

# Frequently Asked Questions

## Air Top Diesel Heaters

### 2000 ST, Evo 40 & Evo 55



## **Question 1 – What power outputs are the heaters available in?**

There are 3 models – 2kW, 4kW and 5.5kW

## **Question 2 – What voltage are the heaters available in?**

12V and 24V DC

## **Question 3 – What are the dimensions of the heaters?**

AT 2000 ST – 311 x 120 x 121mm (LxWxH)

AT Evo 40 & 55 – 423 x 148 x 162mm (LxWxH)

## **Question 4 – How much diesel do the heaters use per hour?**

Depending on the heater size, between:

0.12L – 0.24L per hour for the AT 2000ST

0.18L – 0.49L per hour for the AT Evo 40

0.18L – 0.67L per hour for the AT Evo 55

On average a heater needs 100ml diesel per hour, per kW

### **Question 5 – I have a petrol vehicle, can I still fit a heater?**

Yes, our 12V AT2000ST model is also available in a petrol version

### **Question 6 – I have a caravan, can I still fit a heater?**

Yes, Webasto can offer a separate 12L fuel tank for this application. The fuel tank is supplied with a quick connect coupling and sight glass.

### **Question 7 – How many outlets can be run off one heater unit?**

AT 2000ST – up to 2 outlets

At Evo 40 and AT Evo 55 – up to 6 outlets

### **Question 8 – What type of outlets are available?**

60mm, 80mm, 90mm closeable vents, 45 degree and 90 degree louvers, as well as open vents (spider vents).

### **Question 9 – Are standard installation kits available?**

Based on our experience with manufacturers and aftermarket installers, we have developed comprehensive installation kits. These are available as 1 or 2 outlet kits.

### **Question 10 – Can the heater be mounted outside of the vehicle?**

Yes, but the unit should be protected by installing it in a box.

### **Question 11 – Where can the heater be fitted inside the vehicle?**

Installation of the heater is determined by the amount of available space, usually under the bed or under the dinette area. Consideration of location must take into account good air flow around the heater.

### **Question 12 – Can an outlet be installed in the bathroom?**

Yes, a closeable vent is recommended

### **Question 13 – Does the heater need to be mounted on a flat surface?**

Yes, it should be mounted on a horizontal surface, which is achieved by using the available mounting bracket which is supplied in the heater kits.

### **Question 14 – Does the heater get hot?**

The heater itself will get hot directly around the warm air outlet, up to approx. **80°C**

### **Question 15 – How much power does the heater consume?**

The AT 2000 ST uses as little as 14 watts during normal operation (6-7 Amps at initial start phase, then 1-2 Amps during continuous running).

### **Question 16 – What type of controllers are available for the heaters?**

A standard rotary control is supplied with all heaters.

An option for the Evo heater is the Multifunction Control, with features such as economical heating, boost heating, ventilation mode and high altitude mode.

### **Question 17 – Can the heater be used whilst driving the vehicle?**

Yes, this is particularly useful for when people are travelling in the rear of a motorhome. It also ensures you arrive at your destination in a pre-warmed vehicle.

### **Question 18 – Can the heater be used while we are sleeping?**

Yes, the heaters are thermostatically controlled and safe to run while you are sleeping at night.

### **Question 19 – Do the heaters generate any unpleasant odours?**

Thanks to continuous improvements in burner technology and fuel quality, exhaust odour is virtually unnoticeable as it is directed outside the vehicle.

### **Question 20 – Is there any exposure to a naked flame?**

No, the heater's use an electrical charged glow pin to initiate the combustion process, which is all contained within the units own combustion chamber.

### **Question 21 – Is it possible for the heater to flatten my house battery?**

As with any appliance, it is possible, but highly unlikely given the low current draw.

## **Question 22 – What size ducting is required?**

Depending on the heater, either 60mm for the AT 2000 ST and 90mm for the AT Evo 40 and AT Evo 55.

## **Question 23 – What is the maximum length of ducting I can use?**

The ducting required is dependent on the length of the vehicle and the placement of the heater. There is no restriction on the length, however the more bends in the system, the less heat and air flow at the outlets. A larger heater should be selected if the duct length is too excessive.

## **Question 24 – Can the ducting be bent?**

Yes, it is a convoluted flexible duct specifically designed for high temperature applications. Acute bends should be avoided.

### **Question 25 – How is the heater connected to the fuel tank?**

In caravans the heater is connected directly to a 12L fuel tank that we can supply. With Motorhomes, fuel is taken from the vehicle's own fuel tank via a fuel standpipe. Some modern vehicles have an auxiliary spigot on the fuel tank sender unit that can be connected to the heaters fuel line.

### **Question 26 – Is it possible for the heater to drain all the fuel from the Motorhome's tank?**

Yes, but only if the fuel hasn't been sourced correctly from the vehicle's fuel tank. The recommendation is to cut the fuel standpipe so that it is 25mm from the bottom of the tank.

### **Question 27 – Does the exhaust need to have a muffler?**

In an RV application, yes to minimise the inconvenience to fellow campers. This is supplied as a standard inclusion in our 1 and 2 outlet kits.

### **Question 28 – What is the maximum length of exhaust pipe that can be used?**

With silencer max. 2 meters.



### **Question 29 – Where should the exhaust pipe be terminated?**

Level to the outside edge of the vehicle, pointed down, away from the direction of travel and on the opposite side to the awning.

### **Question 30 – Will the heater run on Bio Diesel?**

No

### **Question 31 – Can the heater run whilst the vehicle is being refueled?**

No

### **Question 32 – Can I use my own fuel line?**

No, the fuel line supplied is a specific dimension to ensure the correct amount of fuel is delivered to the combustion chamber.

### **Question 33 – Does the heater come with a fuel filter?**

Yes, it is standard in our 1 and 2 outlet kits.

### **Question 34 – Where should the fuel pump be mounted?**

Close to the fuel source so the pump can circulate fuel to the heater allowing for efficient delivery of the fuel.

### **Question 35 – How far away can the fuel pump be from the fuel tank?**

It is recommended the fuel pump be within 1 meter of the tank.

### **Question 36 – Where should I put the fuel filter?**

After the fuel source, before the fuel pump.

### **Question 37 – Where should the combustion air be sourced from?**

Externally in a position where it is unlikely that the air inlet could be blocked and is splash proof.

### **Question 38 – Does the heater come with a temperature sensor?**

Yes, it is located on the return air side of the heater unit.

### **Question 39 – What electrical connections are required for the heater?**

A positive and negative to a reliable power supply directly to the house battery. An inline fuse is supplied in the harness.

### **Question 40 – Can the heater be connected to a circuit breaker?**

It is recommended to connect directly to the batteries via the fuse supplied in the kits to ensure that the heater cannot be switched off without going through its shutdown cycle.

### **Question 41 – If there is a fault with the heater, how do I diagnose the problem?**

The heater has an inbuilt fault code diagnoses that is displayed on the control. Consult your user manual to identify the displayed code.

## **Question 42 – Is there any regular maintenance that must be carried out on the heater?**

If the heater is installed and operated correctly there should be no need to maintain the unit. However, as a preventative maintenance it is recommended that the heater should be run for 1 hour once every month regardless of the season.

## **Question 43 – After turning the heater ON, how long does it take for the heater to produce maximum heat?**

It depends on many variables. The combustion process for the AT 2000 ST takes 105 seconds. After this the heater will start to heat up the space.

## **Question 44 – After turning the heater OFF, how long does it take to shutdown?**

The fan will run for a period of time to cool down the heat exchanger. This will depend on how the heater has been running and what the return air temperature is.

### **Question 45 – Why do you have a temperature sensor on the return air side of the heater?**

This is positioned so that it measures the overall room temperature, not the temperature at the controller.

### **Question 46 – Can I fit the rotary controllers anywhere inside the vehicle?**

Yes, as the controller does not contain a temperature sensor, its position has no influence on the heater performance (note that the supplied wire harness is 7m in length).

### **Question 47 – How do you maintain stable temperatures?**

Our heaters are designed to measure the overall room temperature. We use step-less power modulation to ramp the power required up and down to maintain temperature.

## Question 48 – What safety features are built into the heater?

Safety features include:

- Under / Over voltage
- Overheat temperature sensor (in case of vent blockage)
- Heater lock out after 3 false attempt starts
- In case of an error (fault code) the fuel pump will stop operating to ensure the burner chamber is not flooded.

## Question 49 – Where are Webasto heaters made?

Our heaters are made in our factory in Germany.

## Question 50 – Is the heater unit covered by warranty?

Yes, the heater units come with a 2 year warranty.