

# ATC HVAC Unit AG48028B

## ADVANCED TEMPERATURE CONTROL UNIT



- For off-highway and commercial vehicle
- Heating, cooling and ventilation functions
- Brushless blower with PWM control (24V)
- Electronic temperature control with multi-point air sensing
- Actuator-controlled airflow (face, floor, demist, fresh air)
- Integrated water valve and F7 recirculation filtration
- Standard refrigerant (UNF) and coolant (16 mm) connections
- Robust metallic construction with integrated drainage

Calatherm Cabin HVAC Units, designed to deliver a comfortable and controlled cabin environment across off-highway, commercial, and electrified vehicle platforms. Providing efficient heating, cooling, and ventilation, the system maintains consistent cabin conditions in extreme climates, supporting operator comfort and overall vehicle productivity.

Engineered for energy efficiency and ease of integration, the units combine a brushless PWM-controlled blower, electronic thermostat, and multi-point air sensing to maintain precise and stable temperature control. Airflow is carefully managed across face, floor, and demist areas to ensure consistent cabin conditions, while fresh air intake and F7 filtration help maintain air quality. Standardised refrigerant and coolant connections, together with HMI compatibility, support straightforward integration into modern vehicle systems.

Built with durable metallic construction, Calatherm Cabin HVAC Units are designed to perform reliably in harsh and demanding environments. The integrated water valve and control system ensure stable thermal output and efficient operation across varying duty cycles, supporting consistent performance in real-world applications. As a result, the units provide OEMs and system integrators with a dependable solution for maintaining cabin comfort.

### BENEFITS

- Enables precise cabin climate control via electronic thermostat and multi-point air sensing
- Optimised airflow distribution supports operator comfort and effective demisting performance
- PWM-controlled brushless blower improves efficiency, noise, and power consumption
- Supports extended battery range in electric vehicles through energy-efficient operation
- Integrated heating control (water valve) ensures stable thermal performance across duty cycles
- Fresh air management with F7 filtration enhances cabin air quality
- Standardised refrigerant and coolant interfaces simplify vehicle integration
- Actuator-based air management supports advanced HVAC control strategies, and helps decrease energy consumption
- Robust construction and integrated drainage ensure durability in harsh environments
- Compatible with vehicle control systems via electronic control head or HMI

## 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		8.2
	Airflow – m3/h		825
	Heating – KW – 100deg C		11.4
	Airflow – m3/h		825

Note: Other systems and designs are available.

## OUTLINE DIMENSIONS

Note the image below is representative of the 24V variant

