Compressor, Kiriazi Refrigerator, KM 33, L 310, 1/5 hp

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Technical Analysis of the Kiriazi KM 33 and L 310 Tropical Cooling Systems

When it comes to high-performance refrigeration in demanding climates, the **Kiriazi Company** has established itself as a benchmark for durability and thermal efficiency. The **KM 33 and L 310 models** are specifically engineered for **Tropical Class** environments, meaning they are designed to maintain internal temperatures even when ambient external heat exceeds 43°C.

The heart of these units is a robust reciprocating compressor optimized for **R134a refrigerant**. Understanding the electrical and thermodynamic parameters of this system is essential for HVAC engineers and field technicians performing maintenance or compressor replacements.

Core Technical Specifications

The following data outlines the operational limits and requirements for the Kiriazi KM 33 and L 310 series.

Parameter	Specification Value
Appliance Model	KM 33 / L 310 / K 330
Refrigerant Type	R134a (Tetrafluoroethane)
Refrigerant Charge	160 Grams
Voltage / Frequency	220V – 240V / 50Hz
Current Consumption	1.1 Amperes
Power Consumption	2.3 Kw.h / 24H
Freezing Capacity	5.0 Kg / 24H
Cooling System Pressure	20 Bar (High Side Test)
Climate Class	Tropical (T)

Compressor Characteristics and Horsepower Correlation

In the field, identifying the exact horsepower of a compressor when the label is weathered requires looking at the **Current Consumption (FLA)**. For the Kiriazi L 310, the 1.1A rating at 220V typically points to a **1/4 HP (Horsepower)** compressor.

These compressors usually operate on an **RSIR (Resistive Start, Inductive Run)** or **RSCR (Resistive Start, Capacitive Run)** circuit. The Tropical motor designation indicates higher torque and reinforced insulation to handle the increased head pressure common in hot regions.

Comparative Power Analysis

How does the KM 33 compressor compare to other common refrigerator sizes?

Refrigerator Size	Typical Current (A)	Estimated HP	Refrigerant Charge
Small (120L)	0.6 – 0.7 A	1/8 HP	80 – 100g
Medium (250L)	0.8 – 0.9 A	1/6 HP	120 – 140g
Kiriazi KM 33 (330L)	**1.1 A**	**1/5 HP**	**160g**
Large Side-by-Side	1.5 – 2.0 A	1/4 HP	200g+

Electrical Wiring and Schema

For technicians replacing the starting device (PTC or Relay), following the correct wiring diagram is vital to prevent motor burnout.

Typical Compressor Terminal Layout (Standard C-S-R):

1. **Common (C):** Connected to the Overload Protector (OLP).
2. **Start (S):** Connected to the Starting Relay/PTC.
3. **Run (R):** Connected to the Neutral line and the other side of the PTC.

Note: In Tropical models, a Run Capacitor (usually 4µF to 6µF) is often added between the Start and Run terminals to improve electrical efficiency and reduce heat generation during long run cycles.

Engineering Advice for Peak Performance

1. **Condenser Hygiene:** Because this is a **Tropical Class** machine, the condenser coils dissipate a significant amount of heat. Ensure the rear of the fridge has at least 10cm of clearance from walls to prevent “short-cycling” of the compressor.
2. **Voltage Stabilization:** The 1.1A draw can spike significantly if the input voltage drops below 190V. In regions with unstable power, a dedicated voltage stabilizer is recommended to protect the compressor windings.
3. **Filter Drier Replacement:** When opening the system for repair, always replace the filter drier. With a 160g charge of R134a, even trace amounts of moisture can cause capillary tube blockage.

Focus Keyphrase

Kiriazi Refrigerator KM 33 Compressor R134a Specs

SEO Title

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Meta Description

Comprehensive technical guide for Kiriazi KM 33 and L 310 refrigerators. Detailed specs on R134a compressor, 1.1A current, and tropical cooling performance for HVAC professionals.

Slug

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Tags

Kiriazi, Refrigerator, KM 33, L 310, Compressor, R134a, HVAC, Cooling, Mbsmgroup, Mbsm.pro, mbsmpro.com, mbsm

Excerpt

The Kiriazi KM 33 and L 310 refrigerators represent the pinnacle of tropical cooling engineering, designed to withstand extreme ambient temperatures while maintaining peak efficiency. Utilizing R134a refrigerant and a robust 1.1A compressor, these units are a staple for technicians requiring reliable performance data for maintenance and compressor replacement in high-heat environments.

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