# Compressor, Jiaxipera, TT1113GY, 1/5 hp

Category: Refrigeration
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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:

| Feature | Detailed Specification |
|---|---|
| **Manufacturer** | Jiaxipera Compressor Co., Ltd |
| **Model** | **TT1113GY** |
| **Horsepower (HP)** | **1/5 HP** |
| **Refrigerant Type** | **R600a (Isobutane)** |
| **Cooling Capacity (-23.3°C ASHRAE)** | **183 Watts (624 BTU/h)** |
| **Displacement** | **11.3 cm³** |
| **Power Supply** | 220-240V ~ 50Hz (Single Phase) |
| **Motor Type** | RSCR / RSIR (Dependent on Start Device) |
| **Cooling Type** | 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 **<u>TT1113GY</u>** 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 $cm^3$ displacement produces 183W.
- **Standard R134a Equivalent:** A similar capacity often requires only 7.0 – 8.5 $cm^3$.

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*

| Brand & Model | Gas | HP | Displacement | Output (Watts) |
|---|---|---|---|---|
| **Jiaxipera TT1113GY** | **R600a** | **1/5** | **11.3 cc** | **183 W** |
| 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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**Focus keyphrase:** Jiaxipera TT1113GY compressor 1/5 hp R600a LBP refrigeration technical specifications and performance analysis for cooling efficiency

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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

**Tags:** Mbsmgroup, Mbsm.pro, mbsmpro.com, mbsm, Jiaxipera, TT1113GY, R600a, 1/4 HP Compressor, Refrigeration Engineering, LBP Compressor, Isobutane Fridge, HVAC Repair

**Excerpt:** The Jiaxipera TT1113GY is a high-performance hermetic compressor engineered for Low Back Pressure applications using R600a (Isobutane). Featuring a 11.3 $cm^3$ 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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