How many cubic feet can LJ118CY1 compressor cooling ?

Category: Refrigeration
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The motor shown in the image is a Donper brand, model LJ118CY1. This motor uses R600a (isobutane) refrigerant.
Based on its power output, this motor is approximately 1/4 horsepower (or 1/4+ horsepower with good thrust), and is very suitable for use in household refrigerators ranging from 14 to 16 cubic feet (approximately 320 to 450 liters), depending on the insulation efficiency and circuit design.
Donper is a leading and highly respected Chinese brand in the global market, and major companies use it in their original production lines because it combines quiet operation with low energy consumption.

Technical Specification Table

Attribute	Specification
Model	LJ118CY1
Utilisation	LBP (Low Back Pressure)
Domaine	Freezing / Cooling
Cooling Wattage at -23.3°C	198 W
Kcal/h	170 Kcal/h
Oil Type and Quantity	Mineral / POE (approx. 180-200ml)
Horsepower (HP)	1/4 HP
Refrigerant Type	R600a
Power Supply	220–240V ~ 50Hz, 1Ph
Cooling Capacity BTU	675 BTU/h
Motor Type	RSCR / RSIR
Displacement	11.8 cm^3
Winding Material	Copper
Pressure Charge	Low Pressure (Suction)
Capillary Recommendation	0.031 – 0.036 inch (Depends on length)
Refrigerator Size	14 to 16 Feet (Domestic)
Temperature Function	-35°C to -15°C
Fan Requirement	Static Cooling (No fan required for compressor)
Commercial Use	No (Mainly Domestic)
Amperage (RLA)	0.9 A – 1.2 A
LRA (Locked Rotor Amps)	6.5 A
Type of Relay	PTC Relay
Capacitor	4µF – 5µF (Optional depending on version)
Country of Origin	China (Donper Group)

Compressor Replacements

5 Replacements (Same Gas R600a):

1. **Embraco:** EMX70CLC
2. **Secop (Danfoss):** NLE11KK.4
3. **Jiaxipera:** NT1114Y
4. **Huayi:** HYB115MHU
5. **LG:** CMA069LHEM

5 Replacements (Other Gas R134a – Requires system flush and oil change):

1. **Embraco:** FFI 7.5HAK
2. **Secop:** TLES7.5KK.3
3. **ZMC:** GM80AF
4. **Donper:** LU118CY (R134a version)
5. **Panasonic:** QB77C16GPX5

Mbsmpro.com, Compressor, LJ118CY1, 1/4 hp, Donper, Cooling, R600a, 198 W, 1.1 A, 1Ph 220-240V 50Hz, LBP, RSCR, -35°C to -15°C

The LJ118CY1 stands as a high-efficiency hermetic reciprocating compressor specifically engineered for domestic refrigeration. Developed by Donper, a global leader in cooling technology, this model is optimized for R600a refrigerant, ensuring a minimal environmental footprint while delivering robust thermal performance.

Efficiency and Performance Metrics

The LJ118CY1 is designed for Low Back Pressure (LBP) applications. Its displacement of 11.8cc allows it to reach deep freezing temperatures quickly, making it ideal for large refrigerators and domestic upright freezers.

Performance Data Table (ASHRAE Conditions)

Evaporating Temp (°C)	Cooling Capacity (Watts)	Power Consumption (Watts)	COP (W/W)
-30	145	112	1.29
-25	185	128	1.45
-23.3	**198**	**134**	**1.48**
-20	235	145	1.62
-15	290	162	1.79
-10	360	180	2.00

Comparison: Donper LJ118CY1 vs. Standard 1/5 HP Units

When comparing this unit to a standard 1/5 HP compressor (like the GM70AZ), the LJ118CY1 offers a significantly higher displacement (11.8 cm^3 vs 7.0 cm^3). This extra “lung capacity” allows the refrigerator to recover its temperature faster after the door has been opened frequently, which is vital in warmer climates.

Technical Advice and Installation Benefits

- **Eco-Friendly:** R600a gas has zero ODP (Ozone Depletion Potential) and very low GWP (Global Warming Potential).
- **Low Noise:** The LJ118CY1 is known for its dampened vibration levels, making it suitable for modern open-plan kitchens.
- **Maintenance:** Always ensure the condenser is clean. Because R600a operates at lower pressures, even a slight blockage can cause a noticeable drop in COP (Coefficient of Performance).

> *Expert Notice: When replacing a compressor with the LJ118CY1, ensure the vacuum process is thorough. R600a systems are highly*

> *sensitive to moisture and non-condensable gases.*

Focus Keyphrase: Donper LJ118CY1 Compressor 1/4 HP R600a Specifications
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Meta Description: Discover the complete technical specifications for the Donper LJ118CY1 compressor. Learn about its 1/4 HP capacity, R600a efficiency, cooling wattage, and the best replacements for refrigerators.
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Excerpt: The Donper LJ118CY1 is a high-performance 1/4 HP hermetic compressor designed for domestic refrigerators using R600a refrigerant. Known for its efficiency and quiet operation, it features a displacement of 11.8cc and a cooling capacity of 198W at -23.3°C. This article provides technical details, wiring diagrams, and compatible replacement models for professional technicians.



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