

Compressor MAF QD59H HM for Ideal 8-foot Refrigerator

Category: Refrigeration

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Meta Description: Discover if the MAF QD59H HM Comptek compressor is the right fit for your Ideal 8-foot refrigerator. Comprehensive technical specs, 1/6 HP performance, and engineering tips.

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Excerpt: Choosing the correct compressor for a classic Ideal 8-foot refrigerator requires technical precision. The MAF QD59H HM, a robust 1/6 HP unit by Comptek, is a frequent candidate for these repairs. This article explores the mechanical compatibility, electrical requirements, and performance values necessary to ensure a long-lasting and efficient cooling system restoration.

The Engineering Guide to Compressor MAF QD59H HM: Performance and Compatibility for Ideal 8-Foot Refrigerators

In the world of domestic refrigeration maintenance, the **Ideal 8-foot refrigerator** remains a legendary appliance known for its sturdy build. However, when the heart of the system—the compressor—fails, selecting a modern replacement requires an understanding of displacement, cooling capacity, and motor torque. The **MAF QD59H HM**, manufactured by Comptek, is a specialized **L/MBP (Low/Medium Back Pressure)** unit designed for R134a systems.

Technical Breakdown: MAF QD59H HM Characteristics

The MAF QD59H HM is engineered for efficiency. As a **1/6 HP** class compressor, it provides the necessary thermal displacement to handle the internal volume of an 8-cubic-foot unit without overstressing the condenser coils.

Table 1: Technical Specifications

Feature	Specification
Model	MAF QD59H HM
Brand	Comptek / GR
Horsepower (HP)	1/6 HP
Refrigerant	R134a
Voltage/Frequency	220-240V ~ 50Hz
Phase	1 PH (Single Phase)
Application Range	L/MBP (Low/Medium Back Pressure)
Motor Type	RSIR / CSIR (Depending on Starter Kit)
Starting Torque	HST (High Starting Torque)
Cooling Capacity	~150W - 165W (at -23.3°C LBP)

Is it Compatible with an Ideal 8-Foot Refrigerator?

The short answer is yes. An 8-foot refrigerator typically requires between 1/8 HP and 1/6 HP. Using the **MAF QD59H HM** ensures that the system reaches the desired temperature quickly, even in high-ambient-temperature environments.

The **HST (High Starting Torque)** designation is particularly beneficial. In many regions where voltage can fluctuate or where the refrigerator is opened frequently, an HST motor ensures the compressor starts reliably against the pressure of the refrigerant without tripping the thermal overload protector.

Comparative Analysis: Displacement vs. Cooling Efficiency

When comparing the MAF QD59H HM to other common industry standards like the Danfoss or Embraco equivalents, we see a focus on balancing energy consumption with cooling speed.

Table 2: Comparison with Equivalent Models

Compressor Model	Displacement (cc)	Cooling Capacity (W)	Efficiency (COP)
Comptek MAF QD59H	5.9	158	1.25
Embraco EMT56CLP	5.6	145	1.22
Danfoss TL5G	5.0	135	1.18
ZMC GM70AZ	6.5	170	1.28

Engineering Insights: Wiring and Installation

For the field technician, the electrical configuration is standard but requires precision. Below is the typical schematic logic for the MAF series.

Electrical Connection Schematic:

1. **Common (C):** Connected to the Internal/External Overload Protector.
2. **Main/Run (R):** Connected to the Neutral line.
3. **Start (S):** Connected via the PTC (Positive Temperature Coefficient) or Start Capacitor.

Notice: Always ensure the suction tube is identified correctly (marked by an arrow on the label) to prevent oil slugging into the manifold during the first start-up.

Professional Advice for Maximum Longevity

- **System Flushing:** Before installing the MAF QD59H HM, always flush the evaporator and condenser with R141b to remove old mineral oil or carbon deposits.
- **Capillary Tube Check:** For an 8-foot Ideal fridge, ensure the capillary tube is not restricted. A restricted tube will cause the HST motor to overheat.
- **Vacuuming:** Achieve a vacuum of at least 500 microns to ensure the R134a/POE oil environment remains moisture-free.
- **Filter Drier:** Always replace the filter drier with a high-quality 20g or 30g XH-9 molecular sieve drier.

Benefits of Using the MAF QD59H HM

- **Thermal Stability:** Excellent heat dissipation during long run cycles.
- **Quiet Operation:** Low vibration levels compared to older reciprocating models.
- **Versatility:** Suitable for both freezers and standard refrigerators due to its L/MBP range.

Expert Notice: While the MAF QD59H HM is a robust replacement, always verify the original nameplate of the refrigerator. If the original compressor was significantly larger (e.g., 1/4 HP), a QD59H may lead to extended run times. However, for the standard Ideal 8ft model, this unit remains a top-tier engineering choice.

