



# ENGINE OFF ANTI-IDLE SYSTEM

## **ANTI-IDLE HVAC SYSTEM**

Sigma Air Conditioning is a leading global company in the development of bespoke Heavy Duty HVAC Systems for the Mining, Industrial, Defence and Freight Rail markets and an OEM supplier to global brands. With over 50 years of experience in developing specialised HVAC solution to suit the specific needs of our customers. Designed & engineered in Australia for global deployment.

First launched in 2015, Sigma's Anti-Idle HVAC system is now offers second generation technology. Developed to be simple to install, easier to operate and more intuitive to service. This new generation system features the core benefits of its predecessor with improved reliability and simple interface.





AIS30621

# TECHNOLOGY



## LATEST BRUSHLESS TECHNOLOGY

- Semi-hermetic scroll compressor with built-in 26 V/DC\* permanent magnet motor
- Seamless capacity control independent of the drive motor (speed range 900 – 2100 rpm)
- Light aluminium construction
- Extraordinarily high coefficient of performance

## ELECTRO MECHANICAL SWITCH

- Designed for robust & reliable operation
- Simplified for easy service & diagnosis
- Configured for easy ON-OFF operation



## ROBUST STAINLESS STEEL CONSTRUCTION

- Validated on Mining class Dozers
- Increase gauge thickness to withstand severe shock & vibration loads



## BATTERY MANAGEMENT

- 2 X 200Ah 12V batteries
- Up to 1400 cycles
- Bolt-down terminals
- Maintenance-free deep cycle battery



#### HCF6BX3 (H0269011)

## **SPECIFICATIONS**

	METRIC	IMPERIAL
<b>Cooling Capacity</b> (Remote off-engine compressor)	5 kW	17060 BTU
<b>Cooling Capacity</b> (Integrated DC Compressor)	3.6 kW	12280 BTU
Fan Speeds	1	1
Air Flow	670 l/s	1419 CFM
Power Supply	24VDC	24VDC
Current Draw	70 A	70 A
Refrigerant	R134a	R134a
Maximum Ambient Temperature	54°C	129°F
Weight (nominal)	60 kgs	132.2 lbs
Technical Manual Reference	SM508-3993	SM508-3993
Dimension (L X W X H)	752mm X 429mm X 480mm	29.6in X 16.8in X 18.8in







# BENEFITS

## **REDUCE CO2 EMISSIONS**

Not only are diesel engines one of the largest emitter of CO<sub>2</sub> gas but extraction of diesel fuel itself causes a lot of CO<sub>2</sub> emission in its extraction. Our Anti-idle solution enables you to reduce your carbon footprint but eliminating the dependence on the diesel engine whilst stationary.





### **REDUCE MAINTENANCE**

As engine run time is the deciding factor for maintenance in heavy duty vehicles. By eliminating the use of main engine to power the HVAC system our Anti-idle solution extends your maintenance intervals and inturn extends the life of your engine.

### **FUEL SAVING**

Designed to integrate with your existing HVAC system, SIGMA Anti-idle Technology transfers machine idle time into thousands of dollars in cost saving through reduced fuel consumption and extended service intervals







## ANTI-IDLE CALCULATOR

Enter your make & model and our Anti-Idle Calculator will return your expected return on investment and carbon emission reduction figures





## Where does the fuel go and how does SIGMA Anti-Idle smart thinking fit in the equation?

#### TRAFFIC MANAGEMENT

Traffic management, controlled accelerations and efficient non-stop run management all contribute to the ideal vehicle flow and fuel reduction.

#### **LOAD FACTORS**

Load factors have a huge impact on fuel consumption. High resource and investment is required to reduce costs through vehicle model and capacity selection, payload anagement and engine power control changes.

#### **DRIVER TRAINING**

Driver behaviour can have a big effect on fuel consumption. Training can involve significant resources in effort and are challenging to measure and monitor.

#### 🕸 HVAC

#### **ANTI-IDLE**

Because SIGMA Anti-Idle Technology is part of an engine management system it will work alongside all of these initiatives. Most important in these urgent times of cost savings the technology can be up and running immediately on a large haul truck and can pay for itself in fuel savings in less than 12 months.

#### $\rightarrow$ FORWARD MOTION

**FUEL SAVINGS** 

#### 🔅 ROAD SURFACING

Roll resistance and traction greatly reduces vehicle performance and increases fuel consumption. Road resurfacing has a high investment cost financially, and in time, creating long payback periods.

#### TYRES

Tyre technology advancements in addition to tyre maintenance reduces replacement costs and fuel usage. Under tyre inflation reduces carcass life, reduces tread life, and increases fuel consumption.

## Road planning that incorporates **IDLING**

MANAGEMEN

**OUEUING** 

TIME

haul slope optimisation and elevation changes can greatly reduce energy and fuel usage. Initiatives however remain high investment financially and in payback periods.

🖌 GRADIENT

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