

AH and LTSA

Comparison Between Agricultural Indirect-Fired Warm Air Heating and Agricultural Radiant Heating Approaches

Key Conclusions:

Both AH and LTSA are designed for agricultural buildings, but their heating logic differs.

- AH: Agricultural indirect-fired warm air heating approach, with greater emphasis on overall warm air coverage of the main space.
- LTSA: Agricultural radiant heating approach, with greater emphasis on zoned heating, thermal utilization in target areas, and high-space heating logic.
- If the goal is overall warm air coverage for the main space → prioritize AH.
- If the goal is zoned heating or high-space radiant heating analysis → prioritize LTSA.

Comparison Dimensions:

Comparison Dimension	AH	LTSA
Heating Principle	Indirect-fired warm air heating	Radiant heating
Heat Transfer Method	Warm air covers the main space	Radiation acts on target areas
Main Positioning	Warm air heating solution for agricultural main spaces	Zoned radiant heating solution for agriculture
Applicable Buildings	Poultry houses, greenhouses, and some agricultural buildings	Poultry houses, greenhouses, and some high-space agricultural buildings

Comparison Dimension	AH	LTSA
Fuel Compatibility	Gas / Oil	Gas
Middle East Market Adaptability	Very strong	Moderate
Overall Main Space Coverage	Stronger	Moderate
Zoned Heating Capability	Moderate	Stronger
Control of Upper Heat Loss	Moderate	More advantageous
Typical Project Logic	Focus first on overall warm air coverage	Focus first on zoned heating and layout logic
Best Suited For	Establishing overall warm air heating in poultry houses and greenhouses	High spaces, local areas, and zoned heating applications

Quick Selection Guidelines:

Situations Where AH Should Be Prioritized:

- Greater focus on overall warm air coverage of the main space.
- Projects include poultry houses, greenhouses, and various agricultural buildings.
- Dual-fuel compatibility (gas / oil) is required.
- Better suited for markets with varying fuel conditions, such as the Middle East.

Situations Where LTSA Should Be Prioritized:

- Greater focus on zoned heating.
- Greater focus on high-space thermal utilization logic.
- Desire to reduce the impact of upper heat loss.
- Overall warm air coverage is not the only objective.

Conclusion:

AH is an agricultural main-space warm air heating solution, while LTSA is an agricultural zoned radiant heating solution.