

Transcritical CO2 Refrigeration Unit

The transcritical CO2 refrigeration unit uses R744 refrigerant and a Bitzer screw compressor. It is suitable for medium and large cold storage applications and can meet the electricity system requirements of any country.



ADDITIONAL IMAGES



Overview



Modular, containerized design allows for rapid deployment and installation in various industrial sites.

Industrial Transcritical CO2 Refrigeration

This advanced transcritical CO2 refrigeration unit utilizes the natural R744 refrigerant to deliver high-efficiency cooling and heating for medium to large-scale cold storage facilities. Engineered for versatility, the system features a robust compressor design and energy-optimization technologies such as ejector systems and auxiliary compression. It is a plug-and-play solution suitable for diverse environments, ranging from quick-freezing and low-temperature storage to high-temperature production water heating.

Technical Specifications

Refrigerant	R744 (CO2)
Evaporation Temperature Range	-50°C to +20°C
Compressor	Screw Compressor (HSK/CSH series)
Hot Water Output Temperature	40°C - 100°C
Condenser	CO2 gas cooler

Features

Performance Advantages

- High COP via vapor-vapor and gas-liquid ejector technology
- Booster two-stage supercharging
- Plug and play modular design
- High-temperature heat recovery capability
- Low operating costs

Environmental Credentials

GWP=1, ODP=0, Non-toxic, Non-flammable

Applications



Versatile applications in food preservation, pharmaceutical storage, and scientific research.



Reliable performance for demanding industrial environments such as processing plants and cold storage warehouses.

Typical Use Cases

Cold Storage • Quick Freezing • Process Cooling • Domestic Hot Water • Indoor Ski Slopes • Ice Rinks • Food Processing