

RECIPROCATING COMPRESSORS



Reciprocating compressors are designed for dependable, consistent performance in commercial refrigeration and light industrial cooling applications. Utilizing a piston-cylinder compression mechanism, these compressors deliver strong compression efficiency, stable temperature control, and proven durability across medium and low temperature systems.

Ideal for walk-in coolers, freezers, and retrofit installations, our reciprocating compressors support multiple refrigerants including R-134a, R-404A, R-507, and R-22 for legacy system compatibility.

Product Line Overview

Compressor Type: Reciprocating (Piston)
Cooling Method: Air-Cooled
Capacity Range: 500W – 1200W
Refrigerants: R-134a, R-404A, R-507, R-22
Application Range: Medium & Low Temperature
Design: Serviceable piston-cylinder construction
Applications: Commercial Refrigeration, Freezers, Retrofit Systems

Core Features

Heavy-duty rotary screw compression mechanism
Designed for continuous 24/7 operation
High volumetric efficiency for large-capacity systems
Water-cooled design for thermal stability
IE3 / IE4 high-efficiency motor options
Optimized for industrial refrigeration plants
Smooth, low-vibration operation
Excellent part-load performance
Integrated oil management system

Performance Characteristics

- Stable medium- and low-temperature operation
- High compression efficiency
- Strong suction and discharge pressure control
- Reliable performance in variable load conditions
- Proven long operational lifespan

Application Guidelines

Medium Temperature Applications

- Walk-in coolers
- Reach-in refrigerators
- Beverage and display coolers

Low Temperature Applications

- Commercial freezer systems
- Frozen food storage
- Ice cream cabinets

Environmental & Compliance

- Compatible with:
 - R-134a
 - R-404A
 - R-507
 - R-22 (legacy systems)

Construction & Design

- Heavy-duty piston-cylinder compression mechanism
- Durable crankshaft and connecting rod assembly
- Optimized valve plate for efficient gas flow
- Air-cooled housing design
- Service-accessible internal components
- Designed for consistent compression under varying loads

Installation requirements

- Ensure proper airflow for air-cooled models
- Verify refrigerant compatibility
- Install vibration isolation where required
- Match electrical supply to compressor rating
- Follow oil charging and refrigerant charging procedures

Advantages of Design

- Proven and widely used compression technology
- Strong pressure ratio capability
- Serviceable design
- Lower upfront cost compared to screw systems
- Suitable for small to mid-capacity systems
- Reliable under frequent start-stop conditions

Model Specification Summary

Specification	CP-134A-RC-01	CP-404A-RC-02	CP-507A-RC-03	CP-22-RC-04
Name	R-134a Reciprocating Compressor – 500W	R-404a Reciprocating Compressor – 750W	R-507 Reciprocating Compressor – 1200W	R-22 Reciprocating Compressor – 650W
Overview	Durable reciprocating compressor for medium-temperature refrigeration	Medium-capacity compressor with consistent cooling output	Heavy-duty compressor for demanding refrigeration cycles	Reliable compressor for legacy systems
Cooling Capacity	500 W	750 W	1200 W	650 W
Refrigerant	R-134a	R-404a	R-507	R-22
Temperature Range	32–50°F	28–45°F	-10–20°F	30–50°F
Application	Medium Temp Refrigeration	Walk-In Cooler	Low Temp Refrigeration	Legacy Refrigeration Systems
Compressor Type	Reciprocating	Reciprocating	Reciprocating	Reciprocating
Cooling Method	Air-Cooled	Air-Cooled	Air-Cooled	Air-Cooled
Voltage	220–240V	220–240V	460V	220–240V
Phase	1	1	3	1
Frequency	50 Hz	60 Hz	60 Hz	60 Hz
Motor Type	RSIR	RSIR	CSR	RSIR
Weight	80 lbs	85 lbs	110 lbs	88 lbs
Dimensions (in)	11 × 8 × 19	12 × 9 × 20	15 × 11 × 21	13 × 9 × 20
Oil Charge	50 oz	55 oz	60 oz	54 oz
Suction Connection	7/8 Stub	1 Stub	1-1/8 Stub	1 Stub
Discharge Connection	1/2 Stub	5/8 Stub	3/4 Stub	5/8 Stub