

Jaxipera JM1080Y Compressor 1/8 hp R600a, capillary 0.028 2.5m

Category: Refrigeration

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Mbsmpro.com, Compressor, JM1080Y, 1/8 hp, Jaxipera, Cooling, R600a, 100 W, 0.6 A, 1Ph 220-240V 50Hz, LBP, RSCR, -35°C to -10°C, cooling or freezing

Jaxipera JM1080Y Technical Specifications

This compressor is a high-efficiency model designed for **R600a** refrigerant and Low Back Pressure (LBP) applications.

Compressor Performance Data

- **Horsepower (HP):** Rated at approximately **1/8 HP** (or 1/8+ HP).
- **Cooling Capacity:** Reaches up to **100 Watts** (approximately 341 BTU/h) according to ASHRAE standards.
- **Displacement:** 6.0 cm^3 .
- **Refrigerant Type:** R600a (Isobutane).

Recommended Capillary Tube Sizes

To achieve the best performance in domestic refrigeration units, use the following specifications:

- **Primary Option:** 0.031 inch (0.8 mm) diameter with a length of **3 meters**.
- **Secondary Option:** 0.028 inch (0.7 mm) diameter with a length of **2.5 meters**.

Technical Installation Notes

- **Precision Charging:** Because R600a is used, the system must be charged **strictly by weight**

(in grams) as indicated on the appliance's data plate.

- **Sensitivity:** This refrigerant is highly sensitive to even minor deviations in gas volume.
- **Vacuum Process:** A thorough vacuum (20-30 minutes) is mandatory to ensure the system is completely free of air and moisture before charging.

The refrigeration industry relies on precision components to maintain efficiency and food safety. Among these, the **Jaxipera JM1080Y** stands out as a high-performance, hermetic reciprocating compressor engineered for modern domestic appliances. Designed for low-back-pressure (LBP) applications, this unit is commonly found in energy-efficient refrigerators and freezers where quiet operation and low energy consumption are paramount.

Operating on **R600a (Isobutane)**, the JM1080Y reflects the global shift toward environmentally friendly refrigerants with low global warming potential. Its design incorporates a robust motor and optimized internal mechanics to ensure longevity and consistent cooling capacity even under varying thermal loads.

Technical Specifications: Jaxipera JM1080Y

Feature	Specification
Model	JM1080Y
Utilisation (mbp/hbp/lbp)	LBP (Low Back Pressure)
Domaine (Freezing/Cooling)	Freezing and Cooling
Cooling wattage at -23.3°C	100 W
Cubic feet (approx. cooling capacity)	6.5 to 8.5 cu. ft.
Litres (approx. cooling capacity)	185 to 240 Liters
Kcal/h	86 Kcal/h
Oil Type and Quantity	Mineral Oil / 180 ml
Horsepower (HP)	1/8 hp
Refrigerant Type	R600a
Power Supply	220-240V / 50Hz
Cooling Capacity BTU/h	341 BTU/h
Motor Type	RSCR (Resistance Start - Capacitor Run)
Displacement	6.2 cm³
Winding Material	Copper
Pression Charge	Low Pressure
Capillary (Suggested)	0.026" - 0.031"
Refrigerator Models	Bosch, Haier, Samsung, Beko, Hisense
Temperature Function	-35°C to -10°C
With fan or no	Static (Natural cooling)
Commercial or no	No (Domestic / Household)
Amperage in function	0.55 A - 0.6 A
LRA (Locked Rotor Amps)	4.6 A
Type of relay	PTC Starter
Capacitor Value	2.5 µF / 450V

Feature	Specification
Country of Origin	China

Efficiency Metrics (COP) & Performance Data

The coefficient of performance (COP) is a critical indicator of how much cooling work the compressor does relative to the electrical energy it consumes.

Evaporating Temp (°C)	Cooling Capacity (Watts)	Power Consumption (Watts)	COP (W/W)
-35	58	51	1.14
-30	76	60	1.27
-23.3 (Standard)	100	68	1.47
-20	118	74	1.59
-15	146	82	1.78
-10	180	92	1.96

Comparison: JM1080Y vs. Industry Standard 1/10 HP Units

While many 1080 models are rated at 1/10 HP, the **JM1080Y** is frequently categorized as a **1/8 HP** unit due to its higher displacement (6.2 cm³) compared to the standard 5.5 cm³ found in models like the NE1080Y. This extra displacement provides a higher cooling reserve, making it more resilient in high-ambient temperature conditions.

Replacement Cross-Reference

5 Replacements (Same Gas: R600a)

- **Embraco:** EMX32CLC
- **Secop (Danfoss):** TLES5.7KK.3
- **Huayi:** HYE55Y
- **Donper:** A90CY
- **LG:** CMA057LBJH

5 Replacements (Other Gas: R134a)

Note: Converting systems between refrigerants requires a total oil flush and system cleaning.

- **Jaxipera:** ND1080Y
- **Embraco:** EMT32HLP
- **Secop:** TLS5F
- **Cubigel:** GL45AA
- **Tecumseh:** THG1335YS

Expert Engineering Advice & Notice

- 1. Refrigerant Safety:** R600a is highly flammable. Always ensure there are no ignition sources in the work area and use a vacuum pump specifically rated for hydrocarbons.
- 2. Vacuum & Moisture:** A deep vacuum of 500 microns or less is mandatory. Mineral oil in R600a systems is sensitive to moisture, which can cause internal acid formation.
- 3. Capillary Selection:** If replacing a compressor with a different brand, always verify the capillary tube size. A mismatch can lead to liquid slugging or poor evaporator utilization.
- 4. Static Cooling:** This compressor is designed for static cooling. Do not enclose it in a tight space without adequate airflow, as overheating will drastically reduce the lifespan of the motor windings.

Focus Keyphrase: Jaxipera JM1080Y Compressor 1/8 hp R600a

SEO Title: Mbsmpro.com, Jaxipera JM1080Y, 1/8 HP, R600a Refrigerator Compressor

Meta Description: Detailed technical data for the Jaxipera JM1080Y compressor. 1/8 HP, 100W cooling capacity, R600a refrigerant. Includes wiring, COP tables, and compatible replacements for LBP applications.

Slug: jaxipera-jm1080y-compressor-1-8-hp-r600a-specs

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Excerpt: The Jaxipera JM1080Y is a high-performance 1/8 hp compressor specifically designed for R600a refrigerant in domestic LBP applications. With a cooling capacity of 100W and a displacement of 6.2 cm³, it provides a quiet, energy-efficient solution for modern refrigerators. This guide covers technical data, performance metrics, and professional field advice for technicians.



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