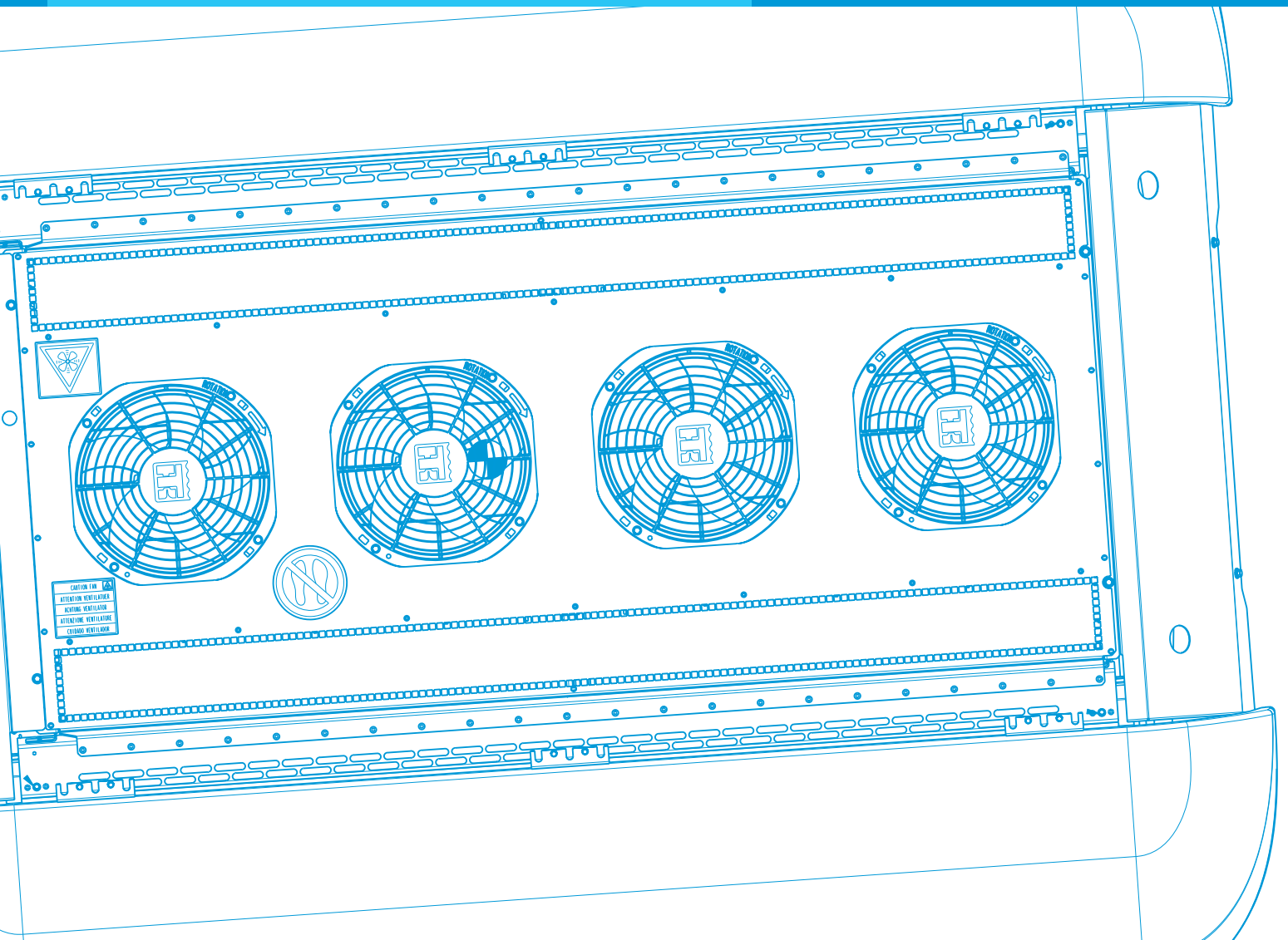


ATHENIA™ MkII SERIES

HVAC ROOF UNITS FOR DIESEL/CNG BUSES



Lower fuel consumption and high passenger comfort

The Athenia™ MkII product range offers the highest ratio between cooling capacity and unit weight, featuring extra light aluminium frames and plastic covers.

CANAIRE® modular expandable control system manages efficient operation and low power consumption through continuous RPM control for fans and blowers.

Athenia™ MkII provides precise temperature control in up to three different zones, with maximised air-conditioning performance efficiency for single, articulated and double-articulated buses.

LCD driver panel with ergonomic design allows for the control of A/C roof units in parallel with a front-box unit placed in the driver's area. It maximizes the efficiency of such system configurations, while lowering the fuel consumption of the bus.

The Athenia™ MkII unit is equipped with a servo-motor controlled fresh air damper, that provides 100% fresh air while reducing fuel consumption.

To further improve air quality and passenger comfort, the AdvanTech™ Fresh Air control option manages the fresh air intake volume based on internal air quality measurement. Built-in CO₂ sensors can be added on demand.

For additional fuel optimisation, the CANAIRE® controller offers customisation features that allow system parameterisation changes, via service and diagnostic software tools, in alignment with operating conditions and customer needs.



HIGH
PERFORMANCE

Environmental impact

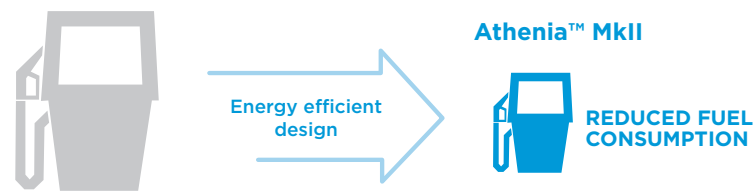
With its innovative micro-channel coils (with a reduced refrigerant charge of 50% compared to conventional coils), the Athenia™ MkII series offers an improved environmental performance with a low global warming potential (GWP).

To improve environmental-friendliness, we offer refrigerant circuit installation packages, minimising the risk of refrigerant leakages from A/C systems.

For additional safety, we only use non-flammable refrigerants with an A1 classification.



LOW CO₂
LOW NOISE



Low noise

As a standard solution we are offering step-less RPMs regulation of the fans and blowers.

The brushless blowers and fans with full speed PWM control can be used in Athenia™ MkII range for lowering the noise level.



QUALITY CONTROL
(ISO 9001:2008, ISO 14001:2004, BS OHSAS 18001:2007)

Reliability

Thermo King products are built to last. We continuously test and develop our designs to meet the high demands of bus temperature control applications. We only use the most reliable and internally validated components in our A/C systems.

We carry out a range of rigorous functional and performance tests to validate all our transport refrigeration equipment in a controlled environment such as special 3D multi-axial vibration and twist profiles tests. They regularly exceed the standard bus homologation requirements (ECE R10.05).

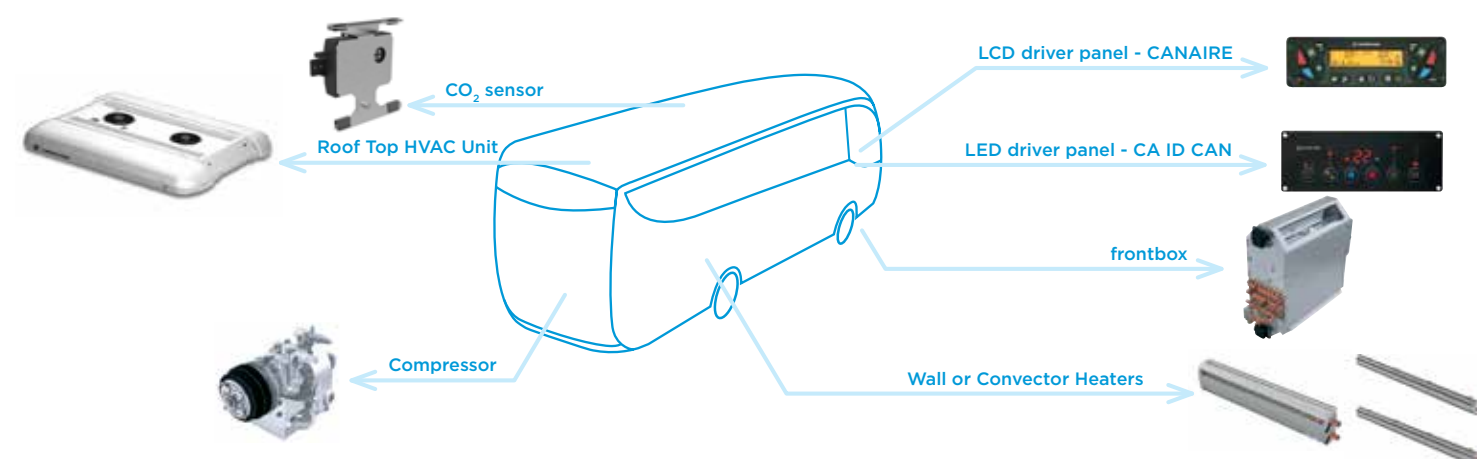
Our Thermo King manufacturing plant is ISO 9001: 2008, ISO 14001: 2004 and BS OHSAS 18001: 2007 accredited to demonstrate our dedication to quality and reliability.

Ease-of-use and service

Athenia™ MkII units are designed to be compatible with bus roofs with a radius from 7,5m to flat. To increase the flexibility of usage, the units are available for screw or glue bus roof installation.

All Athenia™ MkII units are compatible with a wide range of compressor dimensions and installation space limitations, helping to extend the application areas.

Athenia™ MkII's ergonomic unit design ensures faster access to components, thus minimising maintenance and service time.



Low cost of ownership

Athenia™ MkII owners have access to Thermo King's worldwide dealer and service network that helps to minimise cost of ownership and maximise uptime. Our Thermo King dealer network has over 500 service centres across Europe, all within a 2-hour drive and available 24/7 - wherever you are: dealers.thermoking.com



ATHENIA™ MKII SERIES SPECIFICATIONS

SPECIFICATIONS ATHENIA™ MKII SERIES	S-500	S-700	S-805	S-960	S-960 ADV
Layout unit	Narrow (N) Wide (W)	Narrow (N) Wide (W)	Narrow (N) Wide (W)	Narrow (N) Wide (W)	Narrow (N) Wide (W)
Listed cooling capacity ¹ [kW] / [kBtu/h] / [kcal/h]	25 / 85 / 21500	32 / 109 / 27500	40 / 136 / 34400	45 / 153 / 38700	48 / 163 / 41300
Rated cooling capacity ² [kW] / [kBtu/h] / [kcal/h]	14,0 / 48 / 12000	20,7 / 71 / 17800	24,3 / 83 / 20900	27,0 / 92 / 23200	31,6 / 108 / 27200
Heating capacity ³ [kW] / [kBtu/h] / [kcal/h]	33 / 112 / 28400	33 / 112 / 28400	47 / 160 / 40400	47 / 160 / 40400	47 / 160 / 40400
Evaporator air capacity ⁴ [m ³ /h]	4400 (4920)	4400 (4920)	6600 (7380)	6600 (7380)	6600 (7380)
Fresh air range [%]	0..100	0..100	0..100	0..100	0..100
Current draw ⁵ [A]	54 (65)	63 (74)	81 (92)	90 (101)	99 (110)
Dimensions roof unit (W x L x H) [mm]	1850x2300x215 (N) 2100x2300x215 (W)	1850x2300x215 (N) 2100x2300x215 (W)	1850x2300x215 (N) 2100x2300x215 (W)	1850x2300x215 (N) 2100x2300x215 (W)	1850x2300x215 (N) 2100x2300x215 (W)
Refrigerant type / average filling volume [kg]	R134a / 2,2	R134a / 3,7	R134a / 3,7	R134a / 3,8	R407C / 3,9
Weight (cool/cool+heat) [kg]	125 / 131 130 / 136	131 / 137 136 / 142	141 / 147 146 / 152	146 / 152 151 / 157	149 / 156 160 / 167
Control system (languages)	CANAIRE (EN/DE/CZ/IT/FR/SP)	CANAIRE (EN/DE/CZ/IT/FR/SP)	CANAIRE (EN/DE/CZ/IT/FR/SP)	CANAIRE (EN/DE/CZ/IT/FR/SP)	CANAIRE (EN/DE/CZ/IT/FR/SP)
Compressors options	TM31	TM31, TK X430, FKX 40/470, S616, S391	TK X430, FKX 40/560, FKX 40/655, S616, S391	TK X430, FKX 40/560, FKX 40/655, S616, S391	TK X430, S616, S391
Split system option availability ⁶	No	No	Yes (S-805 Split)	Yes (S-960 Split)	No
Driver unit evaporator extension availability	Yes (DS-500)	Yes (DS-700)	Yes (DS-805)	Yes (DS-960)	No

¹ - Simulated at conditions 40°C/40°C/95%
² - Measured at conditions 35°C/27°C/19°C
³ - Measured at conditions -20°C/+80°C/16,7 l/h
⁴ - Free blow capacity for brush (brushless) blowers
⁵ - Current consumption for unit only at 27 VDC (unit with compressor clutch and pump)
⁶ - For split systems 2 smaller compressors can be used instead of one



S-805



S-960



S-500 & S-700



S-960ADV





Thermo King is a brand of Ingersoll Rand®. Ingersoll Rand (NYSE:IR) advances the quality of life by creating comfortable, sustainable and efficient environments. Our people and our family of brands—including Ingersoll Rand®, Thermo King®, Trane® and Club Car® – work together to enhance the quality and comfort of air in homes and buildings; transport and protect food and perishables; and increase industrial productivity and efficiency. We are a global business committed to a world of sustainable progress and enduring results.



ingersollrand.com

Ingersoll Rand - Lenneke Marelaan 6, B-1932 Sint-Stevens-Woluwe, Belgium.

© 2015 Ingersoll-Rand Company Limited TK 70031 (10-2015)-EN