

A long-exposure photograph of a city street at night. The image shows a multi-lane highway with numerous light trails from cars, creating a sense of motion. In the background, several tall skyscrapers are illuminated with various lights, including blue and white. A construction crane is visible on the right side. The overall scene is a vibrant urban environment.

Frequently Asked Questions EVO5 HYDRONIC Integrated Hot Water Service

FREQUENTLY ASKED QUESTIONS

Question 1 – How does the EVO5 HYDRONIC heater work?

A Webasto Thermo Top Evo 5kW diesel furnace is mounted next to a 15L Buffer Tank which contains a Plate Heat Exchanger. This combination makes for a very compact unit. A Fan Heater is an optional extra to provide warm air.

The Thermo Top Evo 5 heats glycol that is stored in the Buffer Tank (to about 85°C). This heated coolant goes through the Plate Heat Exchanger that has on-board water going through it as well. The water is heated via heat transfer. By utilising rubber heater hose and brass plumbing fittings, you can incorporate a Fan Heater to provide you with the comfort of warm air.

Question 2 – What is power output of the Thermo Top Evo 5 heater?

5kW full load

2.5kW partial load

Question 3 – 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 preventative maintenance it is recommended that the heater should be run for 1 hour once every month regardless of the season.

Question 4 – What are the dimensions of the unit?

400 x 350 x 350mm (LxWxH)

Question 5 – How much diesel does the heater use per hour?

0.31L – 0.62L per hour ($\pm 10\%$)

Question 6 – What is the tank made out of?

Stainless steel tank, filler neck & fittings.

Question 7 – How long does it take to heat the coolant (Glycol)?

Approximately 20 minutes depending on ambient temperature.

Question 8 – What voltage is the heater available in?

12V only.

Question 9 – What temperature does the coolant obtain?

Maximum 90°C

Question 10 – What is the maximum water temperature and for how long?

Approximately 50°C tapering down to 38°C for 3-4 minutes, based on a water flow rate of 8L/min.

Question 11 – How does the tempering valve work?

Using the supplied tempering valve, the mixing function is automatic once the hot water inlet & cold water inlet are connected. The blue cover which hides the valve will need to be removed, turned over and used on top of the valve for temperature adjustment (clockwise/anti-clockwise) in order to obtain desired temperature between 40-50°C (note tolerance of $\pm 3^{\circ}\text{C}$.)

The valve should be initially set by the installer and not require further adjustment unless necessary. All care to be taken when performing an adjustment.

Question 12 – What type of coolant is required and capacity?

Standard automotive glycol is used, mix ratio is 2:1 glycol:water. The buffer tank capacity is 15L, however level should be checked and system bled before initial start & run or after refilling.

Question 13 – How heavy is the system?

Dry weight is 12kg.

Question 14 – What are the water heating fittings made of?

All fittings supplied are brass.

Question 15 – Can I heat air as well?

Yes, an optional 1.5kW space air heater is available and comes with all fittings, valves & insulated hose. Note: The temperature out put of this heater is 50°-60°C compared to 80°-120°C for the Air Top 2000STC diesel air heater. *Refer to page 11 for more detail*

Question 16 – Is the air heater thermostatically controlled?

As standard supply, no, the air heater simply has a 3 position switch, that is, OFF, Low Fan Speed & High Fan Speed.

A temperature sensor and additional controller can be added for thermostatic air heater control, refer to page 13 for more details on the Blower Speed Regulator operation.

Question 17 – What type of controllers is available for the water heater?

The hot water service is controlled via a programmable digital multi-controller allowing for timer function, 3 times per day, 7 days per week.

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

Yes.

Question 19 – Does the heater generate any unpleasant odours?

Thanks to a combination of the very precise control of our combustion process and the high quality burner technology exhaust odour is virtually unnoticeable. The exhaust produced from the burner cartridge is directed outside the vehicle.

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

No, the heater uses an electrically 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 – How is the heater connected to the fuel tank?

The heater is connected directly to a 12L fuel tank via supplied fuel line specific to the diesel furnace.

Question 23 – Does the exhaust need to have a muffler?

Yes to minimize the inconvenience to fellow campers. This is supplied as a standard inclusion.

Question 24 – What is the maximum length of exhaust pipe that can be used?

With silencer max. 1 meter.

Question 25 – 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.

If dust prevention mechanisms are used, ensure this is clear/removed prior to starting the unit next time to avoid the diesel furnace going into fault.

Question 26 – Will the heater run on Bio Diesel?

No

Question 27 – Does the heater come with a fuel filter?

Yes

Question 28 – How is the heater cycling controlled?

The heater unit will try to maintain glycol temperature of 85°C, once achieved the heater will cycle off. When the coolant temperature falls below 65°C the heater will restart and repeat the heating cycle.

Question 29 – If there is a fault with the heater, how do I diagnose the problem?

The digital multi-controller will provide a fault code should there be an error with the diesel furnace, refer to the manual for details or contact Webasto for further assistance.

Question 30 – After turning the heater OFF, how long does it take to shutdown?

When the heater is turned off by the programmable digital multi controller, the combustion process will extinguish followed by a shut-down cooling cycle of approximately 90 seconds.

Question 31 – Can the diesel furnace be left on for constant operation?

Yes the heater can remain on for extended periods, however this may not be required as the system may perform unnecessary cycles of heating which can consume fuel & electric power.

No adverse impact if you choose to leave the diesel furnace on. Just remember to switch off afterwards.

Question 32 – If the diesel furnace is not operable, will I also not have hot air?

If you have the combination system, this will be true. The diesel furnace is producing the heat and transferring the energy to the coolant.

If you have a separate hot water service & diesel air heater then both systems are independent of each other.

Refer to page 11 for additional detail

Question 33 – What safety features are built into the heater?

Safety features include:

- Under / Over voltage (10.2/17V)
- Overheat temperature sensor
- Heater lock out after a number false attempts to start
- In case of an error the fuel pump will stop operating to ensure the burner chamber is not flooded with diesel.

Question 34 – Where are Webasto heaters made?

Our heaters are made in our factory in Germany.

Question 35 – Is the heater unit covered by warranty?

Yes, the heater units come with a 2 year warranty and is supported by our service dealer network.

COLD WEATHER ADVISE

- Where available and appropriate winterized diesel should be used to ensure the diesel furnace will operate at lower ambient temperatures
- Do not add any substance to the fuel as any damaged caused will not be covered by warranty
- If there is a possibility of water freezing, take precautions to prevent damage
- Hot water service components including the heat exchanger failing due to frozen water, will not be covered by warranty
- *Note: Water can expand by 8-9% when frozen*

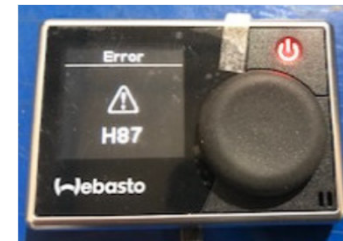
Air Top 2000STC v Fan Heater

- The Air Top 2000STC is an independent & dedicated air heater, with its own burner & air heat exchanger and fan motor. It also incorporates a temperature sensor.
- The optional fan heater that can come with the EVO5 is fully dependent on the EVO5 diesel furnace heating coolant to produce hot air.
- *If more information is required, please contact Webasto*

RESET PROCEDURE

Permanent lock out (H87) reset procedure for Thermo Top EVO5 using Multi-control

1. Turn Heater on using the multi-control & then remove 20A fuse between 3 and 10 Seconds of turning on
2. Acknowledge the fault code by pressing the “control knob”
3. Wait 30 seconds and then refit 20A Fuse
4. Turn Heater on - procedure complete



BLOWER SPEED REGULATOR

The rotary knob has 7 settings for the fan speed: Off, Automatic and five settings for manual control of the fan. The knob for temperature setting is variable. The indicators of both knobs light up in red.



Operation:

Automatic

When set to “Auto” the speed regulator will regulate room temperature by varying the fan's speed. The higher the difference in temperature measured by the temperature sensor and the set temperature on the temperature selector, the faster the fan will turn.

The number of revolutions will decrease when room temperature approaches the set temperature.

Manual:

Using manual settings you can select five different revolution numbers. The number of revolutions increases or decreases evenly once a selection has been made.

The position of the temperature selector no longer affects the temperature setting.



**For all technical enquiries,
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