



THERMO KING

StudentAIRE® Systems

A complete range of HVAC systems for student transport vehicles.



 **Ingersoll Rand®**



StudentAIRE® Systems



Thermo King offers a complete product line of air conditioning products to meet a wide range of applications, including all sizes of school buses. 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.

StudentAIRE High-Capacity Temperature Control Systems Deliver:

- Highest Capacity
- Highest Airflow
- Best Performance
- Worldwide Support
- Best Value

The Right System For Your Application

The StudentAIRE product line is configurable, allowing you to put the cooling where it's needed the most. Split system evaporators can be installed in the front of the vehicle, rear of the vehicle, or both. Condensers are available in both skirt mount and rooftop orientations. A complete lineup of controllers is also available, providing drivers and technicians basic or advanced functionality as required.

Rooftop Efficiency

Integrated rooftop systems are lighter, more compact, and provide better performance. Passenger comfort is improved with centralized airflow, and weight distribution issues can be avoided. Rooftop systems also provide better reliability by moving the components away from the road and are easier to maintain by having most of the serviceable components inside the bus.



SA-Series

Flexible High Capacity Split Systems

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

Evaporators

- Three speed fans for optimal pulldown and passenger comfort
- Easily accessible return air filter and blowers for efficient maintenance
- Optional heat coil
- Galvanneal construction for excellent corrosion resistance
- Dual refrigerant circuits provide redundancy in the event of compressor failure (SA-800 only)



SA-400



SA-600



SA-800

Undermount Condensers

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



SA-400



SA-600/800

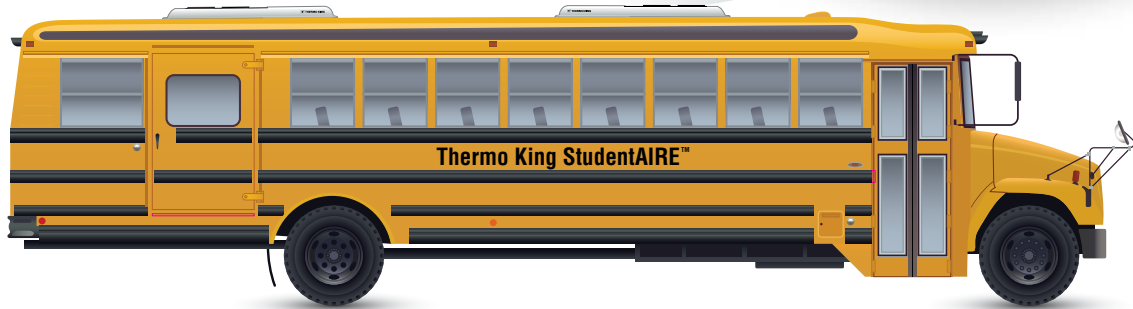
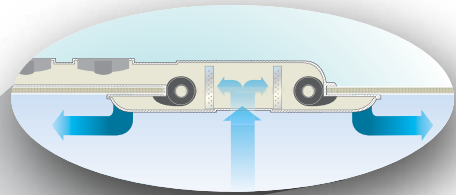
SLC Rooftop Condenser

- 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

StudentAire



SLR

Compact High Capacity Rooftop Solution

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.

- Excellent air distribution for more comfortable passengers
- Low-profile design inside and out
- 90% of service and maintenance performed inside the vehicle
- 40% less refrigerant for reduced cost and environmental impact
- 12 VDC



SLR

SR-50C

The SR-50C is a one-piece rooftop system designed for large shuttle applications. It is supplied with a unique center duct air distribution system, and the unit can be configured to ducted or free-blow configurations.

The SR-50C is Thermo King's highest capacity one-piece system that delivers maximum cooling and airflow performance day in and day out.

- One-piece rooftop system
- Lightweight
- Maximum capacity cooling, heating, and airflow
- Low power consumption
- R134a
- 12 or 24VDC



SR-50C

BE-550/BE-650 Bulkhead Evaporators

Perfect for headroom clearance situations or flushmount front or rear bulkhead areas, Thermo King bulkhead evaporators deliver excellent performance in a tiny amount of space. These units have been designed to deliver superior capacity and durability while performing as efficiently as possible. Coupled with Thermo King's high quality build standards and legendary dealer support, this unit will meet the highest expectations of all: yours.

- Three speed blowers for optimal pulldown and passenger comfort
- Easily accessible return air filter and blowers for efficient maintenance
- Aluminum construction for excellent corrosion resistance and durability with less weight
- Right or left side connections
- Compatible with skirt-mount and rooftop condensers



BE-550

Controllers

Offering You Choice: The Right Controller for Your Application

Standard Controller



- Simple Operation
- Optional Heat Switch

ClimaAIRE 1D



- Digital Readout
- Diagnostics
- Precise Temperature Control
- Four Operating Modes: Vent, Cool, Heat, Auto

IntelligAIRE III



- Digital Readout
- Advanced Diagnostics
- Precise Temperature Control
- Common to Large Bus
- J1939 Communications

Compressors

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



TK-16

- Entry-level performance



TK-21

- Improved low-speed performance



TK-31

- Unmatched low-idle performance
- Oil sump gives maximum durability and reliability

Selection Guide for your StudentAIRE® system

Use the grid to determine the proper unit based on capacity:

		Ambient Temperature									
		120	115	110	105	100	95	90	85		
PASSENGER TEXT	12									SA 400	
	14										
	16										
	18										
	20									BE 550	
	22										
	24										
	26										
	28									SA 600 or SLR 65 or BE 650	
	30										
	32										
	34										
	36									SLR 75	
	38										
	40										
	42										
	44									Dual 400 or single SA 800	
	46										
	48										
	50										
	52									Dual 550 or SA-400/600 combo	
	54										
	56										
	58										
	60									Dual 550 or SA-400/600 combo	
	62										
	64										
	66										
	68									Dual 550 or SA-400/600 combo	
	70										
	72										
	74										
76									Dual 550 or SA-400/600 combo		
78											
80											
82											
84									Dual 550 or SA-400/600 combo		
86											
88											
90											
92											

Dual SLR 75

Dual SLR 65 or SA-800/SA-400
Combo or Dual BE-650

Combo BE 550 and BE 650

Select the right air conditioning unit for your bus.

Look up the number of passengers in the left hand column and the typical outside (ambient) temperature across the top row. The color at the intersection of the number of passengers and ambient temperature corresponds to the appropriate cooling system for your vehicle as indicated in the right column or bottom bar.

Specifications

Model	SA-400	SA-600	SA-800	BE-550	BE-650	SLR-65	SLR-75	SR-50C
Cool	x	x	x	x	x	x	x	x
Heat	x	x	x	-	-	x	-	x
Cooling Capacity kW / Btu/hr (IMACA)	6.4/46000	9.1/65000	12.3/82000	8.2/55000	9.1/65000	9.2/66000	11.7/75000	14.5/110000
Heating Capacity kW/Btu/hr	9.1/31000	12.3/42000	18.5/63000	-	-	12/42000	-	15/51000
Compressor Type	TK-16, TK-21	TK-16, TK-31	TK-16 (x2), TK-21, TK-31	TK-16, TK-21	TK-16, TK-21, TK-31	TK-16, TK-21	TK-16, TK-21, TK-31	TK-21, TK-31
Evaporator Airflow (0" Static) m³/hr ft³/min (CFM)	850/500	1700/1000	2550/1500	1350/800	1700/1000	1700/1000	1700/1000	3250/1920
Evaporator Airflow m³/hr ft³/min (CFM)	765/450	1360/800	2040/1200	850/500	1530/900	1600/940	1530/900	2300/1300
Amperage Requirements 12VDC/27VDC	34/-	48/-	85/-	48/-	65/-	65/-	65/-	80/40
Weight (kg/lbs.)								
Condenser (Rooftop)	33/73	33/73	33/73	33/73	33/73	-	-	-
Condenser (Skirt)	18/40	23/51	23/51	23/51	23/51	-	-	-
Evaporator Cool Only	20/44	29/64	42/92	12/26	14/31	-	-	-
Evaporator Cool/Heat	22/48	32/70	45/100	-	-	-	-	-
Rooftop Cool-Only	-	-	-	-	-	56/124	59/131	85/188
Rooftop Cool/Heat	-	-	-	-	-	59/130	-	88/194
Dimensions (mm/in)								
Rooftop Condenser (LxWxH)	1143x1397x152 45x55x6	1143x1397x152 45x55x6	1143x1397x152 45x55x6	1143x1397x152 45x55x6	1143x1397x152 45x55x6	2083x1194x152 82x47x6	2083x1194x152 82x47x6	2319x1136x215 91.3x44.7x8.5
Skirt Condenser (LxWxH)	864x356x254 34x14x10	1270x356x254 50x14x10	1270x356x254 50x14x10	1270x356x254 50x14x10	1270x356x254 50x14x10	-	-	-
Dimensions Evaporator (LxWxH)	813x610x229 32x24x9	1118x610x229 44x24x9	1549x610x229 61x24x9	813x152x318 32x6x12.5	965/152-365 38x6x14	-	-	-

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





Ingersoll Rand's Climate Solutions sector delivers energy-efficient HVACR solutions for customers globally. Its world class brands include Thermo King, the leader in transport temperature control and Trane, a provider of energy efficient heating, ventilating and air conditioning systems, building and contracting services, parts support and advanced controls for commercial buildings and homes.

Distributed by: