Ingersoll Rand
Climate Control Technologies

Providing equipment and services to manage controlled-temperature environments for food and other temperature-sensitive products, our Climate Control Technologies sector encompasses both transport and stationary refrigeration solutions. Our product brands include Thermo King®, a world leader in transport temperature control systems, and Hussmann®, a manufacturer of refrigeration and food merchandising equipment.

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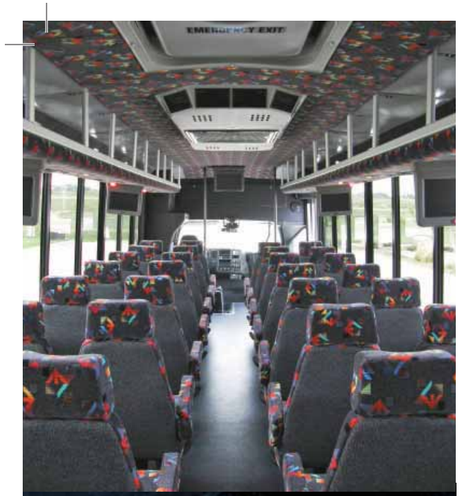
THERMO KING

ShuttleAire®

Environmental control systems for small vehicles.

Ingersoll Rand
Climate Control Technologies



ShuttleAire® High-Capacity Temperature Control Systems

- **Highest capacity**
- **Highest airflow**
- **Best performance**
- **Worldwide support**
- **Best value**

Dependable Retrofit Applications

The ShuttleAire product line is versatile and flexible for both retrofit and factory installations in a variety of small bus HVAC applications.

Choices of undermount and low profile rooftop condensers, ducted or free-flow evaporators, and modular installation kits attractively integrate with vehicle design. A combination of lightweight aluminum, fiberglass and plastic construction enhances aesthetics, is corrosion resistant and reduces maintenance costs.

For the highest capacity and the highest airflow,

Thermo King offers a complete ShuttleAire product line to meet a wide range of applications including small 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 reliability, low maintenance and high performance for the life of the vehicle.

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 vehicle as indicated in the right column.

Select the right components

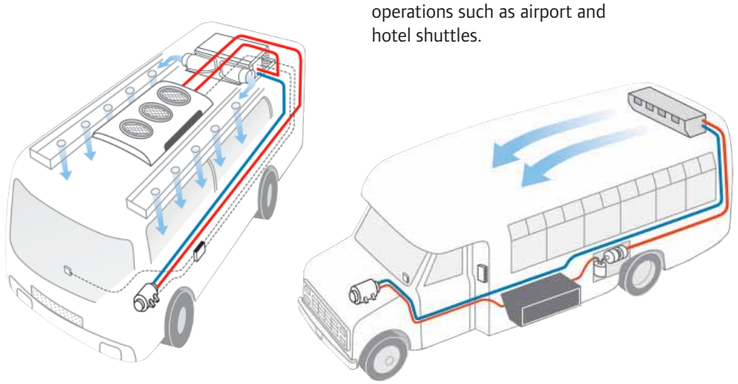
for your application.

Duct system

The ShuttleAire® evaporator, when used with the side discharge plenum, can be installed into a ducted system. The duct distributes the cool air evenly to all areas of the bus interior. This system works best for tour and commuter buses. The evaporator hidden inside the ductwork does not affect appearance.

Free-blow system

The ShuttleAire evaporator is also designed to be installed so the cool air is directly discharged into the passenger area. This creates faster temperature reduction for rider comfort. Since there are no air distribution ducts, the installation is simple and low in cost. This system works particularly well for short haul operations such as airport and hotel shuttles.



Specifications

Models	SR-15	S-20 II	S-30 II	S-40 II	S-50
Capabilities					
Cool	X	X	X	X	X
Ventilate	X				X
Heat	X	X	X	X	X
Maximum Capacity @ 50°C (120°F)					
kw	45	6.8	10.0	13.5	15.5
Btu/hr (ASHRAE)	15,300	23,000	34,000	46,000	53,000
Rated Capacity @ 95°F (35°C) outside 80°F (27°C) dB, 67°F (19°C) wb inside					
kw	4.2	5.3	8.1	11.0	14.5
Btu/hr (ASHRAE)	14,000	18,000	27,500	37,500	50,000
Btu/hr (IMACA)	33,000	40,000	60,000	82,000	110,000
Heating Capacity					
kw	4.0	9.1	12.3	18.5	15
Btu/hr	13,500	31,000	42,000	63,000	51,000
Refrigerant Type	R-134a	R-134a	R-134a	R-134a	R-134a
kg/lbs	1.75/3.9	3/6.5	3.9/8.5	5.5/12	3.7/8.2
Compressor Type					
	TM 08	TM 16	TM 16 TM 21	TM 16 TM21 TM31	TM-16 TM-21 TM-31
Evaporator Airflow					
m^3/hr.	816	892	1487	2295	2300
ft^3/min.(cfm)	480	525	875	1350	1300
Electric Power @12V dc / 24V dc (Amps)					
Evaporator	23/12	14/8	28/16	42/24	80/40
Condenser	—	15/8	22.5/12	30/16	—
Clutch	3.8/1.9	3.8/1.9	3.8/1.9	3.8/1.9	3.8/1.9
Weight					
Cool Only Evaporator	95 (43)	42 (19)	46 (21)	75 (34)	188 (85)
Cool/Heat Evaporator	99 (45)	46 (21)	51 (23)	84 (38)	194 (88)
Evaporator (low-profile)	—	42 (19)	71 (32)		—
Undermount Condenser	—	53 (24)	71 (32)	91(41)	—
Undermount Condenser (low-profile)	—	46 (21)	64 (29)		—
Rooftop Condenser	—	69 (31)	91 (41)	113 (51)	—

Accessories and Controls

Compressors

A complete range of compressors, clutches and manifolds are available for all applications.

ClimaAIRE™ controller

Standard: On/off switch and a three-speed fan switch.

Optional: Cool only or heat/cool electronic thermostats with digital display.

All driver control panels are pre-wired and come with easy-to-install mounting brackets.

Optional heat coil

An optional two-row hot water heating coil that delivers maximum evaporator heating capacity can be added to standard evaporators.

Benefits:

Supplemental heat for passenger comfort and quick defogging of passenger area windows.

Airflow plenum

Where ducted airflow is preferred to free-blow, this plenum can be attached to the standard evaporator to divert the cool air into side ducts that distribute the air throughout the vehicle. The plenum is insulated.

Flexible hoses and clamps are supplied to complete the connection to the duct system.

Choose ShuttleAire®

Use grid to determine proper unit based on capacity:

Bus Length (Feet)	Outside Temperature (Degrees F) 110	105	100	95	90	85	80	TK Unit
14								S-20 II
15								
16								
17								
18								
19								
20								S-30 II or S-20 II + S-20 II
21								
22								
23								
24								
25								
26								
27								S-40 II or S-20 II + S-30 II
28								
29								
30								
31								
32								
33								SR-50 or S-30 II + S-40 II
34								
35								
36								
37								
38								
39								
40								
	S-40 II + S-40 II							

The ShuttleAire® Value Advantage.

Highest cooling capacity + highest airflow = Best performance.

Rooftop condensers

A low-profile, low-maintenance rooftop condenser is available and can be used to protect the condenser from hot road surfaces and road debris.

Undermount condensers

This condenser is fully integrated under the bus body so that bus appearance is not affected by air conditioning components. Aluminum construction for light weight and corrosion resistance.

Low-profile condensers

For small vehicles that have limited under-floor space, S-20 II and S-30 II models have optional low-profile undermount condensers that are 180 mm (7″) deep.

Evaporators

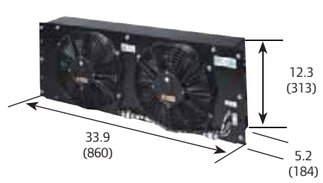
Totally self-contained evaporator includes blowers, cooling coil and condensate drain system. Aluminum construction for durability and long life. Three-speed fans for quick temperature pulldown and comfort. Attractive plastic cover is standard for free-blow system.

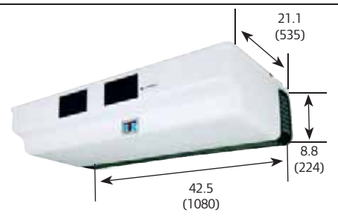
Low-profile evaporators

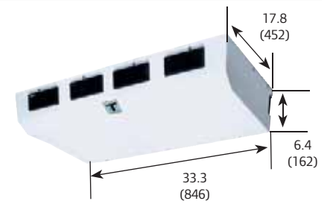
For small vehicles that have limited evaporator space, S-20 II and S-30 II models have optional low-profile evaporators that are 160 mm (6″) high.

all measurements in inches (mm)

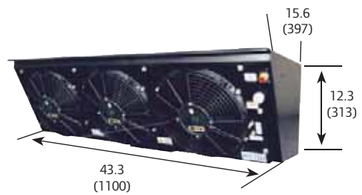
ShuttleAire S-20 II

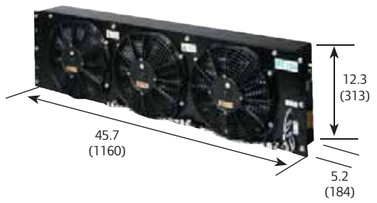


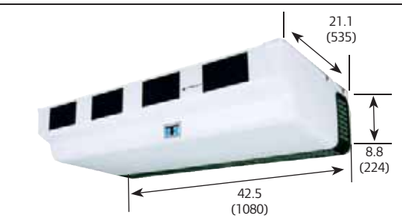


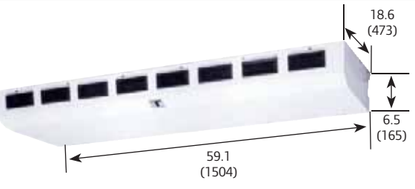


ShuttleAire S-30 II

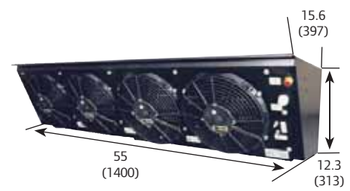


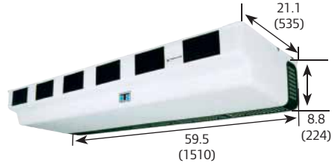




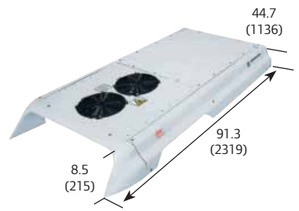


ShuttleAire S-40 II





ShuttleAire S-50



ShuttleAire SR-15