Jiaxipera TT1113GY Compressor 1/5 HP R600a technical specifications and professional replacement guide for domestic refrigeration and freezing systems

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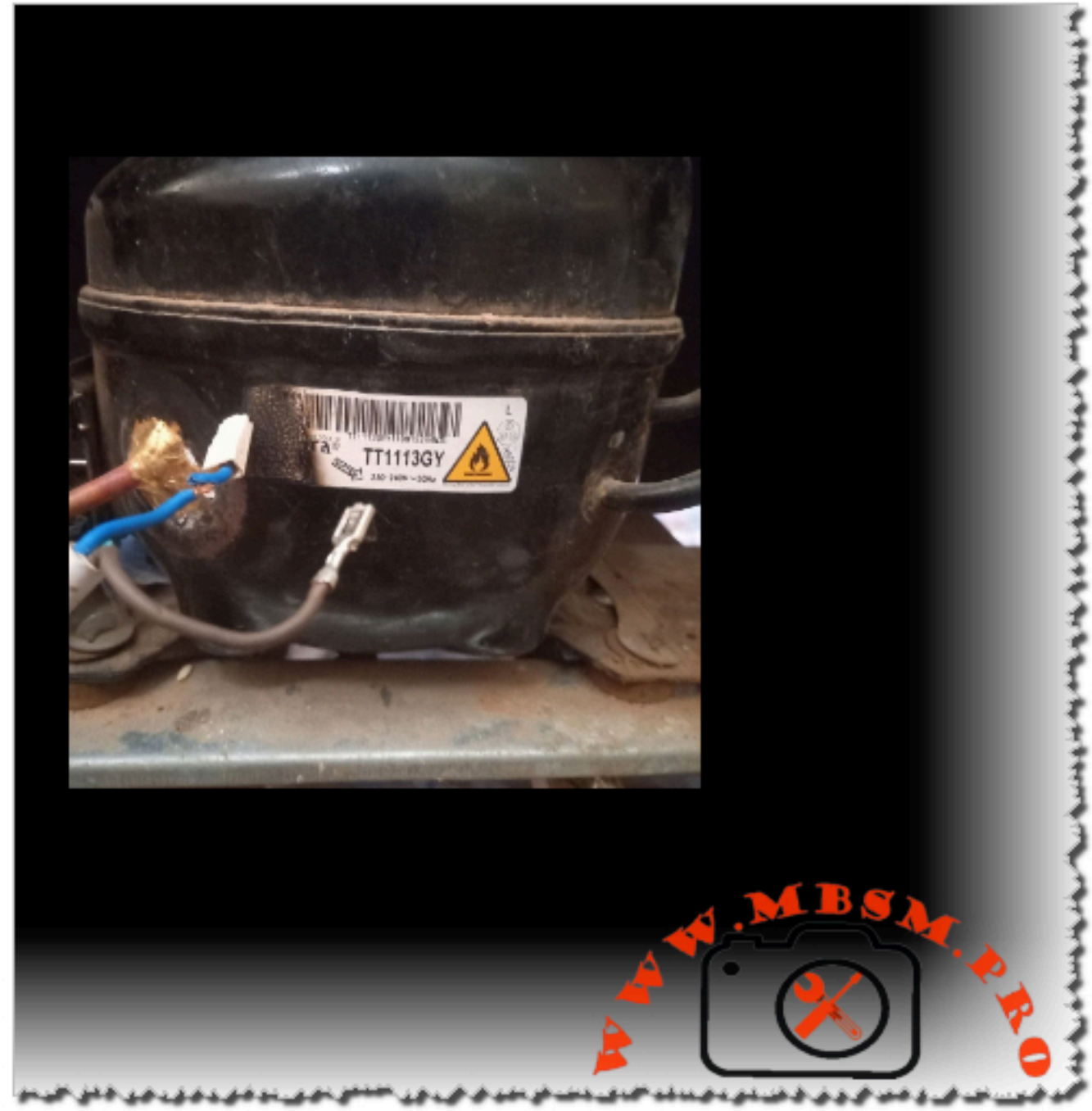

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Focus Keyphrase

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SEO Title

Mbsmpro.com, Compressor, Jiaxipera, TT1113GY, 1/5 hp, Cooling, R600a, 155 W, 0.9 A, 1Ph 220-240V 50Hz, LBP, RSIR, -30°C to -10°C, Household Refrigerator

Meta Description

Discover the full technical profile of the Jiaxipera TT1113GY compressor. Expert insights on this 1/5 HP R600a LBP unit, including cooling capacity, wiring, and replacement alternatives.

Slug

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Tags

Mbsmgroup, Mbsm.pro, mbsmpro.com, mbsm, Jiaxipera TT1113GY, R600a Compressor, 1/5 HP Compressor, HMK95AA, EMX55CLC, TLES8.7KK.3, NLX8.8KK, GLY90AA, TT1114GY, Jiaxipera Replacement, Refrigerator Repair, HVAC Expert

Excerpt

The Jiaxipera TT1113GY is a cornerstone of modern domestic refrigeration, operating as a 1/5 HP Low Back Pressure compressor optimized for R600a refrigerant. This high-efficiency unit is widely used in household refrigerators and freezers, offering a cooling capacity of 155 Watts. This guide covers all essential technical data, electrical characteristics, and professional replacement options.

Technical Specification Table

Feature	Detailed Specification
Model	TT1113GY
Utilisation (mbp/hbp/lbp)	LBP (Low Back Pressure)
Domaine (Freezing/Cooling)	Domestic Refrigeration / Freezing
Cooling wattage at -23.3°C	155 W
Cubic feet can this compressor cool?	12 – 16 cu.ft. (depending on insulation)
Litres can this compressor cool?	300 – 450 Liters
Kcal/h	133 Kcal/h
Oil Type and quantity	Mineral / Alkylbenzene (180 ml)
Horsepower (HP)	1/5 HP
Refrigerant Type	R600a (Isobutane)
Power Supply	220–240V / 50Hz / 1 Phase
Cooling Capacity BTU	529 BTU/h
Motor Type	RSIR (Resistance Start – Inductive Run)
Displacement	8.9 cm^3
Winding Material	Copper/Aluminum (OEM standard)
Pression Charge	Low side (typical 0.5 to 1.5 psi running)
Capillary Recommendation	0.031″ ID (Length varies by cabinet)
Refrigerator Compatibility	Whirlpool, Beko, Haier, Bosch, Hisense
Temperature function	-35°C to -10°C
With fan or no	Static Cooling (No fan required)
Commercial or no	Domestic Only
Amperage in function	0.8 A – 1.1 A
Lara (LRA)	6.5 A
Type of relay	PTC Starter
Capacitor	No (Usually 4µF or 5µF optional for RSCR)
Origin/Export	China / Worldwide

Compressor Replacements (Equivalent Performance)

5 Replacements in same gas (R600a)

1. **ACC / Secop:** HMK95AA
2. **Embraco:** EMX55CLC
3. **Danfoss:** TLES8.7KK.3
4. **GMCC:** SZ90E1H
5. **Wanbao:** HML110YE

5 Replacements in different gas (R134a)

Note: Requires system flush, oil check, and capillary adjustment.

1. **Embraco:** EMI 70HER
2. **ZMC:** GM70AZ
3. **Tecumseh:** THG1365Y
4. **GMCC:** SE54E1J
5. **Jiaxipera:** N1113KZ

The Engine of Domestic Cooling: An Expert Look at the Jiaxipera TT1113GY

In the world of modern appliances, the transition toward eco-friendly refrigerants has made the **Jiaxipera TT1113GY** a standard-bearer for efficiency and reliability. As someone who has spent years in the field, diagnosing cooling cycles and performing heart transplants on refrigerators, I can tell you that this 1/5 HP unit is a workhorse designed for longevity—provided it is handled with professional care.

The TT1113GY is specifically engineered for **Low Back Pressure (LBP)** applications. This means it thrives in environments where it needs to pull heat out of a frozen space and maintain temperatures well below zero. What makes this model stand out in the current market is its optimization for **R600a (Isobutane)**.

Performance Metrics and Thermodynamic Efficiency

Understanding the efficiency of a compressor requires looking at the **Coefficient of Performance (COP)**. The TT1113GY is designed to provide maximum cooling output while minimizing electricity draw. This is vital for modern energy-star ratings.

Efficiency Metrics (COP) Table

Evaporating Temp (°C)	Cooling Capacity (Watts)	Power Consumption (Watts)	COP (W/W)
-30	108	92	1.17
-25	142	105	1.35
-23.3 (Standard)	**155**	**112**	**1.38**

-20	185	120	1.54
-15	240	135	1.77
-10	310	150	2.06

Comparison: Jiaxipera TT1113GY vs. Standard R134a Units

When comparing this R600a unit to older R134a compressors like the GM70AZ, there are distinct differences. The R600a molecules are larger, and the compressor runs at a lower discharge pressure. This results in quieter operation and a significant reduction in environmental impact (Global Warming Potential). However, the TT1113GY uses about 40-50% less refrigerant charge by weight than an R134a counterpart, making precise charging critical for field technicians.

Expert Insights: Field Worker Perspective

If you are replacing a compressor, here is what my experience has taught me about the TT1113GY:

1. **Cleanliness is Godliness:** Because R600a uses mineral or alkylbenzene oil, moisture is your worst enemy. Always replace the filter drier and use a high-grade vacuum pump.
2. **Capillary Precautions:** The TT1113GY has a 8.9cc displacement. If you are retrofitting this into a cabinet that previously held a smaller 7.5cc unit, monitor your frost pattern closely; you may need to adjust the capillary length to prevent liquid slugging back to the compressor.
3. **Startup Reliability:** The RSIR motor is simple and effective. If you encounter startup issues, 90% of the time it is a failing PTC relay rather than the windings themselves.

Pro Tip for Longevity

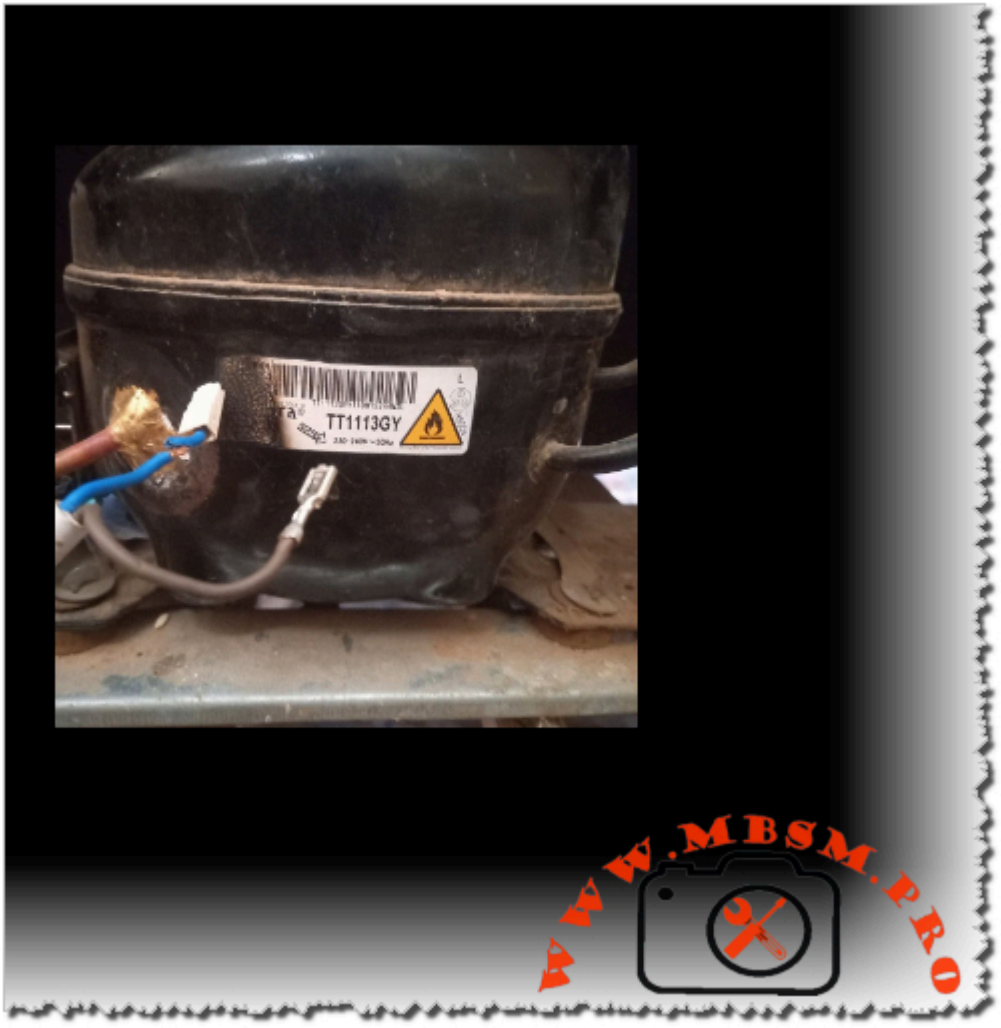
Ensure the condenser coils are free of dust. While the TT1113GY is a “static cooling” unit (often not needing a fan), it relies on convection. In tight kitchen cabinets, heat buildup is the number one killer of these compressors. Giving the unit “room to breathe” will extend its life by years.

Internal Electrical Configuration (RSIR)

codeText

```
[Overload Protector]
             |
             C (Common)
            / \
           /   \
 (Main)   M     S (Start)
           \   /
            PTC (Relay)
             |
          [Line In]
```

(This schematic represents the typical PTC/RSIR wiring for the TT1113GY without a run capacitor.)



1/5 HP Compressor, EMX55CLC, GLY90AA, HMK95AA, Jiaxipera Replacement, Jiaxipera TT1113GY, mbsm, mbsm.pro, mbsmgroup, mbsmpro.com, NLX8.8KK, R600a compressor, Refrigerator Repair, TLES8.7KK.3, TT1114GY

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