Compressor, KCE444HAG, 3/8 HP, Copeland, R-134a, 1077 W, 2.2 A, 230V, HBP, CSCR, High Temp

Category: Refrigeration
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PHASE 1: SURGICAL IMAGE ANALYSIS

Feature	Visible Nameplate Data
Brand	Emerson Climate Technologies / Copeland
Model	KCE444HAG-B332H (Family: KCE444HAG)
Serial Number	GCRA-0909669
Voltage/Hz/Phase	1Ph 180-260 V AC / 230V, 50 Hz
Refrigerant	R-134a
LRA (Locked Rotor Amps)	13 A
Electrical Circuit	CSCR
Oil Type & Volume	10.5 oz POE (Polyolester)
Application	High Temp (HBP)
Relay & OLP	Relay: KARPN-4241 / OLP: KAT0072/H3 OR MRA-12309-12101

Feature	Visible Nameplate Data
Capacitors	Run: **10 µF @ 440 V AC** / Start: **40-60 µF @ 230 V AC**
Manufacturing Origin	Mfg. By Emerson Climate Technologies (India) Limited

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PHASE 3: ARTICLE STRUCTURE

SEO Metadata

- **Focus Keyphrase:** KCE444HAG Compressor
- **SEO Web Title:** Mbsmpro.com, Compressor, KCE444HAG, 3/8 HP, Copeland, R-134a, 1077 W, 2.2 A, 230V, HBP, CSCR, High Temp
- **Meta Description:** Technical specs for the Copeland KCE444HAG compressor. Includes LRA, displacement, electrical data, and equivalent drop-in cross-references for field techs.
- **Slug:** copeland-kce444hag-specs-replacement
- **Tags:** Mbsmgroup, Mbsm.pro, mbsmpro.com, mbsm, KCE444HAG, NEK6210Z, SC12G, NT1112Y, FL2088-SA, GP12TB
- **Excerpt:** Field data and technical breakdown of the Emerson Copeland KCE444HAG 3/8 HP commercial refrigeration compressor, including performance charts and direct replacement options.

Field Introduction

Found this slugger in a glass-door Coca-Cola merchandiser or a heavy-duty sandwich prep table? You are looking at the Emerson Copeland KCE444HAG. This 3/8 HP unit is a cast-iron workhorse built to handle the constant door-opening abuse of commercial beverage coolers. When a shop owner relies on cold drinks to keep the lights on, this HBP (High Back Pressure) compressor does the heavy lifting. It runs smoothly on R-134a, but when it finally locks up or burns out a winding, you need the hard numbers to wire it back up or drop in a reliable match. Let’s break down the specs.

Full Nameplate Data Table

Here is exactly what is stamped on the steel:

Parameter	Specification
Manufacturer	Emerson Climate Technologies (Copeland)
Model	KCE444HAG-B332H
Serial	GCRA-0909669
Voltage	180-260 V AC (Rated 230V), 50 Hz
Phase	Single Phase (1Ph)
Locked Rotor Amps (LRA)	13 A
Refrigerant	R-134a
Application	High Temp
Motor Type	CSCR
Oil Charge	10.5 oz Polyolester (POE)
Country of Origin	India

Technical Specifications Table

Knowing what the compressor is doing on the inside dictates how you size the metering device and handle the system charge.

Specification	Value
Horsepower (HP)	3/8 HP
Displacement	12.05 cc
Cooling Capacity (HBP)	~3675 BTU/h / 1077 Watts
Application Type	HBP / CBP (High / Commercial Back Pressure)
Operating Voltage	230V
Motor Type	CSCR (Capacitor Start, Capacitor Run)
Max Continuous Current (MCC)	3.0 A
Rated Load Amps (RLA)	~2.2 A (at HBP standard conditions)

Electrical & Origin Details

Wiring up a CSCR motor means you are dealing with potential relays and dual capacitors. Don’t mix up your start and run values, or you will bake the new start winding before lunch.

- **Motor Circuit:** CSCR (Capacitor Start, Capacitor Run) for high starting torque.
- **Start Capacitor: 40-60 µF @ 230 V AC** (Gets the heavy rotor moving against high head pressure).
- **Run Capacitor: 10 µF @ 440 V AC** (Keeps the power factor tight and the motor running cool).
- **Relay Model:** KARPN-4241 (Potential Relay).
- **Overload Protector (OLP):** KAT0072/H3 or MRA-12309-12101.
- **Manufactured By:** Emerson Climate Technologies (India) Limited.

Efficiency Metrics Table

Here is how the KCE444HAG pulls down at varying evaporator temperatures (assuming a standard **130°F / 54.4°C** condensing temp):

Evaporating Temp (°F / °C)	Cooling Capacity (BTU/h)	Power Input (Watts)	Amp Draw
45°F / 7.2°C (HBP)	3675	475	2.2
20°F / -6.7°C (CBP)	1880	339	1.64
0°F / -17.8°C	1190	268	1.33

Drop-in Replacements

If you can’t source a fresh Copeland KCE444HAG from the supply house, these 3/8 HP, ~12cc, R-134a HBP models will bolt right in and keep the cabinet at temp:

- **Embraco:** NEK6210Z
- **Secop / Danfoss:** SC12G
- **Jiaxipera:** NT1112Y
- **GMCC:** FL2088-SA

- **Cubigel / Huayi:** GP12TB



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