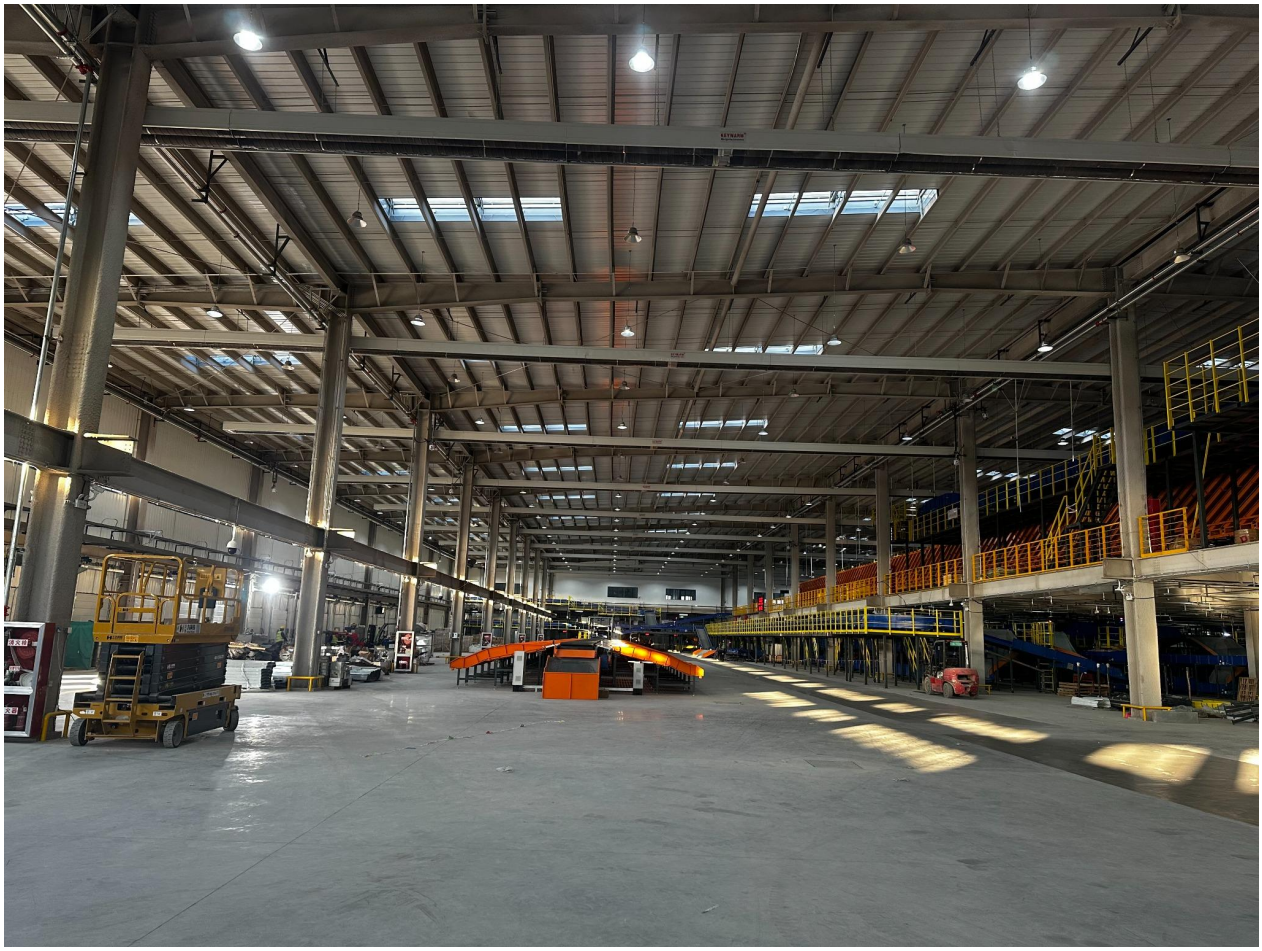
KEYWARM®
We Ignite Success

China Post Lanzhou Logistics Sorting Center (Phase II)

Big-tube radiant heating solution for a 14,184 m² high-bay logistics building



Keywarm Case Study

Case Snapshot

Project	China Post Lanzhou Logistics Sorting Center (Phase II)
Location	Lanzhou, China
Application	Parcel sorting and storage logistics center
Building Size	Approx. 14,184 m² ｜ 156 m × 84 m + 60 m × 18 m ｜ Building height: 14.8 m
System Type	Big-tube radiant heating system
Installation	14 units of 300 kW systems ｜ Outdoor combustion generators with indoor radiant strips

Project Goal	A safer, more efficient and low-NOx-compliant heating solution for a very large high-bay logistics building

Project Overview

China Post's logistics sorting center in Lanzhou required a more efficient heating solution for a large parcel-sorting and storage facility. The building is a typical high-volume, high-roof logistics hall. In the previous phase, high-bay hydronic downflow unit heaters were used, but the project experienced clear thermal stratification in operation: heat accumulated in the upper space, workstation temperatures were less satisfactory, and energy consumption remained high. To address these conditions, Keywarm proposed a big-tube radiant heating solution that transfers heat more directly to people, equipment, floors and surrounding objects in the occupied zone rather than simply heating the full building air volume. Because the site did not allow indoor gas piping, the combustion generators were installed outdoors while only the radiant strips remained indoors. The system also adopted premix low-NOx combustion technology to satisfy local environmental requirements.

Challenges and Responses

Challenges	Responses
The large building volume and height made conventional warm-air or hydronic downflow systems prone to thermal stratification.	Big-tube radiant heating delivers heat more directly to the occupied working zone and reduces unnecessary heat accumulation in upper space.
Gas safety management did not allow gas piping inside the building.	Outdoor combustion generators kept gas piping outside while only radiant strips remained indoors.
Local requirements demanded low-NOx performance.	Premix low-NOx combustion combined heating efficiency with environmental compliance.

System Configuration & Installation

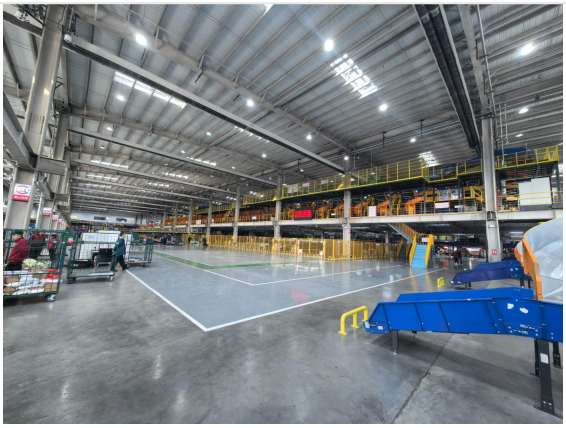
- 14 units of 300 kW big-tube radiant systems were used.
- Combustion generators were installed outdoors while radiant strips remained indoors.
- The system supports zoned, timed and temperature-based control for energy-saving operation.

Performance & Customer Value

The case shows that in a very large logistics building, the key question is not only whether total heating capacity is sufficient, but whether heat is delivered through the right path to the actual working zone. Keywarm's big-tube radiant solution matched the building operation pattern while also responding to gas safety and environmental requirements.

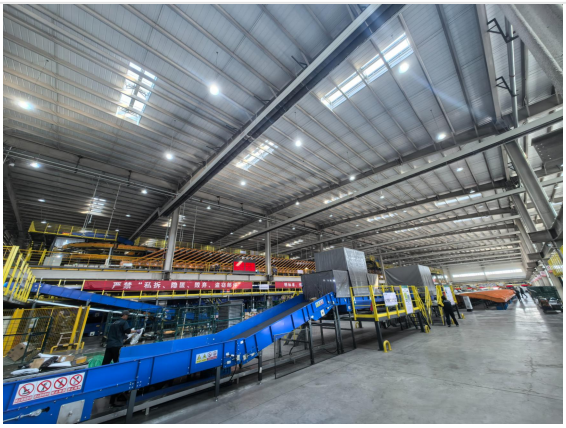
Project Photos

Overall interior view of the high-bay project space



Sorting lines and occupied working zone

High roof structure and column grid



Equipment and working area inside the hall

Exterior facade and doorway area

Truck loading / unloading and dock area

Recommended Applications

- Logistics sorting centers
- Warehouses
- Sports halls
- Exhibition centers
- Aircraft hangars
- Maintenance facilities
- Other large-volume commercial or industrial spaces