



## *ShuttleAIRE® Systems*

*A complete range of HVAC systems for small and medium sized vehicles.*

A long-exposure photograph of a city street at night, showing light trails from cars and streetlights. The scene is dominated by blue and yellow tones, with modern buildings in the background.

TRANE  
TECHNOLOGIES™



## ShuttleAIRE<sup>®</sup> Systems

Thermo King offers a complete ShuttleAIRE product line to meet a wide range of applications, including small to mid-size buses, vans, ambulances, security vehicles, and special purpose vehicles. These systems are supported by the industry's largest worldwide service organization and are engineered for high performance, reliability and low maintenance for the life of the vehicle.



### *ENGINEERED FOR LIFE*

ShuttleAIRE leverages Thermo King's long history of transport refrigeration and HVAC, resulting in the most reliable HVAC system available for shuttle applications. Each system is engineered and tested to last a minimum of 5 years or 400,000 miles with standard maintenance (see your dealer for warranty details).

### *EFFICIENCY*

Every component has been selected to provide the highest level of system efficiency to maximize passenger comfort.

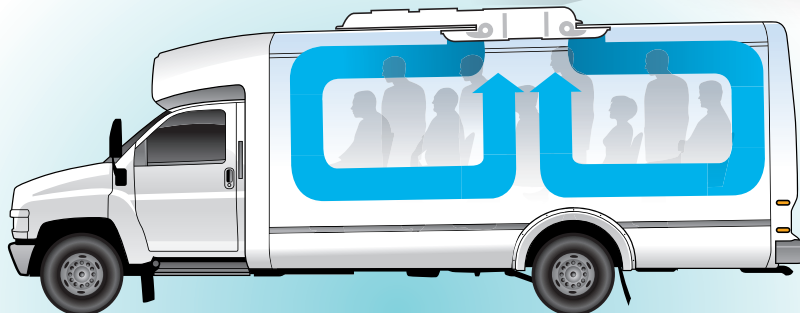
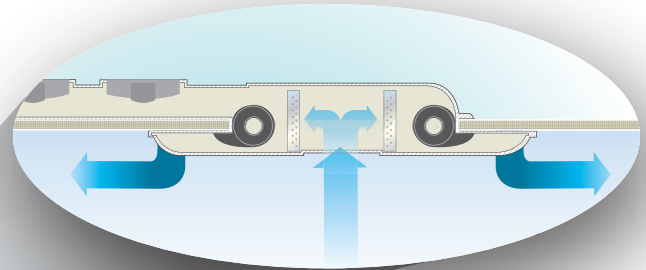
- Proper component selection and sizing decreases engine load for maximum fuel savings
- Thermostatic Expansion Valves (TXV) precisely regulate refrigerant flow for highest efficiency, providing more capacity when needed vs. block valves or orifice tubes
- Oversized condensers ensure proper cooling in extreme climates
- Properly-sized fans give maximum cooling capacity with lower power consumption

### *SAFETY*

Each ShuttleAIRE product has been developed with the highest regard for safety. From standard centralized fusing and power distribution to the structural integrity of the unit, ShuttleAIRE systems have you covered.

# SLR Rooftop Systems

The SLR is a one-piece lightweight rooftop unit that has optimal clearance both inside and outside the vehicle. It delivers superior airflow throughout the vehicle due to its centered position compared to rear or front mounted units and can be configured in multiple ways to deliver the right amount of cooling for the application.



## THERMO KING'S EXCLUSIVE COMFORTEK SYSTEM DELIVERS:

- Better Air Distribution for More Comfortable Passengers
- Multi-Directional Airflow Means No Hot or Cold Spots
- Balanced Performance for Lower Energy Consumption
- Lower Profile Design for Increased Passenger Headroom
- 40% Less Refrigerant Required for Cost and Environmental Savings

FEATURE	BENEFITS
Through-Roof Design inside bus	20-25% quicker installation Safer work environment - no climbing on roof Control panel located inside bus
Mechanical Fittings	Ease of maintenance
Modular Construction	Reduced installation time Eliminates long runs of hoses in bus chassis Moves condenser from the ground, less maintenance, longer life 40% less refrigerant charge
Multiple Configurations from One Basic Design	Flexibility to configure a system for buses from 14' to 32' Flexibility to configure a system for any climate zone.
Injected Structural Foam Construction	Lightweight, rustproof and recyclable

*A REVOLUTIONARY DESIGN - DELIVERING WHAT MATTERS TO OUR CUSTOMERS*

# Split System Evaporators

Split systems provide complete flexibility to meet the cooling needs for even the most demanding applications. Rooftop or skirt, single system or multiple systems, Thermo King provides solutions for every customer need. These units reflect Thermo King's commitment to sustainability, efficiency, and reliability, while maintaining customer value every step of the way.

## SA-SERIES CEILING MOUNT EVAPORATORS

- Long life three-speed blowers for optimal pull down and passenger comfort
- Easily accessible return air filter and blowers for efficient maintenance
- High-quality reusable air filter to enhance air quality
- Optional heat coil



SA-400



SA-600



SA-800

## SA-SERIES DUCTED EVAPORATORS

- Long life three-speed fans for optimal pull down and passenger comfort
- High-quality air filter to enhance air quality
- Optional heat coil
- All-aluminum construction for maximum durability and less weight



SA-600 Ducted



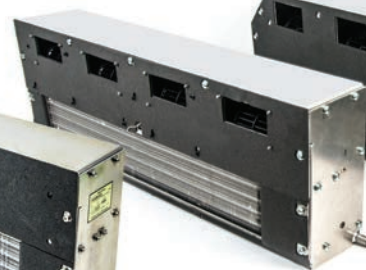
SA-800 Ducted

## BE-SERIES BULKHEAD EVAPORATOR

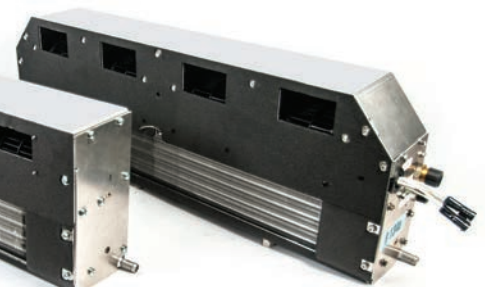
- Lightest, most efficient bulkhead evaporator in the market
- Long life three speed blowers for optimal pulldown and passenger comfort
- Easily accessible return air filter and blowers for efficient maintenance
- Standard aluminum covers for maximum durability
- Right or left side connections
- Compatible with skirt-mount and rooftop condensers



BE-450



BE-550



BE-650

## UNDERMOUNT CONDENSERS

- Fully integrated under the vehicle to minimize impact on aesthetics
- Painted aluminum construction provides excellent corrosion resistance
- Microchannel coils create high-capacity systems while minimizing space and refrigerant charge



SA-400



SA-600/800

## SLC ROOFTOP CONDENSER

- Condenser is removed from harsh road environment: corrosion, heat, debris, and impacts
- Microchannel coils create high-capacity systems while minimizing space and refrigerant charge to reduce costs and environmental impact
- Minimal vehicle height impact - only 6" tall



SA-400/600/800

## CONTROLLERS

Offering You Choice: The Right Controller for Your Application

### ROTARY/ROCKER SWITCH



- Simple Operation
- Optional Heat Switch

### CLIMAAIRE 1D



- Digital Readout
- Diagnostics
- Precise Temperature Control
- Four Operating Modes: Vent, Cool, Heat, Auto
- Remote Temp Sensor
- Fuel Savings

### INTELLIGAIR® III



- Digital Readout
- Advanced Diagnostics
- Precise Temperature Control
- Common to Large Bus
- J1939 Communications
- Remote Temp Sensor
- Fuel Savings

### STANDARD RELAY PANEL



- Centralized Power Distribution
- Individually fused components
- Compatible with all controllers

## COMPRESSORS

A Complete Range of Compressors, Clutches and Manifolds Available for All Applications



TM-16

- Entry-level performance for buses
- 160 cm<sup>3</sup> compressor providing:
  - 4.8 kW idle capacity
  - 8.6 kW max capacity



TM-21

- Improved low-speed performance for buses
- 210 cm<sup>3</sup> compressor providing:
  - 6.1 kW idle capacity
  - 10.2 kW max capacity

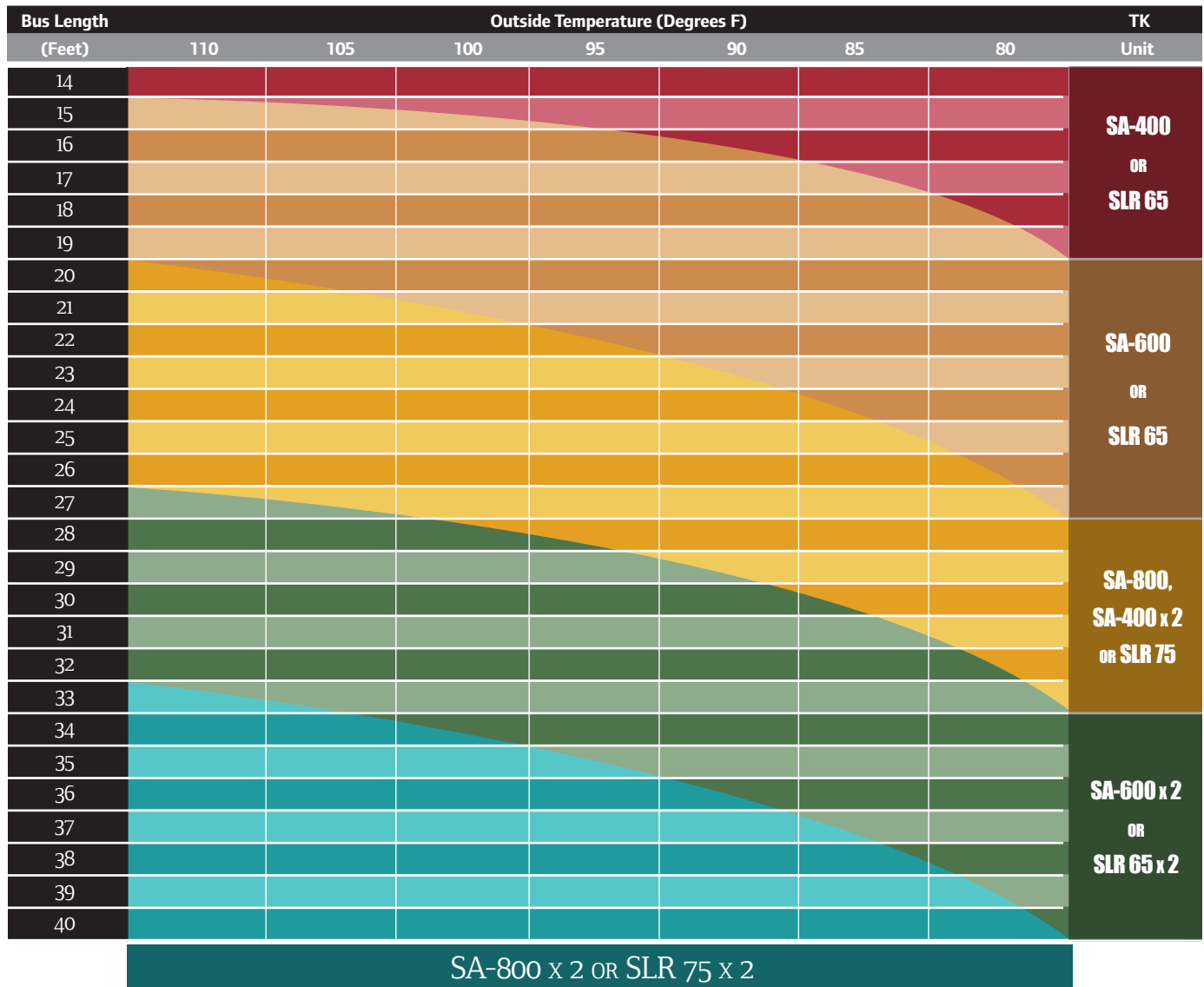


TM-31

- Unmatched low-idle performance for buses
- Oil sump gives maximum durability and reliability
- 310 cm<sup>3</sup> compressor providing:
  - 9.4 kW idle capacity
  - 15.2 kW max capacity

# Selection Guide for your ShuttleAire® system

USE GRID TO DETERMINE THE PROPER UNIT BASED ON CAPACITY:



## SELECT THE RIGHT AIR CONDITIONING UNIT FOR YOUR BUS.

Look up the length of your bus in the left hand column and the typical outside (ambient) temperature across the top row. The color at the intersection of the length and ambient temperature corresponds to the appropriate cooling system for your vehicles as indicated in the right column.

*The selection guide provides an approximate system selection. Variation of selection is dependent on window and insulation ratings. For more details, please contact your local Thermo King dealer or call (952) 887-2200 for assistance.*

# SPECIFICATIONS

Model	SLR-65	SLR-75	SA-400	SA-600	SA-800	BE-450	BE-550	BE-650
IMACA Btu/hr (estimated)	66,000	75,000	46,000	65,000	82,000	45,000	55,000	65,000

Thermo King systems are developed and tested in accordance with American Society of Heating, Refrigeration and Air conditioning Engineers (ASHRAE). ASHRAE testing validates the entire system, ensuring performance in all climates vs. ratings determined via IMACA method, which may only test system components that are not reflective of the installed application.

Leveraging the ASHRAE application philosophy, Thermo King units are designed to deliver the required cooling capacity across the entire engine RPM range. This results in increased passenger comfort, fast recovery and decreased engine load.

Model	SLR-65	SLR-75	SA-400	SA-600	SA-800	BE-450	BE-550	BE-650
Engine Idle Capacity (ASHRE)* BTU/hr / kW	23,500/6.8	30,750/9	16,210 / 4.8	26,548 / 7.8	29,080 / 8.5	15,400/4.5 (estimated)	17,500/5.1 (estimated)	20,150/5.9
Maximum Capacity (ASHRE)* BTU/hr / kW	34,000/ 10.0	38,422 / 11.3	18,620 / 5.4	29,450 / 8.6	32,440 / 9.5	16,700/4.9 (estimated)	18,900/5.5 (estimated)	22,000/6.5
Heating Capacity BTU/hr / kW	42,000/12	-	31,000 / 9.1	42,000 / 12.3	63,000 / 18.5	-	-	-
Evaporator Airflow ft <sup>3</sup> / min (CFM) / m <sup>3</sup> /hr	1,000	1,000	450	800	1,050	250	500	650
Amperage Requirements 12 VDC	65	65	34	48	85	24	48	48
Recommended Compressor	TM-21 or TM-16	TM-31 or TM-21	TM-16 or TM-21	TM-21 or TM-16	TM-31 or TM-21	TM-16 or TM-21	TM-21 or TM-16	TM-21 or TM-16
Refrigerant	R134a	R134a	R134a	R134a	R134a	R134a	R134a	R134a
<b>Weight (lbs)</b>								
Condenser (Rooftop)	-	-	73	73	73	73	73	73
Condenser (Skirt)	-	-	40	51	51	40	51	51
Evaporator Cool Only	-	-	44	64	92	23	26	35
Evaporator Cool/Heat	-	-	48	70	100	-	-	-
Rooftop Cool Only	124	131	-	-	-	-	-	-
Rooftop Cool/Heat	130	-	-	-	-	-	-	-
<b>Dimensions (inches)</b>								
Rooftop Condenser (L x W x H)	82 x 47 x 6	82 x 47 x 6	55 x 47 x 6	55 x 47 x 6	55 x 47 x 6	55 x 47 x 6	55 x 47 x 6	55 x 47 x 6
Skirt Condenser	-	-	34 x 14 x 10	50 x 14 x 10	50 x 14 x 10	34 x 14 x 10	50 x 14 x 10	50 x 14 x 10
Evaporator	-	-	32 x 24 x 9	44 x 24 x 9	61 x 24 x 9	32 x 24 x 9	32 x 6 x 12.5	50 x 14 x 10

\* AHSRAE results are based off the following conditions

TM-21 compressor  
Ambient 95°F, Interior Temperature 80°F, 50%RH  
Idle Capacity: Compressor speed 1,500 RPM  
Max Capacity: Compressor speed 4,000 RPM

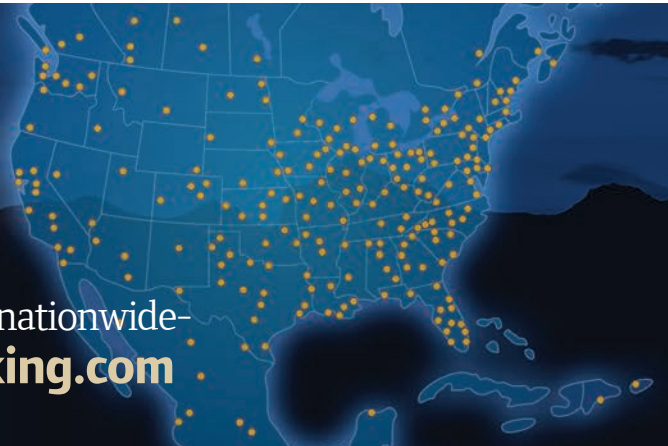
SLR-75 and SA-800  
Results are based off of TM-31 with the same conditions



Expert Service and Support  
are as close as this sign.

Enjoy the support of the  
Thermo King Dealer Network.

Over 200 factory-authorized service centers nationwide-  
**find one nearby at [www.thermoking.com](http://www.thermoking.com)**





Thermo King – by Trane Technologies (NYSE: TT), a global climate innovator – is a worldwide leader in sustainable transport temperature control solutions. Thermo King has been providing transport temperature control solutions for a variety of applications, including trailers, truck bodies, buses, air, shipboard containers and railway cars since 1938. For more information, visit [thermoking.com](http://thermoking.com) or [tranetechnologies.com](http://tranetechnologies.com).

