



## T Series

*The most reliable HVAC system for transit is now better than ever.*





## High performance and reliability for more than 30 years *T-Series: The HVAC design that changed an industry.*



### Low life cycle costs

Performance proven components provide long service life and minimum maintenance for low life cycle costs.

### Lightweight

Lightweight all aluminum frame, blowers, coil headers and compressor reduce bus stress and fuel consumption.

### Easy to service

Convenient service access to all major components. Simplified electrical troubleshooting with microprocessor controls. Removable access panels and a convenient rear window location provide easy access to unit components for repairs or maintenance.

### Same major components and options across platform.

T Series units have many of the same internal components in the electrical and refrigeration systems, assuring a readily available supply of parts and parts interchangeability to lower costs and minimize downtime.

### Easy to install

T Series units are easy to install and service because of the compact, one-piece design.

### Proven dependability

You know you're getting a dependable, reliable bus air conditioning and heating system that can lower your operating and maintenance costs and keep your bus riders cool.

*Best Value, Best Performance.*



# T-Series All-Electric HVAC Options

*Help Drive Energy Efficiency and Sustainability in Your Organization!*

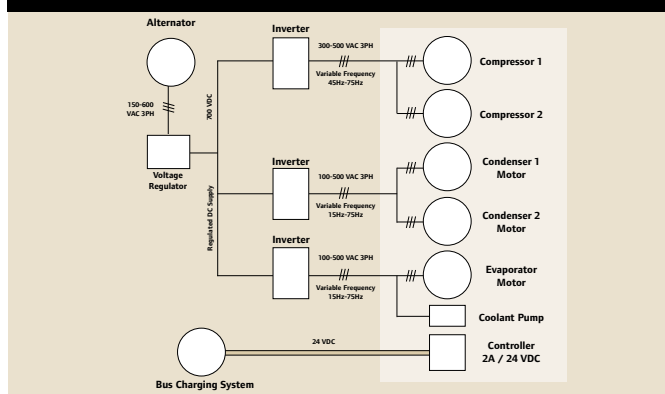
## TEA Series



## TE Series

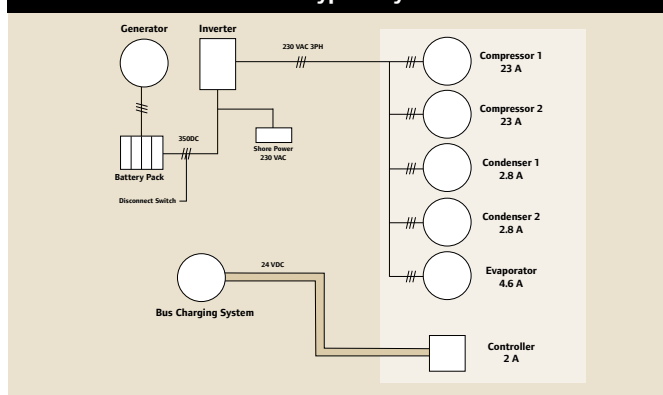


**Power Circuit - Alternator Powered Electric Unit**



For use on standard diesel engine-driven buses.

**Power Circuit - Typical Hybrid Electric**



For use on hybrid electric and all-electric buses.



Power Electronics for Alternator Powered All-Electric HVAC

For complete All-Electric specifications, see your local Thermo King dealer or call 952-887-2241



## T Series Specifications

### Evaporator Airflow\* \*

0 mm (0 in.) water column  
external static pressure  
High speed fan  
-3814 m<sup>3</sup>/hr (2250 cfm)  
Low speed fan  
-2366 m<sup>3</sup>/hr (1400 cfm)

\* \*Consult factory for optional airflow on high speed or low speed fan operation.

### Performance Data

System net cooling capacity with 35°C (95°F) ambient, and 26.7°C (80°F) db, 19.5°C (67°F) wb evaporator return air (50% RH):

### Refrigerant HFC R-407c\*

CompressorNet System Capacity				
RPM	Btu/hr	KCal/hr	HP	
1000	66,700	16,808	7	
1800	88,400	22,277	15	
2400	97,300	24,520	21	
2800	101,000	25,452	24	

### Refrigerant HFC-134a\*

CompressorNet System Capacity				
RPM	Btu/hr	KCal/hr	HP	
1000	45,700	11,516	6	
1800	73,600	18,547	12	
2400	83,900	21,143	15	
2800	86,000	21,672	18	

\* Nominal cooling system capacities shown above may vary depending upon the specific T Series unit model (frame size) selected. Consult factory for more specific performance data for your application.

### System Heating Capacity

24,696 KCal/hr (98,000 Btu/hr)  
@ 8 GPM & 160°F water

### Electric Power Requirements

AT 27V dc  
High speed fan: 106 amps (high speed evaporator and condenser fans)  
Power source: Bus alternator or Thermo King batteryless alternator (options below)

### Unit Operation W/Driver Mode Switch

**Reheat:** Compressor clutch continuously engaged, boost pump and water control valve cycling is controlled by thermostat.

**Cool:** Compressor clutch cycles On/Off on demand of thermostat.

**Vent:** Evaporator fan operation only.

**Heat:** Boost pump and water control valve cycle on demand of thermostat.

Compressor clutch off.



*Add Thermo King's T-Series HVAC System to Your Specification Today!*



Thermo King offers system diversity to fit your individual requirements.

## Unmatched versatility to meet customer specifications

### 2 Refrigerant Options

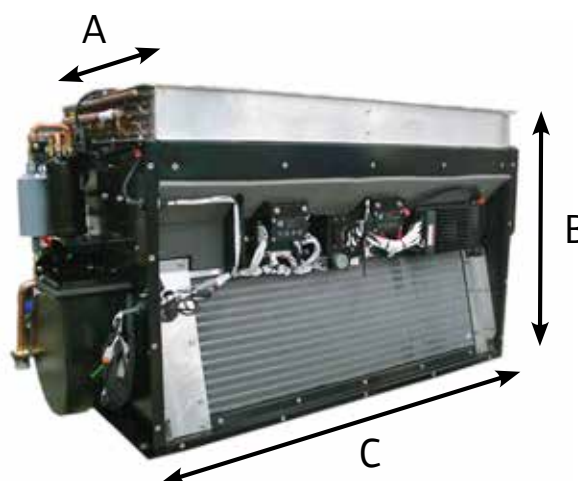
- R134a
- R407C

### 3 Motor Options

- Brushless
- Wound Field
- Permanent Magnet

### 3 Compressor Options

- X426/X430
- S391 Screw
- S616 Screw



Unit	A (Depth)	B (Height)	C (Width)	Weight
T 14	683 mm (26.9")	902 mm (35.5")	1636 mm (64.4")	168 KG (370 lbs)
T 15	658 mm (25.9")	963 mm (37.9")	1618 mm (64.4")	173 KG (380 lbs)

*The Best Solution Available for CNG Rear Mount Applications!*



## T-Series Standard Features

Why pay for more than you want. Thermo King provides standard features designed to meet your needs.

### Thermo King's IntelligAIRE III Control System Delivers Industry-Leading Capability with Unmatched Ease-of-Use

- ✓ Multiple zones can be controlled using identical expansion modules via CAN network and interconnected software
- ✓ Expanded CAN communication capability to plug directly into the vehicle's J1939 network
- ✓ Operator-friendly display and pressure modules for improved control and diagnostics

### Four simple modules remove complexity for operators and technicians



Display Module



Pressure Display Module



Main Module



IO Module



#### High Performance R-407C

- Environmentally safe alternative that provides more BTUs of cooling per HP used

#### R-134a Refrigerant

- Environmentally-friendly solution



#### The Thermo King X430 Compressor

- Engineered exclusively for transport applications
- Built for extended service life
- Field repairable

## Additional Standard Features

#### Evaporator fan motor

- Heavy-duty, double shafted industrial permanent magnetic motor with replaceable bearings and brushes
- 27V, 1.15 hp, 1700 rpm (high speed)
- Drives two large, high airflow, forward curved, centrifugal blowers

#### Condenser fan motors

- Two, heavy-duty, industrial permanent magnet motors with replaceable bearings and brushes
- 27V, .75 hp, 1900 rpm (high speed)
- Each motor drives a 457 mm (18 in.) diameter axial flow fan



## T-Series Optional Features

Take control of your operating costs with these cost-saving options available only from Thermo King.

### Thermo King Brushless Motors



**114-LB. WEIGHT REDUCTION FOR IMPROVED FUEL ECONOMY!**

Designed Specifically for Mobile Air Conditioning

## Lower Your Operating Costs

- Eliminates High Brush Maintenance Costs
- Fewer Parts to Maintain and Replace - Electronic Package is Integral to Motors, Eliminating External Controllers, Harnesses, Terminals and Studs for Lower Costs
- Advanced Diagnostics Provide Failure Mode Indication



### IntelligAIRE III™ Electronic Pressure Display Module

- Touchpad displays four different pressure readings
- Simplifies problem diagnosis and pre-trip inspections



### S391/S616 Screw Compressors

- Exclusive oil management system for increased reliability
- Fewer moving parts than reciprocating compressors
- Lower noise levels and vibration than reciprocating compressors
- Programmable capacity control for fuel savings



### Electronic Energy Management System

- Provides fuel savings with X426, X430 and X640 reciprocating compressors
- Programmable electronic capacity control reduces the parasitic load on the engine



### High Performance Clutch

- Long-life sealed bearing
- More torque for heavy-duty applications
- Extended maintenance intervals

## Additional Optional Features

- Wound field condenser & evaporator fan motors
- Modulating water valve
- 125 amp, 27V dc batteryless alternator (independently powers fan motors and controls)



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