LG MA57LBJG Compressor 1/6 HP R134a LBP Technical Specifications and Replacements

Category: Refrigeration
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Mbsm.pro, Compressor, MA57LBJG, 1/6 hp, LG, Cooling, R134a, 160 W, 1.2 A, 1Ph 220-240V 50Hz, LBP, RSIR, -35°C to -10°C, Freezing

The LG **MA57LBJG** is a staple in the refrigeration world, specifically engineered for low back pressure (LBP) applications. As a technician or engineer, you

recognize this model by its robust build and reliability in domestic cooling. Operating on R134a refrigerant, it balances efficiency with a compact frame, making it a go-to choice for household freezers and large refrigerators.

Technical Specifications Table

Feature	Specification Details
Model	MA57LBJG
Utilisation	LBP (Low Back Pressure)
Domaine	Freezing / Deep Cooling
Cooling Wattage at -23.3°C	160 W
Cubic Feet Capacity	8 – 11 cu.ft (Depending on insulation)
Litres Capacity	220 – 300 Liters
Kcal/h	138 Kcal/h
Oil Type and Quantity	Ester Oil (POE), 180cc
Horsepower (HP)	1/6 HP
Refrigerant Type	R134a
Power Supply	220-240V / 50Hz / 1Ph
Cooling Capacity BTU	546 BTU/h
Motor Type	RSIR (Resistive Start-Inductive Run)
Displacement	5.7 cc
Winding Material	Copper
Pression Charge	0.5 to 1.2 Bar (Low side running)
Capillary Recommendation	0.031″ (0.8mm) x 3 meters (approx)
Common Application	LG, Samsung, and Whirlpool Refrigerators
Temperature Function	-35°C to -10°C
Cooling Method	Natural Cooling (Static)
Commercial Status	Residential / Light Commercial
Amperage (RLA)	0.9 A – 1.2 A
LRA (Locked Rotor Amps)	6.5 A
Type of Relay	PTC Relay
Capacitor	Usually Not Required (RSIR)
Origin/Export	Made in China / Exported Globally

Efficiency Metrics (COP) & Performance

Evaporating Temp (°C)	Cooling Capacity (Watts)	Power Consumption (Watts)	COP (W/W)
-30	115	105	1.10
-25	148	120	1.23
-23.3	160	128	1.25
-20	185	138	1.34
-15	230	155	1.48
-10	285	175	1.63

Compressor Replacement Guide

Top 5 Replacements (Same R134a Gas)

1. **Embraco:** EMI60HER / EMT45HDR
2. **Secop (Danfoss):** TLES5.7FT.3
3. **Tecumseh:** THG1358YKS
4. **Samsung:** SD152H-L1UA
5. **Huayi:** HYB60MHU

Top 5 Replacements (Alternative Gas – R600a Conversion Required)

1. **LG:** CMA057LHEG
2. **Embraco:** EMX55CLC
3. **Secop:** TLES5.7KK.3
4. **ACC:** HMK80AA
5. **Donper:** S65CY

Note: Replacing R134a with R600a requires a complete system flush, change of oil, and a specific R600a charging procedure due to flammability.

Engineering Insights: Comparison & Benefits

When compared to the slightly more powerful **MA62LJJG (1/5 HP)**, the MA57LBJG offers a higher energy efficiency ratio for mid-sized units. While the 1/5 HP model provides faster pull-down times, the MA57LBJG is optimized for maintaining steady-state freezing temperatures with lower electrical overhead.

Why use this model?

- **Copper Windings:** Unlike some newer aluminum-wound budget models, the copper internals of the MA57LBJG ensure better thermal conductivity and longer life under high-heat conditions.
- **Low Vibration:** The internal spring mounting is tuned specifically for domestic environments, ensuring whisper-quiet operation.

Professional Tips for Installation:

> *Pro Tip: Always replace the filter drier when swapping this compressor. Since it uses POE oil, it is highly hygroscopic (absorbs moisture quickly). Limit the time the system is open to the atmosphere to under 15 minutes.*

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Excerpt: The LG MA57LBJG is a high-performance 1/6 HP compressor designed for R134a refrigerant in Low Back Pressure (LBP) applications. Ideal for domestic freezers, it delivers 160W of cooling capacity at -23.3°C. This guide provides comprehensive technical data, winding details, and a full cross-reference list for professional refrigeration technicians and engineers.



1/6 HP, EMI60HER, HYB60MHU, LBP, LG compressor, MA57LBJG, mbsm, mbsm.pro, mbsmgroup, mbsmpro.com, R134a, Refrigeration Repair, SD152H, THG1358YKS, TLES5.7FT.3
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