

CO2 Refrigerant Heat Pump

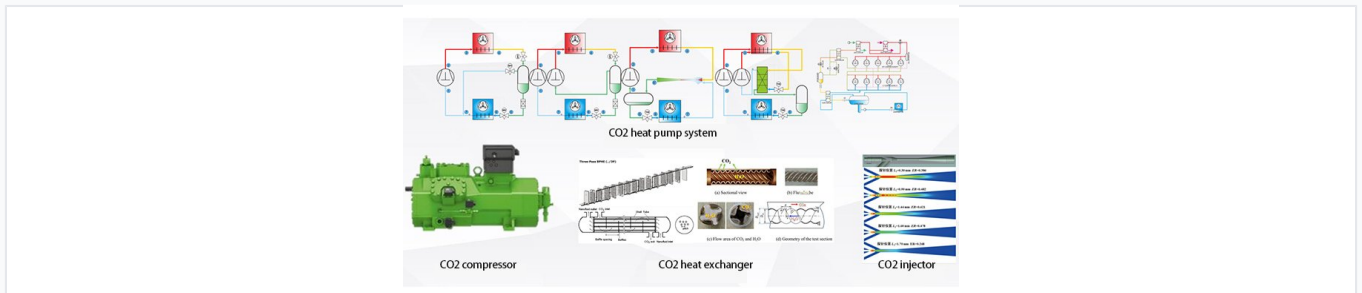
This heat pump uses CO2 as a refrigerant for efficient heating and cooling. It is suitable for applications such as quick freezers, cold storage, and ice rinks.



ADDITIONAL IMAGES



Overview



Comprehensive system overview showing the integration of the CO2 compressor, heat exchanger, and injector technology.

High-Efficiency CO2 Transcritical Heat Pump

This industrial-grade heat pump utilizes R744 (CO2) as a natural refrigerant, offering an environmentally friendly and sustainable solution for large-scale thermal management. Designed for versatility, it supports combined cooling and heating applications, making it ideal for everything from ice rinks to industrial quick-freezing. With a modular design and customizable capacities, it provides reliable performance across a wide range of operating temperatures.

Technical Performance

2 MW level CO2 transcritical heat pump hot water unit

- Efficient CO2 compressor
- Efficient regenerator
- Efficient CO2 gas cooler
- Intercooler
- Hot gas defrost
- Injectors for changing working conditions
- CO2 four-way reversing valve



Detailed view of the 2 MW level unit components including the efficient regenerator and four-way reversing valve.

Heating Capacity

0.1 MW

Min Capacity

2.2 MW

Max Capacity

Refrigerant

R744 • CO2

Hot Water Temperature Range

30°C to 120°C

Core Components

Compressor System

- Specialized CO2 piston compressor
- Efficient regenerator
- Efficient CO2 gas cooler
- Intercooler system
- CO2 four-way reversing valve

Efficiency Enhancements

Ejector Technology, Transcritical Cycle, Hot Gas Defrost, Injectors for Variable Conditions

System Configuration



Robust control interface designed for precise operation and monitoring in industrial environments.

Heat Source Types

Air Source, Water Source

Electrical Compatibility

Universal (Can meet any country's electricity system)

