

Hugozhuang Chicken Farm Heating Case Study

Outdoor direct-fired heating solution for broiler floor-rearing houses in Zhucheng, Shandong



Keywarm Case Study

Case Snapshot

Project	Hugozhuang Chicken Farm heating project
Location	Zhucheng, Weifang, Shandong Province, China
Building Type	Broiler floor-rearing poultry houses
Single-House Size	116 × 12.5 m
Climate Conditions	Lowest winter temperature approx. -10°C ■ Target house temperature 33°C
Equipment	6 units of KWDHVSO70 outdoor direct-fired gas heaters per house ■ Fuel: natural gas

Project Overview

The project is located in Zhucheng, Weifang, Shandong Province, China, and serves broiler floor-rearing poultry houses. Each house is 116 m long and 12.5 m wide. The local winter temperature can fall to around -10°C, while the target house temperature is 33°C. In this type of long poultry house, the heating system must not only build up the base temperature quickly, but also help maintain relatively even temperatures in different sections of the house.

To meet these requirements, Keywarm provided a heating solution centered on KWDHVSO70 outdoor direct-fired gas heaters. Each house is equipped with 6 units, with 3 units installed on each side, and the control logic is connected to the poultry house environmental controller for precise three-zone temperature control.

Challenges and Responses

Challenges	Responses
Long poultry houses require both fast heat-up and more even temperature distribution from front to rear.	A two-side symmetrical layout with 6 units per house provides more balanced heat coverage.
The lowest winter temperature is around -10°C, while the target house temperature is 33°C.	70 kW natural-gas direct-fired heaters were selected to provide fast warm-up and steady heat supply.
A single whole-house start/stop logic is not ideal for long poultry houses.	Front, middle and rear zones are controlled precisely by the poultry house environmental controller.
The project requires both effective air spread and clear operating management.	The heaters use a three-side air discharge design, and the supply duct opening is controlled by electric dampers.
Multiple houses operating in parallel require a clear and repeatable control logic.	The corresponding left and right units are connected in parallel for easier zoning and operation.

System Configuration & Installation

- Each poultry house is equipped with 6 units of KWDHVS070.
- The heaters are installed outside the house, with 3 units on each side.
- Natural gas is used as the fuel source.
- The heater control circuit is connected to the poultry house environmental controller.
- The corresponding left and right units in the front, middle and rear sections are connected in parallel, enabling three-zone precise control.
- The unit uses a three-side air discharge design, and the supply duct opening is controlled by electric dampers.

Performance & Customer Value

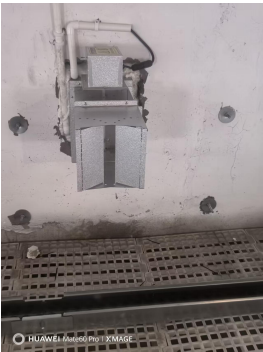
The value of this solution is not only its heating capacity, but also its ability to improve temperature management inside a long poultry house through two-side installation, three-zone control and three-side air discharge. The environmental controller can command the heaters in the front, middle and rear sections separately, helping reduce temperature differences between different areas of the house.

The outdoor installation layout also helps keep the heater body, gas piping and major service operations outside the house, improving maintenance convenience and daily operational management.

Project Photos



Outdoor site view and poultry-house layout



Indoor air outlet and air distribution scene



Outdoor heater installation



Overall outdoor scene of the poultry houses

Recommended Applications

- Broiler floor-rearing poultry houses
- Poultry projects requiring outdoor-installed gas heaters
- Long poultry houses needing zoning control
- Poultry applications requiring three-side air discharge and electric damper control
- Projects aiming to improve indoor temperature uniformity throughout the house