Radiant Tube Brooding
Product Design & House Installation

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AG1 Series

AG1 SERIES
AGRICULTURAL GAS-FIRED, SINGLE-STAGE, INFRA-RED HEATERS

The AG1 Series is designed for poultry and non-corrosive agricultural environments. Proven construction features assure reliable performance at an economical price. Performance and flame distribution are enhanced by the use of a stainless steel "swirl" burner. Radiant output is optimized with highly polished aluminum reflectors. Standard features include a single stage operation, hot surface ignition, indicator lights, most mounting accessories and potted (waterproof) circuit boards. For use in poultry, dairy, areas, barns, shops and much more.

PRODUCT FEATURES
- Titanium alloy or aluminized combustion chamber
- Hot rolled steel radiant tubes
- Waterproofed control box
- Operational indicator lights
- Optional stainless steel upgrades available
- Pre purge controls
- Epoxy potted circuitry

AVAILABLE AG1 MODELS & CLEARANCES

OPTIONAL ACCESSORIES

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DETROIT RADIANT PRODUCTS COMPANY

VISIT WWW.REVERBERRAY.COM FOR:
- Product Specifications
- Parts Support
- C.A.D. Library
- Dealer Locator
- Product Awards
- Theory of Infra-Red
- Applications
- and Much More!
Why should we try tube brooding today when it did not work fifteen years ago?

- Burner Design.
- Tube Configuration.
- Reflectors.
- Dual Stage Operation (Two Stage).
- Misc. key features.
Burner Design

- Specially Designed.
- Air Gas Mixture.
- Vane sets.
- Flame Radiation.
- Swirl Burner.
Tube Configuration

- Emisivity – 1.0 is Perfect.
- Offsetting tube materials.
- Unpainted Aluminized = .72.
- Hot Rolled Steel = .80.
- Coated Steel - .95 with Pyromark.
Polished Aluminum Reflectors

- Reflectivity is the ability to redirect energy.
- Mil grade reflectors absorb 40% (ASHRAE) of energy.
- Polished Aluminum absorbs only 10% (ASHRAE) of energy.

The word “Infra-Red” is taken from the Greek words “infra” (below) and “red” (first visible color on the Electromagnetic Spectrum).
Two Stage (Modulating) Operation

- Reduction in Cycles - 35%.
- 12% Minimum savings over single stage.
- ASHRAE support for improving comfort.
- Increased bird comfort.
- Load reduction capacity – operate 85% in low fire.
- 1%-2% change in “Thermal Efficiency…”
- What is “Thermal Efficiency”
Dual Stage Operation

Controller Set Points

90°
86°

Low Fire Operation
High Fire Operation

4° Differential
Other Key Features

- 120V Hot Surface ignition – not spark.
- Water tight control box – Silicone Sealed.
- Swedged tubes.
- Butt clamps.
- Totally enclosed components.
- Anti-rattle springs.
- Sight glass – on tube.
- Tool-less igniter replacement.
House Installation

• Center House Tube Brooding
  – Two lines of feed

• Side Wall Brooding
  – Three lines of feed or more

• Wide House Center / Third Tube Brooding
  – Elongated Hanger.
Center House Tube Brooding

- Center house brood with two lines of feed.
Side Wall Tube Brooding

- Heating in Canada for 15 years.
- Has always utilized side wall mounting.
- 70’ wide houses.
- Flash light example – bulb in reflector.
- Tube in reflector – same principle.
Three Year Old House

• Near Toronto.
• Double Decker.
• Solid side wall.
Ten Year Old Heaters

- Heaters are used.
- Side wall mounted.
- Full wash down between flocks.
Side Wall Brooding in the US

- 60’ wide house.
- Solid side wall.
Delmarva 65’ Wide House

- Very Even Heat.
Wide House Center / Third House
Tube Brooding

- Elongated Hanger.
- Lower side wall installations.
- Release heat more directly.
- Not as even as side wall, but very effective.
- Angle reflector on 15 degree angle for 1/3 house heating.
Elongated Hanger
Elongated Hanger Heat Pattern

Brood Chamber

128'
Thank You

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