

**L.B.WHITE**

# An Automatic Variable-Rate Heat Solution: **SMART SENSE®**

**AVAILABLE  
CONFIGURATIONS:**

60,000 Btu/h  
100,000 Btu/h  
250,000 Btu/h  
Spark / Hot Surface



U.S. Patent No. 9,328,937

Works with leading environmental  
control systems such as:

MAXIMUS, DICAM, EDGE, FUSION,  
GENIUS, AP, VALCO, & PMSI!

**SAVE**  
**35%**  
UP TO  
ON HEATING COSTS!



## A Difference You Can Feel

Smart Sense® is a technologically-advanced swine facility heating solution. This **innovative heating technology** eliminates the inefficiency of standard on/off controls by managing the heat automatically through the house control. Smart Sense® operates at maximum efficiency to provide:

- ✓ Fuel-cost savings up to 35%
- ✓ Consistent room temperature
- ✓ Enhanced animal welfare
- ✓ Improved air quality

The L.B. White® system generates only the amount of heat required to reach, maintain, and hold a desired temperature by modulating Btu output. This is achieved only through our patented technology engineered for L.B. White® forced air heaters and radiant heat brooders.



## Smart Sense® Heating System

Smart Sense® automatically manages the heat in pig buildings based on temperature curve settings and heat management preferences.

### What's in a complete Smart Sense® system?

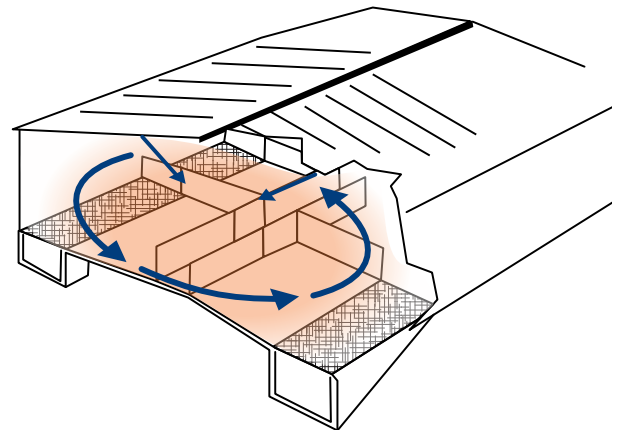
- ✓ Forced air heaters with proportional control gas valve and electronic control.
- ✓ Radiant heat brooders.
- ✓ Radiant heat zone control panels with a proportional valve.
- ✓ House control with the required software and capacity to operate Smart Sense® heaters.



*An L.B. White® forced air heater and radiant heat brooder with Smart Sense®.*

### Heat On Demand!

Smart Sense® operates more efficiently because it automatically controls the heater Btu output to produce the amount of heat required to reach and maintain room temperature. Smart Sense® technology eliminates room temperature target overshoot and distributes heat consistently, evenly in pig buildings.



### Heat Management Protocol

Smart Sense® maintains an even room temperature through the house control. With this system, growers are not required to setup probes.





# You're Smart, Heat Smart!



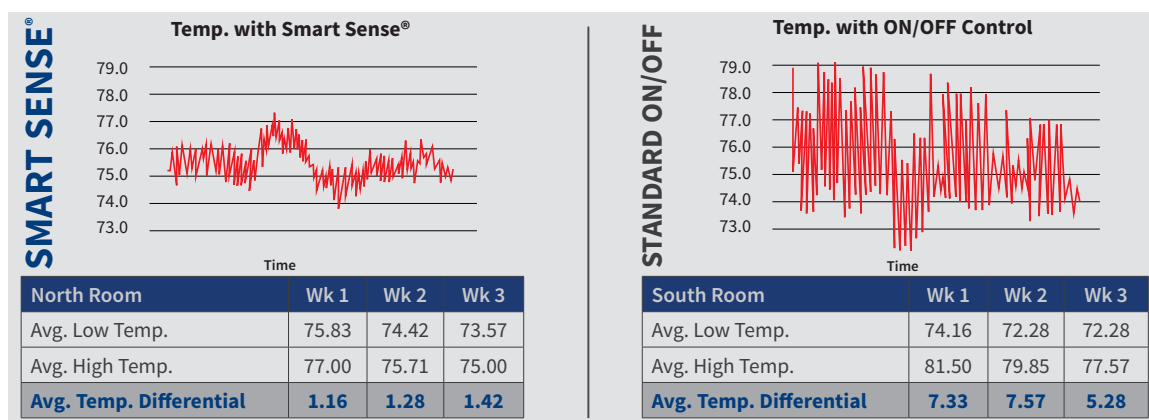
## Manage Room Temperature Automatically

Don't React to the Room Environment—Control It!

Smart Sense® automatically provides heat at only the rate required to reach a set point, and then maintains that temperature.

### HEAD TO HEAD RESULTS

### PRESTAGE FARMS, IOWA



1.) Temperatures recorded in degrees Fahrenheit 2.) Test site location- Prestage Farms, Iowa (2,400 head) 3.) Test duration-January through April 4. Results-22% savings.



## Additional Features When Used with Smart Controllers

### Remote Control:

Connect the Smart Sense® heaters to any smart house controller with web enabled features and control settings remotely.

### Ability to Heat if House Control Fails:

Smart Sense® Heaters will continue to heat your barn at full Btu/h output if your communication with your house control is lost, when a backup thermostat is installed



## SAVE 35% in Fuel Costs! (Results in as little as 1 year!)

Smart Sense® is so efficient and effective at managing heat that payback on the system can be realized in as **little as 1 year**. Studies have indicated a fuel-cost savings of up to 35%!

	Head Count	Fuel (Gallons)	Cost of Fuel†	20% Savings	35% SAVINGS
<b>Farm 1</b> (wean-to-finish) IOWA <sup>1</sup>	2,400	6,300	\$10,080	\$2,016	<b>\$3,528</b>
<b>Farm 2</b> (nursery) OHIO <sup>2</sup>	2,400	13,800	\$22,080	\$4,416	<b>\$7,728</b>
<b>Farm 3</b> (nursery) IOWA <sup>3</sup>	1,200	3,600	\$5,760	\$1,152	<b>\$2,016</b>

† \$1.60 per gallon at time of study. Payback results will vary by cost of fuel.

1. Initially tested at Farm 1 from February-May 2012 in a north room, and during that period reported a 23% savings in fuel costs.

2. Tested at Farm 2 in March 2011, and after several turns reported a 35% savings in fuel costs.

3. Tested at Farm 3 in 2012, and after several months reported a 25% savings in fuel costs.

# Smart Sense® Technology



Scan the QR code to view the Wean to Finish Heating Protocol, or download it at [www.lbwhite.com](http://www.lbwhite.com).



## Guardian® with Smart Sense® Forced Air Heaters

Guardian® heaters with Smart Sense® provide an automatic variable-rate control, compared to manual control in today's standard Guardian® heaters. **(Complete with our latest upgrades including: robust nickel plated steel terminals sealed and covered with polyolefin adhesive-lined shrink tubing, and covered and sealed connections)**, these upgrades reinforce our commitment to provide you with the best performing product on the market.

Smart Sense® allows the heater to run longer at lower firing rates and become part of the circulation system. This results in a much more consistent room temperature.



*A Guardian® forced air heater with Smart Sense®.*

### ✓ Available Smart Sense® Configurations:

- 60,000 Btu/h - Galvanized
- 100,000 Btu/h - Tri-Shield Protected
- 250,000 Btu/h

### ✓ Ignition Types:

- Spark - Hot Surface

### ✓ Works with Leading Environmental Control Systems:

- MAXIMUS - AP - DICAM - FUSION
- GENIUS - VALCO - PMSI



## Operates at firing rates as low as 25% of max Btu/h!

while maintaining acceptable carbon monoxide levels and ignition characteristics.



## Brooder Heater with Smart Sense® Radiant Heat Brooder with Zone Control

- ✓ Both standard manual and spark ignition I-17 brooders function with Smart Sense®.
- ✓ Requires sensor mounting kits for existing and new installations.
- ✓ Operates with any existing 0-10 vdc control.

### I-17 Manual Ignition for OEM 0-10V Control

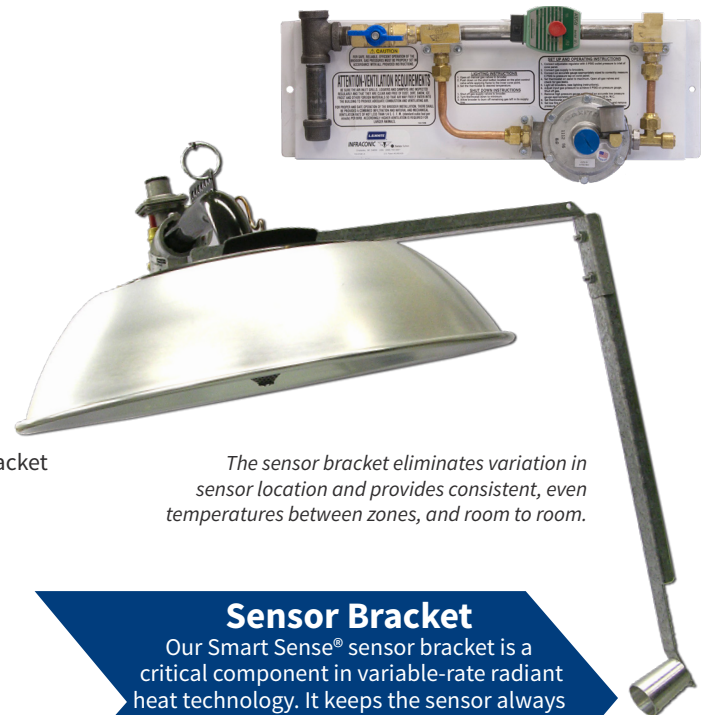
- 24 Brooder capacity—Model 500-28543
- Solenoid valve, control module, power supply, and sensor bracket

### I-17 Spark Ignition for OEM 0-10V Control

- 24 Brooder capacity—Model 500-26487
- Solenoid valve, control module, power supply, sensor bracket

### I-17 Manual Ignition (any zone control or thermostat)

- Low-High Zone
  - 20 Brooder capacity—Model 500-09958
  - 40 Brooder capacity—Model 500-09959
- Low-Medium-High Zone
  - 20 Brooder capacity—Model 500-09875-B
  - 40 Brooder capacity—Model 500-22553



*The sensor bracket eliminates variation in sensor location and provides consistent, even temperatures between zones, and room to room.*

### Sensor Bracket

Our Smart Sense® sensor bracket is a critical component in variable-rate radiant heat technology. It keeps the sensor always locked into position to achieve precise results based on suggested protocols and desired pig pattern.



**WARNING**

Cancer and reproductive harm.  
See [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).