

# Compressor, Jiaxipera, TT1113GY, 1/5 hp

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**Mbsmpro.com, Compressor, Jiaxipera, TT1113GY, 1/5 hp, Cooling, R600a, 183 W, 1Ph, 220-240V 50Hz, LBP, RSCR/RSIR, -35°C to -15°C, cooling or freezing**

**The Engineering Standard: Technical Analysis of the Jiaxipera TT1113GY Compressor**

In the modern refrigeration landscape, precision engineering and environmental sustainability are no longer optional—they are foundational. The **Jiaxipera TT1113GY** stands at the forefront of this evolution, serving as a high-performance **<u>Low Back Pressure (LBP)</u>** compressor optimized for the eco-friendly **R600a** refrigerant. Designed for residential refrigerators and high-efficiency chest freezers, this unit exemplifies the shift toward high volumetric efficiency and low acoustic impact.

## ***Technical Specifications and Thermodynamic***

### ***Characteristics***

The TT1113GY is built on a robust platform that balances power density with thermal stability. Below are the definitive parameters for technicians and refrigeration engineers:

<b>Feature</b>	<b>Detailed Specification</b>
<b>Manufacturer</b>	Jiaxipera Compressor Co., Ltd
<b>Model</b>	<b>TT1113GY</b>
<b>Horsepower (HP)</b>	<b>1/5 HP</b>
<b>Refrigerant Type</b>	<b>R600a (Isobutane)</b>
<b>Cooling Capacity (-23.3°C ASHRAE)</b>	<b>183 Watts (624 BTU/h)</b>
<b>Displacement</b>	<b>11.3 cm<sup>3</sup></b>
<b>Power Supply</b>	220-240V ~ 50Hz (Single Phase)
<b>Motor Type</b>	RSCR / RSIR (Dependent on Start Device)
<b>Cooling Type</b>	Static Cooling (S)

**Application Range**

**LBP (-35°C to -15°C)**

**Oil Charge**

180 ml (Mineral / Alkylbenzene)

## ***Comparative Analysis: Displacement vs. Cooling Efficiency***

When evaluating the **TT1113GY** against legacy R134a systems, the difference in displacement volume is striking. R600a compressors require larger cylinders to achieve the same cooling capacity due to the lower gas density of isobutane.

- **Jiaxipera TT1113GY (R600a):** 11.3 cm<sup>3</sup> displacement produces 183W.
- **Standard R134a Equivalent:** A similar capacity often requires only 7.0 – 8.5 cm<sup>3</sup>.

This increase in displacement is countered by a significantly higher **COP (Coefficient of Performance)**. While older R134a models might operate at a COP of 1.15 W/W, the **Jiaxipera TT1113GY** typically achieves values between **1.35 and 1.50 W/W**, drastically reducing electricity consumption in domestic applications.

## ***Electrical Schema and Connection Protocols***

For professionals in the field, understanding the electrical architecture is vital for system safety. The unit employs a single-phase induction motor with a split-phase winding.

- **Main Winding (M):** Low resistance, carries the running load.

- **Start Winding (S):** Higher resistance, used during the initial acceleration.
- **Safety Tip:** The use of a **PTC (Positive Temperature Coefficient)** starter is standard. When upgrading to **RSCR (Resistance Start Capacitor Run)** mode, a run capacitor (usually 4µf – 5µf) must be integrated across the 'S' and 'R' terminals to further improve electrical efficiency and lower the running amperage.

### ***Comparison with Competitive LBP Models***

<b>Brand &amp; Model</b>	<b>Gas</b>	<b>HP</b>	<b>Displacement</b>	<b>Output (Watts)</b>
<b>Jiaxipera TT1113GY</b>	<b>R600a</b>	<b>1/5</b>	<b>11.3 cc</b>	<b>183 W</b>
Secop NLE11KK.4	R600a	1/4	11.1 cc	191 W
Embraco EMX70CLC	R600a	1/5+	11.1 cc	182 W
Huayi HYB11.5	R600a	1/4	11.5 cc	188 W

### ***Engineering Best Practices: Advice and Benefits***

Operating with **<u>R600a (Isobutane)</u>** requires a heightened level of awareness due to its flammability (A3 safety classification).

1. **Vacuum Procedure:** Always pull a vacuum down to **200 microns**. Moisture in an R600a system with mineral oil can cause rapid mechanical acidification.
2. **Copper-Aluminum Joints:** Ensure vibration dampeners are secure. The 11.3cc stroke creates significant torque oscillation; poorly brazed joints will leak over time.

3. **Filtration:** Utilize a filter drier specifically labeled for XH-9 molecular sieves to maintain refrigerant purity.
4. **No Flame Braze:** In field repair environments, ultrasonic welding or Lokring technology is preferred for sealing R600a process tubes to eliminate the risk of explosion.

### ***Benefits of the Jiaxipera TT1113GY:***

- **Ultra-Quiet Performance:** Specially damped valve plates reduce “click” noises during startup.
- **Global Standard Compliance:** Fully meets ROHS and CE regulations for environmental safety.
- **Energy Efficiency:** Direct contribution to reaching A++ or A+++ energy ratings in residential refrigerators.



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**Meta description:** Professional technical guide for the Jiaxipera TT1113GY compressor. 1/4 HP, R600a, 183W capacity at 50Hz. Ideal for high-efficiency LBP cooling and freezing systems.

**Slug:** mbsmpro-compressor-jiaxipera-tt1113gy-1-4-hp-r600a-specifications

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**Excerpt:** The Jiaxipera TT1113GY is a high-performance hermetic compressor engineered for Low Back Pressure applications using R600a (Isobutane). Featuring a 11.3 cm<sup>3</sup> displacement and a cooling capacity of 183 Watts, it represents the gold standard for modern energy-efficient refrigeration, offering exceptional reliability and reduced acoustic emissions in the domestic market.

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