TOSOT TS-H246JAL3 - MBSM DOT PRO

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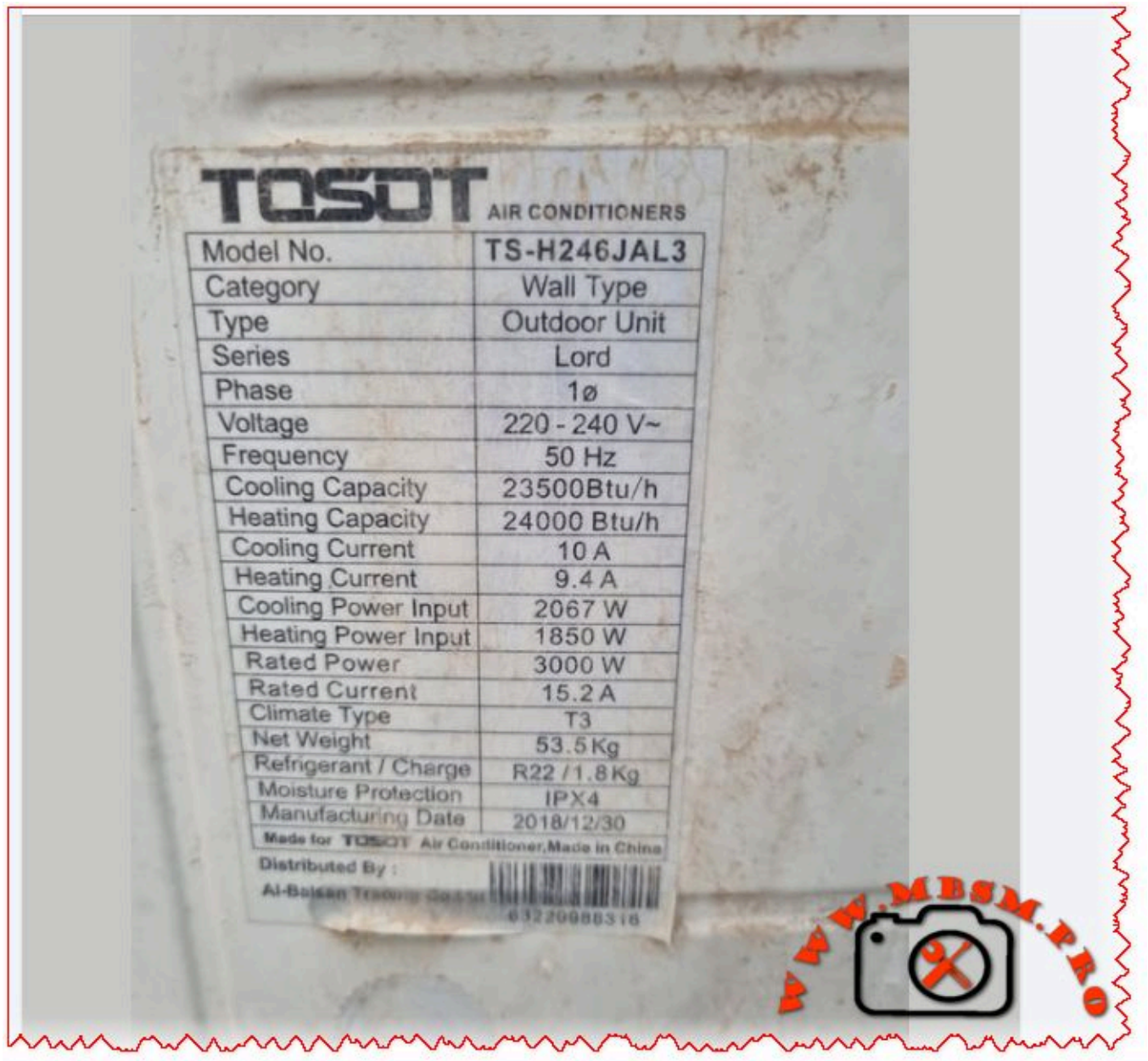

Electrical Schematic & Connection Guide

Since this is a single-phase (1ϕ) unit, the electrical system relies on a **Permanent Split Capacitor (PSC)** motor. Below is the technical breakdown of the wiring logic for this 2-ton TOSOT unit:

- **Compressor Wiring:** * **Common (C):** Connects directly to the Overload Protector (Internal).
  - **Start (S):** Connects to one side of the **50 μF Capacitor**.
  - **Run (R):** Connects to the Neutral line and the other side of the capacitor.

- **Outdoor Fan Motor:** Usually wired in parallel with the compressor power supply, using its own smaller capacitor (typically 5-7 μF).

Technical Article: TOSOT TS-H246JAL3 Lord Series Analysis

Focus Keyphrase: TOSOT TS-H246JAL3 2 Ton Compressor Specifications and R22 Engineering Guide

SEO Title: Mbsm.pro, TOSOT TS-H246JAL3, 2 Tons, 24000 BTU, R22, 220V, Lord Series Outdoor Unit

Meta Description: Technical deep-dive into the TOSOT TS-H246JAL3 2-ton outdoor unit. Features 23,500 BTU cooling, T3 tropical climate rating, and professional R22 compressor replacement data for HVAC engineers.

Slug: tosot-ts-h246jal3-2-ton-compressor-specs

Tags: Mbsmgroup, Mbsm.pro, mbsmpro.com, mbsm, TOSOT, TS-H246JAL3, 2 Ton AC, 24000 BTU, R22 Refrigerant, T3 Tropical Compressor, Panasonic 2K28 replacement, Samsung PH41 replacement.

Excerpt: The TOSOT TS-H246JAL3 is a high-performance 2-ton outdoor air conditioning unit from the Lord Series, specifically engineered for T3 tropical environments. Delivering 23,500 BTU/h of cooling power, this R22-based system is a staple for technicians requiring reliability in extreme heat. This article provides full technical specifications and professional cross-reference guides.

Professional Specification Table

Model Parameter	Technical Data
Model	TS-H246JAL3
Tonnage	2 Tons
Utilization	HBP (High Back Pressure)
Domaine	Cooling & Heating (Heat Pump)
Oil Type	Mineral Oil (SUNISO 4GS or equivalent)
Horsepower (HP)	2 HP
Refrigerant Type	R22
Refrigerant Charge	1.8 Kg
Power Supply	220-240V / 50Hz / 1ϕ
Cooling Capacity	23,500 BTU/h
Heating Capacity	24,000 BTU/h
Motor Type	PSC (Permanent Split Capacitor)
Climate Type	T3 (Tropical – Up to 52°C)
Running Amperage	10.0 A (Cooling)
LRA (Locked Rotor)	52 A
Capacitor Value	50 μF / 450V

Performance Comparison: R22 vs. R410A (2-Ton Class)

In the field, the TS-H246JAL3 uses R22, which offers distinct operational differences compared to modern R410A units of the same tonnage.

Feature	TOSOT TS-H246JAL3 (R22)	Standard 2-Ton (R410A)
Operating Pressure (Suction)	65 – 75 PSI	115 – 130 PSI
Discharge Temperature	Moderate	High
Compression Ratio	Lower (Longer Life)	Higher
Oil Sensitivity	Low (Mineral)	High (POE – Hygroscopic)

Professional Replacement Cross-Reference

If the compressor fails, these models are the gold standard for direct replacement without modifying the chassis:

5 Direct R22 Replacements

1. **Panasonic:** 2K28C225A (Industry Standard)
2. **Samsung:** PH41VP-ET
3. **LG:** QP442PED
4. **Highly:** 203DH-32C2
5. **Mitsubishi:** RH313VAGT

5 Alternative Replacements (Conversion Required)

1. **GMCC:** PA240M2C-4FT (R410A)
2. **Gree:** QXF-B239zH070 (R410A)
3. **Panasonic:** 5RS092DAA (R410A)
4. **Copeland:** ZP24K5E (R410A Scroll)
5. **Tecumseh:** RK5515E (R22/R407C)

Engineer’s Notice & Field Advice

- **T3 Climate Advantage:** This unit is rated for T3. As an expert, I recommend ensuring the outdoor unit has at least 50cm of clearance from any wall. T3 units move a massive amount of heat; restricting airflow will cause the amperage to spike above the rated 10A, leading to premature winding failure.
- **Capacitor Maintenance:** The 50 μF capacitor is the most common point of failure. If the compressor hums but doesn’t start (drawing high LRA), check the capacitor before condemning the compressor.
- **Charging by Weight:** Since the system uses 1.8 Kg of R22, always charge using a digital scale. Overcharging an R22 system in a T3 environment causes liquid slugging and destroys the valve plates.

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