Cabin HVAC Unit AG47595A

HEATING, VENTALATING, AIR CONDITIONING UNIT

- Designed for vehicle cabin HVAC applications
- Heating, cooling and ventilation capability
- Brushless blower with PWM control (12V)
- Electronic thermostat probe for temperature control
- Multiple air outlet configurations
- 100% fresh air operation
- Standard refrigerant connections (liquid and suction)
- Coolant connections (16 mm)
- ABS ducting for lightweight airflow distribution
- Compact fluid and ducting connections
- Robust metallic casing for durability

Calatherm Cabin HVAC Units deliver reliable and efficient climate control for vehicle cabins across a wide range of operating conditions. Designed to regulate temperature, humidity, and air quality, they provide consistent heating, cooling, and ventilation to support operator comfort in all environments.

The units feature standard refrigerant and coolant connections, flexible ducting options, and compatibility with existing vehicle systems for seamless integration. A PWM-controlled brushless blower and integrated electronic thermostat enable precise control of airflow, temperature, noise, and energy consumption.

Using R134a refrigerant with controlled superheat, the evaporator ensures stable cooling performance, while the glycol-based heating system delivers dependable output in temperatures down to -20°C. With robust construction suited to harsh environments, these units provide OEMs with a durable, easy-to-integrate solution for modern vehicle thermal management.

BENEFITS

- Thermal performance under defined ambient conditions, aiding system sizing and validation
- Precise temperature control through integrated electronic thermostat, supporting advanced control strategies
- Robust, durable construction suitable for harsh and off-highway operating environments
- Reliable heating performance in low ambient conditions (-20°C) with glycol-based coolant, supporting thermal output
- Variable airflow management via PWM-controlled brushless blower, enabling optimisation of noise and power consumption
- Stable evaporator performance with controlled superheat (5K) for efficient and reliable operation
- Standardised refrigerant and coolant interfaces enable easy integration into vehicle systems
- ABS ducting and optimised outlet configurations enable lightweight construction and uniform airflow distribution

TECHNICAL SPECIFICATION

Evaporation	Evaporator In	Temperature	0.7 Deg C
		Pressure	3 Bar Absolute
		Liquid to expansion device	61.5 Deg C
	Evaporator refrigerant	Superheat	5 Deg K
	Evaporator Air In	Temperature – Dry Bulb	26.7 Deg C
		Temperature – RH% (Relative Humidity)	51%
Heater	Heater In	Fresh Air %	100%
		Temperature – Dry Bulb	-20 Deg C
		Flow Rate	9 L/Min
		Glycol - %	50%
		Coolant In Temperature	80 Deg C
Duty		Cooling - KW	5.9
		Airflow – m3/h	650
		Heating – KW	12.3
		Airflow – m3/h	650

Note: Other systems and designs are available.

OUTLINE DIMENSIONS

Note that the image below is representative of the 12V variant