

5 Exhaust and combustion air

Exhaust

The exhaust system included in the kit comprises of an exhaust hull fitting, a flexible twin walled stainless steel exhaust, securing clamps and exhaust support brackets. A silenced exhaust and bend with drain coil are available as an option.

Installing the hull fitting

The position of the exhaust hull fitting will depend on several factors, where you have located the heater, whether your boat is sail or power, and the suitable surfaces available.

On a sailboat, the preferred location is on the transom, as it is normally the area least likely to be affected by seawater when sailing. It is also close to the heater, if it is located in a cockpit locker.

On a motorboat, the transom or side of the hull are suitable locations. However, when locating the hull fitting on the transom of a motorboat, the fitting should be positioned a minimum of 300mm above the waterline to avoid any following seas covering the fitting when the boat slows suddenly.

Attaching the exhaust

To avoid water ingress, the exhaust should be installed and routed as illustrated below.

Use the exhaust support brackets provided to secure the exhaust and keep it away from heat sensitive materials. Attach the condensate drain coil to the exhaust elbow and using the drain tube supplied route the tube into a suitable bilge area.

Please Note!

Small arrows indicating the direction of flow have been cast into the fittings to differentiate between the combustion air and the exhaust fittings at the heater.

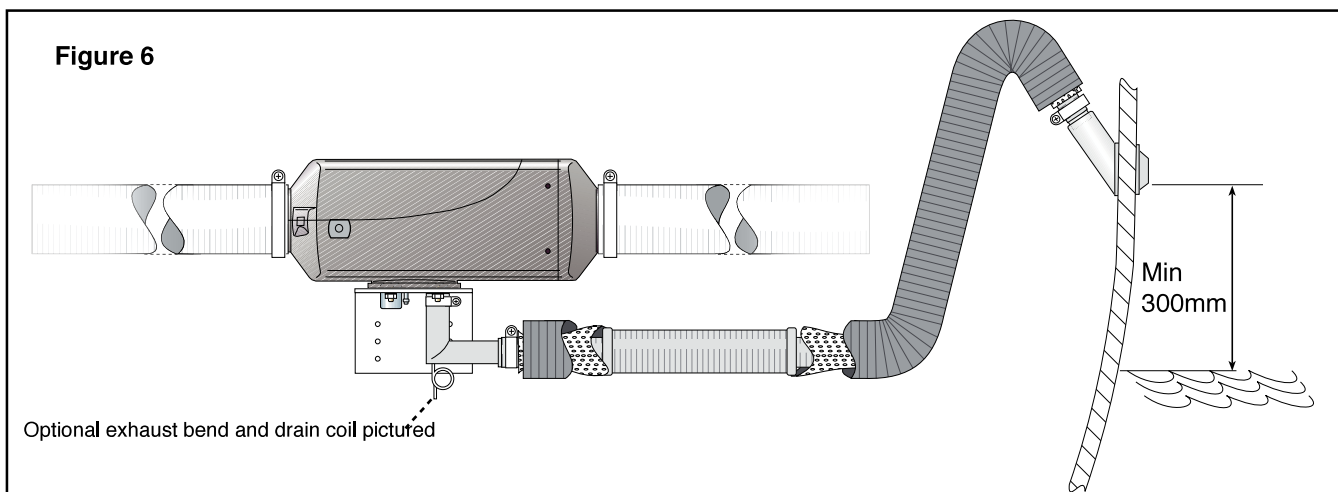


Caution!

Safety instructions!

Although the supplied exhaust is insulated, it will get hot during and immediately after heater operation. To avoid potential safety issues the exhaust system must be installed according to these instructions.

- The exhaust hull fitting must not be fitted to a deck or horizontal surface.
- Under no circumstances connect the heater exhaust to an engine exhaust or any other exhaust system.
- The exhaust outlet must vent directly to atmosphere.
- Adequate clearance must be kept around the exhaust system to prevent interference with important functional parts of the boat, e.g. steering or throttle cables.
- Route the flexible exhaust giving clearance and consideration to heat sensitive components such as fuel lines, electrical cables, etc.
- Ensure the support brackets supplied are used to secure the exhaust and avoid damage by vibration.
- Position the hull fitting so that either the heater combustion air or other inlets cannot draw in exhaust fumes.
- Ensure that the position of the hull fitting allows fumes to exit freely and not affect nearby surfaces, e.g. fenders, ropes or mouldings.
- To avoid water ingress, the hull fitting must be at least 300mm above the waterline and a suitable bend formed in the exhaust to prevent water collecting in the exhaust.



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Danger!

Risk of injury and burns!

All combustion processes produce high temperature and toxic exhaust fumes. This is the reason why the exhaust system must be installed to the instructions given.

- Do not perform any work on the exhaust system while the heater is in operation.
- Before working on the exhaust system, first switch off the heater and wait until all parts have cooled completely. If necessary, wear suitable gloves.
- Do not inhale exhaust fumes.
- Do not operate the heater in enclosed spaces such as a boat shed or when the boat may have a cover fitted in winter etc.

Combustion air

The combustion air components supplied consist of a silencer, extension tube and a combustion air hull fitting (optional part).

The combustion air silencer and tube should be installed as shown below.

If combustion air is to be taken from an engine/ machinery space, please ensure it is adequately vented and that the area will not be pressurised or under partial vacuum when the engine is in use or ventilation fans are running.

If it is to be taken directly to an external hull fitting ensure that it is positioned with regard to the same conditions as required for the exhaust hull fitting.



Caution!

Safety instructions for the combustion air system!

- The position of the combustion air must not allow exhaust fumes or flammable vapour to be drawn in.
- If a combustion air hull fitting is used ensure water ingress is not possible at any time.
- The combustion air inlet must not be restricted or blocked at any time.
- The combustion air must not be drawn from any of the accommodation areas.
- The combustion air inlet must be drawn from a neutral pressure area.

