Mbsm.pro, compressor, EGM91AA, refrigerators, Freezing, Cooling, R134a, ZMC compressors, 1/4 hp, Lbp

Category: compressor
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The EGM91AA is a hermetic reciprocating compressor manufactured by ZMC, designed primarily for use with R134a refrigerant. It operates on a voltage range of 220-240V at 50Hz and is typically used for low back pressure (LBP) refrigeration applications like household refrigerators and freezers.

Main Specifications

- Refrigerant: R134a
- Application: LBP (Low Back Pressure)
- Power: 1/4 HP
- Voltage/Frequency: 220-240V, 50Hz
- Motor Type: RSIR/CSIR
- Starting Device: PTC QP2-15Ω
- Oil Charge: 180 cm³ esters (POE)
- CE certified

Technical Details

- Evaporating Temperature Range: -30°C to -10°C (suitable for refrigeration, not deep freeze)
- Maximum Motor Temperature: 130°C
- Locked Rotor Current: 6.78 A
- Voltage Working Range: 187-264V
- Compressor Cooling: Static
- Expansion device: Capillary tube

Typical Uses

- Household refrigerators
- Small commercial refrigerators
- Appliances using R134a needing 1/4 HP compressor power

This model is manufactured in Egypt and is widely compatible with fridges operating in regions where 220-240V, 50Hz power is standard

For the EGM91AA (LBP, R134a), the answer leans more to **freezing / low-temperature cooling**, but it is used for both refrigerators and freezers depending on the system design.

What LBP means

- LBP = Low Back Pressure, which corresponds to **low evaporating temperatures, typically about −30 °C to −10 °C.**
- Such compressors are commonly used in **freezers, deep freezers, and low-temperature refrigerator compartments**.

So for EGM91AA

- Its data sheet lists application = **LBP** with evaporating range **−30 °C to −10 °C**, exactly the range used for freezer or low-temperature refrigerator circuits.
- Practically: if you charge and size the capillary for −25/−30 °C, it works as **freezing**; if you design around −12/−10 °C, it becomes **strong cooling / chiller level**.

The EGM91AA compressor from ZMC stands out as one of the most notable solutions in the domestic and light commercial refrigeration sector thanks to its use of R134a refrigerant and its high efficiency under varying climatic conditions. It

delivers optimal cooling performance for refrigerators operating on 220–240 V, 50 Hz power, making it a practical choice for both local and international markets. Its advanced technical features translate into quick response, reduced energy consumption, and excellent compatibility with household systems, providing reliable performance backed by solid regional manufacturing.□□

Journalistic introduction

In the fast-moving world of refrigeration technology, real innovation often hides in the small components that only technicians and specialists tend to notice. At the core of every modern refrigerator, a compressor sets the rhythm for the entire system’s life span and efficiency, and the EGM91AA model is a clear illustration of this principle. A compact steel shell, carefully engineered handling of R134a refrigerant, and optimized power consumption come together to keep food safe and temperatures stable even when ambient heat pushes equipment to its limits.□□

This compressor is more than a metal capsule in a sealed circuit; it is a technical product with a manufacturing story that starts in Egypt and extends across regional markets serving home refrigeration. Designed for 220–240 V, 50 Hz grids and carrying CE conformity, it offers installers and repair professionals a unit that combines robustness, availability of spare parts, and predictable behavior in low back-pressure applications. As local industries expand their capabilities, models like the EGM91AA show how regional manufacturing can compete in quality while remaining accessible to small workshops and major appliance brands alike.□□

Technical specifications table for EGM91AA

Feature	Value
Type	Household refrigeration compressor (LBP)
Manufacturer	ZMC Egypt
Rated voltage	220–240 V, 50 Hz
Refrigerant	R134a
Nominal power	1/4 HP (approx.)
Motor type	RSIR / CSIR
Oil charge	About 180 cm³ POE ester oil
Evaporating range	From −30 °C to −10 °C
Operating voltage band	187–264 V
Certification	CE
Country of origin	Egypt