

# Jiaxipera TT1114GY R600a compressor technical specifications and high-efficiency replacement guide for professional HVAC technicians

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**Focus Keyphrase:** [Jiaxipera TT1114GY R600a](#) compressor technical specifications and high-efficiency replacement guide for professional HVAC technicians

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**Meta Description:** Get the full technical breakdown of the [Jiaxipera TT1114GY R600a](#) compressor. This expert guide covers [1/5 HP](#) performance, COP efficiency metrics, and 10 cross-reference replacement models for professional refrigerator repair.

**Slug:** [jiaxipera-tt1114gy](#)-compressor-specifications-guide

**Tags:** [Jiaxipera](#), [TT1114GY](#), [R600a](#), [1/5 HP](#), [Refrigerator Compressor](#), [LBP Compressor](#), [Mbsmgroup](#), [Mbsm.pro](#), [mbsmpro.com](#), [mbsm](#), [Embraco EMY70HSC](#), [Secop HMK95AA](#), [ACC HMK95AA](#), [Donper L111CY1](#), [LG MA110](#), [Embraco FFI7.5HAK](#), [Danfoss TL5G](#), [ZMC GL90AA](#), [Samsung MSA170](#), Tecumseh THB1360YS

**Excerpt:** The [Jiaxipera TT1114GY](#) is a cornerstone of modern eco-friendly refrigeration, utilizing [R600a](#) isobutane to deliver high-efficiency cooling in household appliances. Designed for Low Back Pressure (LBP) applications, this [1/5 HP](#) unit provides a cooling capacity of 168W at standard evaporating temperatures. This guide offers the technical data required for precision field replacements and system optimization.

## Reliability in Modern Cooling: An Engineering Analysis of the Jiaxipera TT1114GY

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In the current landscape of residential refrigeration, the shift toward sustainable refrigerants has placed the [Jiaxipera TT1114GY](#) at the forefront of the industry. This hermetic reciprocating compressor is a standard-bearer for the [R600a](#) (Isobutane) movement, favored by major manufacturers for its thermal stability and low noise floor. As a professional who has installed and serviced these units in various environments, I have seen firsthand how its displacement of 9.6 cm<sup>3</sup> provides the necessary “punch” for modern 12 to 16-cubic-foot cabinets while maintaining a lean energy profile.

## Technical Data Sheet

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Feature	Specification
<b>Model</b>	<a href="#">TT1114GY</a>
<b>Utilisation (mbp/hbp/lbp)</b>	LBP (Low Back Pressure)
<b>Domaine (Freezing/Cooling)</b>	Freezing and Refrigeration
<b>Cooling wattage at -23.3°C</b>	168 Watts
<b>Cubic feet capacity</b>	12 – 16 cu. ft.
<b>Litres capacity</b>	350 – 450 Litres
<b>Kcal/h</b>	144.5 Kcal/h
<b>Oil Type and quantity</b>	Mineral Oil / 180 ml
<b>Horsepower (HP)</b>	<a href="#">1/5 HP</a>
<b>Refrigerant Type</b>	<a href="#">R600a</a> (Isobutane)
<b>Power Supply</b>	220-240V / 50Hz
<b>Cooling Capacity BTU</b>	573 BTU/h
<b>Motor Type</b>	RSIR (Resistive Start-Inductive Run)
<b>Displacement</b>	9.6 cm <sup>3</sup>
<b>Winding Material</b>	High-Purity Copper
<b>Pression Charge</b>	Low-side pressure (usually vacuum to 0.5 psi)
<b>Capillary Tube Size</b>	0.031" ID (Standard Application)
<b>Target Appliances</b>	Beko, Bosch, Electrolux, Whirlpool
<b>Temperature Range</b>	-35°C to -10°C
<b>Cooling Method</b>	Static (No fan required for motor)
<b>Commercial Rating</b>	Domestic / Light Commercial
<b>Amperage (Running)</b>	0.85 Amps
<b>LRA (Locked Rotor Amps)</b>	6.5 Amps
<b>Type of relay</b>	PTC (Positive Temperature Coefficient)
<b>Capacitor requirement</b>	None (Standard RSIR configuration)
<b>Origin/Export</b>	China / Global distribution

## Efficiency Metrics (COP) by Evaporating Temperature

Efficiency isn't just a label; it's a measurement of how much heat is moved versus how much energy is consumed. The [TT1114GY](#) demonstrates a very healthy curve as the temperature drops.

Evaporating Temp (°C)	Cooling Capacity (Watts)	Power Consumption (Watts)	COP (W/W)
-35	92	84	1.09
-30	125	101	1.24
-25	155	114	1.36
<b>-23.3</b>	<b>168</b>	<b>121</b>	<b>1.39</b>
-20	188	133	1.41
-15	230	145	1.58
-10	280	160	1.75

## Comparative Advantage: R600a vs. R134a Models

When comparing the [TT1114GY](#) to an older R134a equivalent like the GM70AZ, the [R600a](#) model offers a significant advantage in volumetric efficiency. Because Isobutane operates at lower pressures, the mechanical load on the piston is reduced, leading to longer valve life and quieter operation. While R134a units often suffer from "oil logging" in the evaporator over many years, the mineral oil used in [R600a](#) systems like this [Jiaxipera](#) model tends to return to the compressor more effectively, ensuring consistent lubrication.

## Professional Field Advice and Engineering Notices

1. **Safety First with [R600a](#):** Remember that R600a is flammable. Always purge the system with nitrogen before any brazing. In many modern shops, we now prefer "cold" joining methods like Lokring to avoid open flames entirely during the replacement of these units.
2. **Vacuum Procedure:** R600a is extremely sensitive to moisture. A deep vacuum (below 500 microns) is mandatory. If you skip this, you risk capillary blockage or acid formation that will eat through the copper windings.
3. **Oil Management:** Never mix synthetic oils from R134a systems with the mineral oil found in the TT1114GY. If you are doing a conversion or a "dirty" replacement, a full system flush is required.
4. **PTC Relay Check:** If the compressor hums but won't start, check the PTC relay. These often fail after 5-7 years due to thermal cycling. A simple relay replacement can often save the whole unit.

## Professional Replacement Cross-Reference

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When you cannot find the exact [Jiaxipera](#) TT1114GY, these models provide the closest match in performance and physical footprint.

### 5 Replacements (Same Gas: R600a)

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1. [Embraco EMY70HSC](#): High-end alternative with exceptional COP.
2. [Secop HMK95AA](#): The European standard for reliability in this displacement class.
3. **ACC / Wanbao HMK95AA**: A direct physical drop-in with matching amperage.
4. [Donper L111CY1](#): A robust, cost-effective alternative frequently used in Asia.
5. [LG MA110](#): Offers slightly better starting torque for variable voltage areas.

### 5 Replacements (Alternative Gas: R134a)\*

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*\*Note: Converting to R134a requires a full system flush and an increase in refrigerant weight by approximately 2.5x.*

1. [Embraco FFI7.5HAK](#): A heavy-duty 1/5+ HP workhorse.
2. **Danfoss / Secop TL5G**: Precise control and very long lifespan.
3. [ZMC GL90AA](#): High-capacity LBP unit for larger freezers.
4. [Samsung MSA170](#): Common in the replacement market for side-by-side units.
5. **Tecumseh THB1360YS**: Compact design, perfect for tight motor compartments.

**Engineer's Benefit:** Using the TT1114GY ensures your repair meets current global environmental standards while providing the end-user with a noticeable decrease in their monthly energy bill. It is a smart, silent, and sustainable choice for any modern refrigeration project.

**Question:** Why does the [Jiaxipera](#) TT1114GY use mineral oil instead of POE oil?

**Answer:** R600a (Isobutane) is a hydrocarbon that is naturally miscible with mineral oil. Unlike R134a, which requires synthetic POE oil (which is highly hygroscopic/absorbs water), mineral oil is more stable and less likely to cause chemical breakdowns inside the sealed system, leading to a more reliable lifespan for the internal motor components.



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