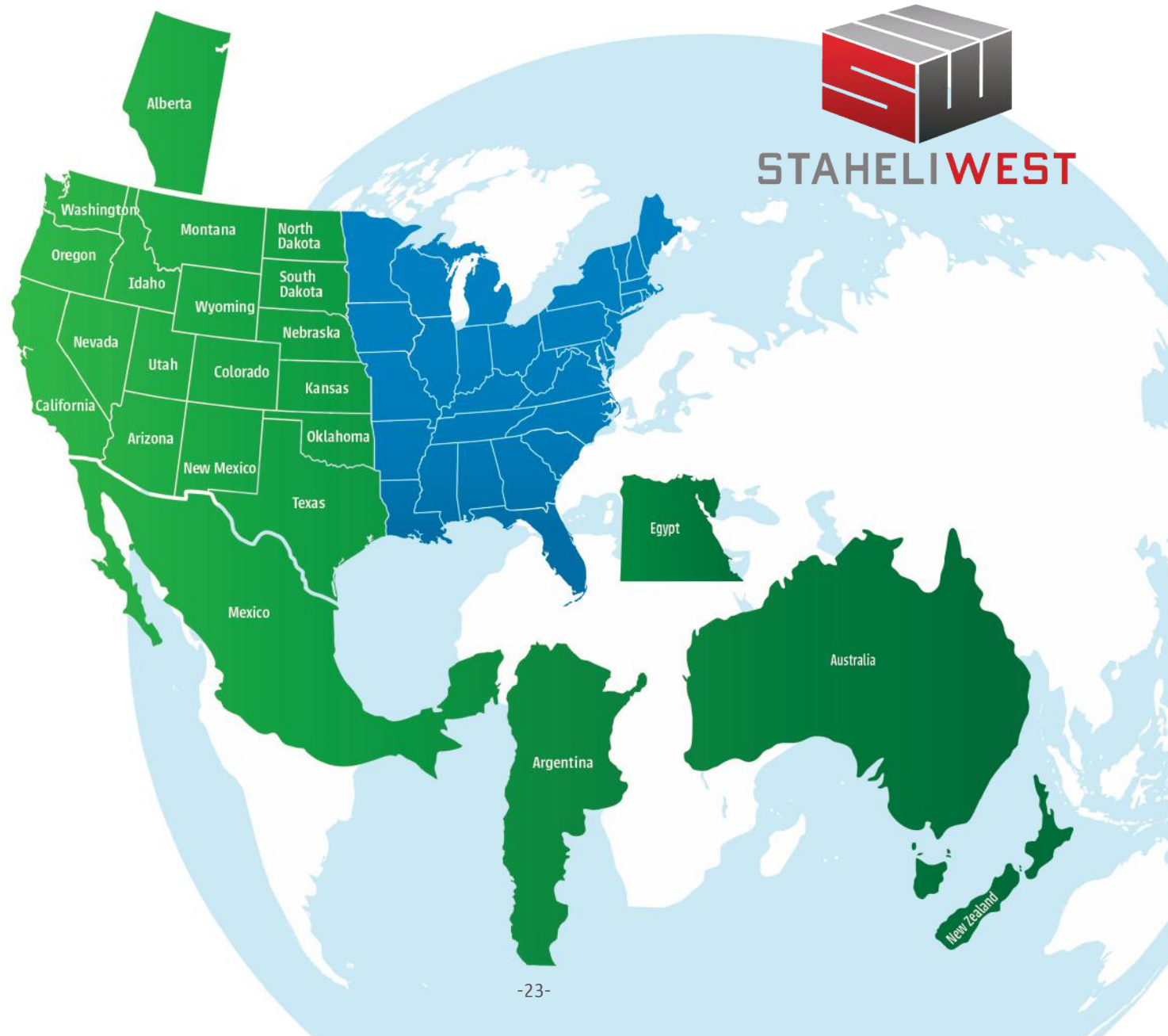
## Our Goal

Our goal at Staheli West is to revolutionize the agricultural industry. We accomplish this goal by providing farmers with technology that improves their operations and their lives. Farmers all over the world are taking advantage of the DewPoint hay steamer.

We also have a wonderful team of dealerships that sell and service the DewPoint 632 in local areas. We have dealers located across the Western U.S., Egypt, Mexico, Argentina, and Australia.

Please contact us if you have any questions or need help locating a dealer.

**Staheli West 435-586-8002**



## Machine Specs



### Dimensions

- Overall Width 128"; 3.25 meters
- Overall Length: 220"; 5.59 meters
- Overall Height: 130"; 3.30 meters

### Approximate Weight

- Dry Weight: 16,080 lbs; 7.3 metric tons
- Fully Loaded with Fuel & Water: 30,355 lbs; 13.78 metric tons

### Fluid Capacities

- Diesel Fuel: 250 Gallons (946 Liters)  
Expected run time: 7.5-15 Hours
- Boiler Water: 380 Gallons (1,439 liters)  
Supply Water: 1,175 Gallons (4,452 liters)  
Expected run time: 3.5-7 Hours





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