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V-500

Enhanced performance with optimal control.



Key Points:

- Superior performance
- New user friendly Direct Smart Reefer
- Electric stand-by capacity at 85% to 95% of the road capacity
- Guaranteed reliability
- New design
- Ultra slim evaporator
- Flexibility
- Low noise
- Exclusive TCC (Triple Cooling Capacity) feature

V-500 Features and Options

Standard Features:

- Jet Lube™ compressor lubrication
- In-cab Direct Smart Reefer controller
- Automatic hot gas defrost
- Electronic thermostat

Dealer Options:

- Data Capture and Communications
 - TKDL-PRO
 - TKDL-SPR
 - TKDL-DCS
 - [Wintrac data analysis software](#)
 - [TrackKing tracking and load monitoring](#)
 - Load Protection
 - [Door switches](#)
 - Life Cost Management
 - [Guaranteed Maintenance Contracts \(Total Kare\)](#)

V-500 Specifications

Description:

- The V-500 Series from Thermo King comprises two-piece split units designed for fresh, frozen and deep frozen applications on medium-sized trucks and vans. The road compressor is powered by the vehicle's engine. In models with electric stand-by, the second one is powered by an electric motor.

New exclusive TCC (Triple Cooling Capacity):

- [New exclusive TCC \(Triple Cooling Capacity\)](#) feature offers you three capacities and fan speeds to automatically match cooling needs of varying intensity. The TCC level is adjusted according to the pressure read within the refrigeration circuit.

Optimized Performance with Exclusive Technology:

- **Outstanding Pulldown Capacity with TCC1.** The unit is working at its highest capacity level with both condenser fans running at maximum speed.
- **Ideal for Tropical Conditions.** The maximum capacity level makes it possible to function in ambient temperatures up to 50 degrees C.
- **Low Fuel Consumption and Running Costs.** Performance is optimized according to the capacity demand thereby reducing the fuel consumption of the truck the capacity delivered is matched to the demand. when working in steady or low demanding conditions, the condenser fans will run at low speed or stop as required.
- **Low Noise Level.** Noise is kept to a minimum level in any operating conditions. Particularly in steady state conditions, where there is virtually no noise. In electric stand-by operation, the sound power level varies by 6dbA according to the TCC level. On road operation, the compressor is driven by the engine of the vehicle, hence the noise from the unit is very small in comparison with that of a self-powered unit.

Guaranteed Reliability:

- Option of Thermo King exclusive reciprocating road compressor offers a 5 times longer life.
- Semi-hermetic reciprocating stand-by compressor.
- Electrical components protected from water and humidity inside a hermetic box.
- New control system (TCC) reduces the working time of the condenser fans.)

New Design:

- Styled with rounded angles.
- Smooth curvature of the front panel.
- No visible screws.

- Chic design of the electric box panel.
- Completely white appearance.
- Ultra Slim Evaporator (only 220mm in height) to maximize payload.

Easy Installation and Easy to Service:

- Front cover fixed to the structure by the means of plastic clips.
- Clip-on electric cover.
- Speedy clip system for hoses and connections.

Models Available:

- [Click For Model Chart](#)

Refrigeration Capacity: European Standard

| Air Return/ On the Road | | Reciprocating Compressor | | Swash Plate Compressor | | Electric Stand-by 50Hz | |
|----------------------------|-----------|-----------------------------|--------|---------------------------|--------|---------------------------|--------|
| Degrees C | Degrees F | Watts | Btu/hr | Watts | Btu/hr | Watts | Btu/hr |
| 0 | 32 | 4025 | 13750 | 3510 | 11990 | 3305 | 11290 |
| -20 | -4 | 1600 | 5465 | 1500 | 5125 | 1250 | 4270 |

Refrigerant:

- HFC R-134a
- Chlorine: Zero
- Refrigerant charge
 - V-500 10: 2.2kg (4.85 lbs)
 - V-500 20: 2.4kg (5.3 lbs)

Defrost:

- Automatic hot gas defrost

Compressor (Engine Driven):

- Reciprocating compressor (TK-312R)
 - Number of cylinders: 3
 - Displacement: 11.4 cu in (186.7 cm³)
 - Speed Max recommended: 3,000 rpm
 - Jet Lube™ compressor lubrication system
- Swash plate compressor (TM16)
 - Number of cylinders: 3
 - Displacement: 9.9 cu in (163 cm³)
 - Speed Max recommended: 3,000 rpm
 - Jet Lube™ compressor lubrication system

Evaporator Fan Performance:

- Evaporator fan performance at 0 in. (0 mm) water column external static pressure:
- Airflow volume: ES500: 1415 cfm (2400 m³/h)

Electric Motors:

- Total current consumption:
 - 12Vdc - 36A
 - 24Vdc - 18A
- Total stand-by current consumption:
 - 230V/1-Phase/60Hz: 12.7A
 - 400V/3-Phase/50Hz: 6.8A
 - 230V/3-Phase/50Hz: 13.6A
 - 230V/3-Phase/60Hz: 14.1A

System Components:

- Condenser
- ES500 Ultra Slim Evaporator
- Installation kit
- In-cab Direct Smart Reefer
- Engine driven compressor choice between reciprocating and swash plate compressor

| Weight: (approximate) | lbs | kg |
|------------------------------------|-----|------|
| Condenser without electric standby | 150 | 68 |
| Condenser with electric standby | 309 | 140 |
| ES500 Ultra Slim Evaporator | 56 | 25.5 |
| Reciprocating Compressor | 29 | 13 |
| Swash Plate Compressor | 16 | 7.5 |

| Dimensions: | Height | Width | Depth |
|-------------|--------|-------|-------|
|-------------|--------|-------|-------|

| | | | | | | |
|----------------------------|---------|--------|---------|---------|---------|--------|
| Condenser | 17.6 in | 448 mm | 50.9 in | 1292 mm | 18.7 in | 475 mm |
| ES500 Ultra Slim Evap | 8.7 in | 220 mm | 51.3 in | 1304 mm | 22.1 in | 562 mm |
| In-cab Direct Smart Reefer | 1.8 in | 46 mm | 5.3 in | 135 mm | 1.0 in | 25 mm |

Specifications are subject to change without notice.

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