Secop TLES6FT.3 R134a 1/5 HP LBP Compressor Specifications and Replacement Guide

Category: Refrigeration
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When it comes to domestic refrigeration, few names carry as much weight as Secop. Formerly known under the Danfoss brand, these Slovakian-made powerhouses have become the backbone of reliable household cooling. Today, we're breaking down the **TLES6FT.3**, a Low Back Pressure (LBP) compressor designed for efficiency and long-term durability in R134a systems.

If you're a technician in the field, you know that the TLES series is prized for its compact footprint and low noise levels. It's a "set it and forget it" component that handles the rigorous demands of modern energy standards without breaking a sweat.

Technical Data & Performance Specifications

The following data provides a granular look at the mechanical and electrical heart of this unit.

Feature	Specification
Model	TLES6FT.3
Utilisation	LBP (Low Back Pressure)
Domaine	Freezing / Cooling
Cooling Wattage (-23.3°C)	149 Watts (ASHRAE)
Cooling Capacity (BTU/h)	508 BTU/h
Cubic Feet Capacity	Approx. 7 to 9.5 cu. ft.
Liters Capacity	200 – 270 Liters
Kcal/h	128 Kcal/h
Oil Type and Quantity	POE (Polyolester) / 180 ml
Horsepower (HP)	1/5 HP
Refrigerant Type	R134a
Power Supply	220-240V / 50Hz / 1 Phase
Motor Type	RSIR/CSIR (Depending on Starter)
Displacement	5.70 cm^3
Winding Material	Copper
Pressure Charge	Low Pressure (Suction Side)
Capillary Tube (Suggested)	0.031″ ID x 3 meters (Approx.)
Appliance Type	Refrigerators, Deep Freezers
Operating Temp Range	-35°C to -10°C
Cooling Method	Static (No Fan Required)
Commercial Class	Domestic / Light Commercial
Amperage (RLA)	0.95 A – 1.1 A
Locked Rotor Amps (LRA)	7.5 A
Start Relay	PTC or Electromagnetic
Run Capacitor	Optional (usually not required for RSIR)
Country of Origin	Slovakia

Efficiency Metrics (COP) & Performance Curve

Efficiency is where the TLES6FT.3 truly shines. The Coefficient of Performance (COP) varies based on the evaporating temperature. Use this table for precise diagnostics during system charging.

Evaporating Temp (°C)	Cooling Capacity (Watts)	Power Consumption (Watts)	COP (W/W)
-35	82	88	0.93
-30	110	102	1.08
-23.3 (Standard)	**149**	**122**	**1.22**
-20	172	134	1.28
-15	215	150	1.43

Evaporating Temp (°C)	Cooling Capacity (Watts)	Power Consumption (Watts)	COP (W/W)
-10	268	168	1.60

Wiring & Connection Schematic

For the electrics, the TLES6FT.3 utilizes a standard triangular pin configuration. Proper wiring is essential to prevent winding burnout.

- **Common (C):** Top Pin.
- **Run (R):** Bottom Right Pin.
- **Start (S):** Bottom Left Pin.
- **Logic:** The PTC starter bridges the Start and Run windings briefly to initiate rotation. If using a CSIR setup, a start capacitor (usually 60-80 µF) is placed in series with the start winding.

Cross-Reference & Replacement Guide

If the TLES6FT.3 is unavailable, these alternatives offer similar displacement and BTU output.

Direct R134a Replacements (Same Gas)

1. **Embraco:** EMS 55 HLC / EMYe 70 CLP
2. **ZMC/Zem:** GL60AA
3. **ACC / Cubigel:** GVY57AA
4. **Huayi:** HYE60MT
5. **Tecumseh:** THB1355Y

R600a Conversion Alternatives (Requires System Flush)

Note: Converting from R134a to R600a requires a complete change of the capillary tube and filter drier.

1. **Secop:** TLY5.7KK.3
2. **Embraco:** EMX55CLC
3. **Jiaxipera:** T1114Y
4. **Sikap:** HMK95AA
5. **Donper:** L72CZ1

Expert Insight: Installation & Maintenance Notice

As a field engineer, I’ve seen these units last 15+ years when installed correctly. The TLES6FT.3 is a “high-tolerance” unit, but it is sensitive to moisture. Because it uses **POE oil**, which is highly hygroscopic (absorbs water), you must keep the system sealed until the very moment of brazing.

- **Pro-Tip:** Always replace the filter drier when swapping this compressor. A 15g or 20g drier is standard for this capacity.

- **Vacuuming:** Do not skip the vacuum stage. A minimum of 250 microns is recommended to ensure the POE oil remains stable.
- **Charging:** Charge by weight according to the refrigerator manufacturer’s label. Overcharging R134a systems will lead to high head pressure and premature valve failure.

Focus Keyphrase

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SEO Title

Mbsmpro.com | Secop TLES6FT.3 Compressor | 1/5 HP | R134a | LBP Guide

Meta Description

Get the technical specs for the Secop TLES6FT.3 compressor. 1/5 HP, R134a, 149W cooling capacity. Includes wiring diagrams, replacement cross-references, and expert COP tables.

Slug

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Tags

Secop, TLES6FT.3, R134a, 1/5 HP, Compressor, Mbsmgroup, Mbsm.pro, mbsmpro.com, mbsm, Slovakia, LBP, EMS55HLC, GL60AA, GVY57AA, HYE60MT, THB1355Y, Refrigeration Repair, Danfoss Compressor

Excerpt

The Secop TLES6FT.3 is a cornerstone of modern domestic refrigeration. This 1/5 HP, R134a compressor is engineered in Slovakia for Low Back Pressure applications, offering a cooling capacity of 149W. Known for its quiet operation and energy efficiency, it is the ideal choice for medium-sized refrigerators and deep freezers looking for long-term reliability.



1/5 hp, Compressor, EMS55HLC, GL60AA, GVY57AA, HYE60MT, LBP, mbsm, mbsm.pro, mbsmgroup, mbsmpro.com, R134a, Refrigeration Repair, Secop, Slovakia, THB1355Y, TLES6FT.3

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