

Copeland D3DS5-100X 10 HP Freezer Compressor

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When it comes to heavy-duty commercial refrigeration, few names carry as much weight as Copeland. A prime example of enduring German engineering is the **Copeland D3DS5-100X-AWM/D**, a robust 10 horsepower (HP) semi-hermetic reciprocating compressor designed specifically for low-temperature freezing applications.

Technical Specifications at a Glance

The nameplate on these newly refurbished units highlights why they remain a staple in cold storage facilities:

- **Displacement:** 49.90 m³/h at 1450 RPM (50 Hz)
- **Motor Rating:** 10 HP (Nominal)
- **Power Supply compatibility:** * 380-420V YY / 3 Phase / 50 Hz
(Operating Current: 19.5 A max | LRA: 107-121 A)
 - 440-480V YY / 3 Phase / 60 Hz (Operating Current: 19.5 A max | LRA: 103-113 A)
- **Maximum Operating Pressure:** High Side: 28 bar / Low Side: 22.5 bar
- **Enclosure Protection:** IP54 Rated

Designed for Low-Temperature Freezing

Equipped with a displacement of nearly 50 cubic meters per hour, this compressor excels at maintaining deep-freeze environments using modern high-pressure refrigerants like **R404A** or **R507**. The inclusion of an oil separator and a deep oil sump ensures that the internal components stay lubricated even during extended low-temperature run cycles, preventing common failure points related to oil migration.

Electrical Configuration and Terminal Inspection

A closer look inside the junction box reveals a standard **Part-Winding Start (AWM/D)** configuration. Terminal links are positioned across the heavy-duty brass studs to accommodate a direct-on-line or part-winding

sequence, effectively minimizing current spikes upon startup.

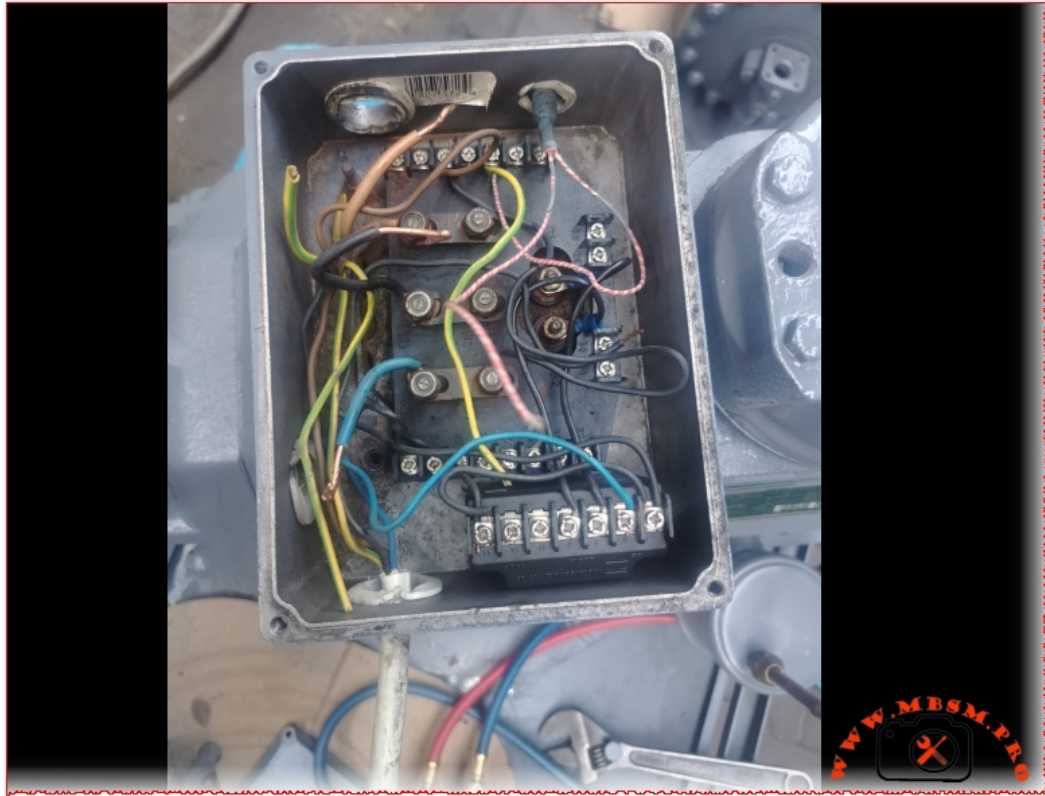
An essential step during installation is cleaning up the older control wiring layout. Technicians should verify that the internal thermistor module (INT69 or equivalent) is correctly integrated into the control circuit to protect the motor windings against overheating.



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